

# BHUTAN NATIONAL LAND USE ZONING

Limited Edition
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# **Executive Summary**

Amidst accelerated socio-economic development taking place, the demand for land use is ever increasing from all sectors, spiraling with numerous land use conflicts and competing interests. The scarcity of land and limited optimization in itself is the primary reason for the discrepancies in land uses. For instance, only 7% of Bhutan's total geographical area is arable land (664,000 acres). Out of this, 500,000 acres are registered on freehold, while 13,776 acres are on leasehold for commercial uses. This leaves a little over 1.58% or 150,224 acres of arable land at the state's disposal. Improper land use management in absence of integrated and reliable geospatial data repository coupled with weak institutional structure is another reason for the contestations. Additionally, inadequacy in cross-sectoral engagement for land use harmonization also contributes to the conflicts and predicaments.

His Majesty has deeply expressed such land use concerns on 29 different occasions so far. For instance, during the grant of land Kidu on 11th March 2009, His Majesty stated, "We must do everything to ensure that our limited land is of greatest benefit to the people and their children. Land must bring social, economic, and political strength to the people. I must give them a stake in the building of a strong nation and a vibrant democracy."

Therefore, the National Land Commission, in collaboration with the relevant sectors has undertaken the exercise to establish a harmonized National Land Use Zoning (NLUZ), primarily through spatial integration, geo-processing and map analysis, to begin with. The exercise is expected to revalidate and delineate prevailing designated areas and macro land uses in consultation with the cross-agencies. The dysfunctional and functional land for any categories of development based on capability and suitability shall be designated through this collective undertaking in times to come. Further, this exercise aspires to make judicious, optimum, and sustainable use of limited arable land by reducing competition and avoiding land use conflicts. Simultaneously, we desire to establish harmonized land use ordinances. Essentially, the purpose of this exercise is to harmonize and integrate all kinds of geospatial data to ultimately foster spatially-enabled land governance and decision-making processes in the country.

The report comprises an overview of the exercise, zoned maps by Dzongkhags and Gewogs. The final part of the report presents multiple references such as LULC maps and metadata for zoning exercise including permissibility in zones/buffers. The exercise suggests nine (macro), 23 (micro), and 23 (nano) land uses. For example, nine macro land uses are; Agricultural Land, Cultural Heritage, Industrial, Nature Conservation Area (NCA), Rangeland, Rural Settlement, Sustainable Forest Management Area (SMFA), Urban and Strategic Development Zones (SDZ).

The nine macro land uses (excluding SDZ) constitute about 6,210,176.574 acres (65.46%) of the country's total geographical area, and from the overall land uses, NCA constitutes 79.18%, followed by SFMA (11.63%) and agricultural land (6.59%). The rest of the land uses constitute only between 0.50% to 1.50%. Similarly, from the overall area, nature conservation (combination of NCA and SFMA) land uses constitute 60.85%, agriculture with 4.41%, industrial (0.11%), human settlements (0.76%) and others (culture and rangeland) with 0.88%.

Eight macro zones were cross-assessed with each other and the area of conflict is deduced through geo-processing of attribute data against individual zones using the conflict matrix. The matrix analysis concludes that NCA and Agricultural Land macro zones conflict across seven other macro zones, while Industrial, SFMA, Rural Settlement and Culture cuts across six macro zones in land use conflicts. However, some level of perceived conflicts were resolved through vigorous geospatial integration amongst the sectors through this exercise. However, about 436,560.588 acres of land use conflicts prevailing amongst the macro land uses. Similarly, 14,166.942 acres of land use conflicts between RoW/Buffer and macro zones.

Essentially, the exercise strongly recommend undertaking further refinement to focus on harmonizing macro land uses in line with broader national and strategic needs. This harmonization process should also address the conflicts between different land use categories. By resolving these conflicts, the groundwork shall be laid for the formation of coherent zoning ordinances to ensure effective land use management in a sustainable manner. Crucially, the exercise emphasizes the importance of implementing the NLUZ through the establishment of a Spatial Decision Support System to provide easy access to geospatial data, maps, and other relevant information. This shall therefore enable policymakers, planners, and stakeholders to make well-informed decisions about land uses and ultimately support the overall Location Intelligence (LI) initiatives, land based Digital Twinning, Smart Growth and any relevant spatial disruptions in times to come.





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# Acronyms

DoA Department of Agriculture

DoAT Department of Air Transport

DoCDD Department of Culture and Dzongkha Development

DoE Department of Energy

oFPS Department of Forests and Park Services

DGM Department of Geology and Mines

DHS Department of Human Settlement

Dol Department of Industry

DLGDM Department of Local Governance and Disaster Management

DoST Department of Surface Transport

DoW Department of Water

HCV High Conservation Value

LULC Land Use Land Cover

CA Nature Conservation Area

NCHM National Centre for Hydrology and Meteorology

NEC National Environment Commission

NLCS National Land Commission Secretariat

NLUZ National Land Use Zoning

NSDI National Spatial Data Infrastructure

 ${\sf REDD+} \qquad {\sf Reducing \, Emissions \, from \, Deforestation \, and \, Degradation}$ 

Strategic Development Zone

SFMA Sustainable Forest Management Area

TWG Technical Working Group

VWF World Wildlife Fund





# **PART I**

# NATIONAL LAND USE ZONING OVERVIEW

#### INTRODUCTION

The Kingdom of Bhutan is a small and mountainous country in South Asia, located in the eastern Himalayas, bordered by China in the North and India in the East, West and South. It is situated between longitude 88° 44' and 92° 07' East and latitude 26° 42' and 28° 14' North. The entire 38,394 sq. km of the geographical area of Bhutan is mountainous, with little flat plains in the southern fringe of the country. The elevation varies from 100 meters above mean sea level (msl) in the southern foothills to more than 7,700 meters above sea level in the northern mountains. Bhutan has a wide variety of climatic conditions influenced by the micro geographic conditions, topography, elevation, and rainfall patterns. Besides being small, Bhutan's terrain is such that only seven percent of the total land is arable, which translates to about 664,000 acres. About 500,000 acres of the arable land are utilized and registered on freehold and 13,776 acres of State land has been leased out as of date for various socio-economic developmental activities. Only about 150,224 acres (roughly 1.58%) arable land is left in stock for now. In addition, there is an ever increasing pressure on limited land from accelerated socio-economic development activities taking place in the country, such as construction of farm roads, electricity transmission/power lines, industries and urbanization (NEC, 2016). The scarcity of arable land is a huge concern for the country, which has been explicitly highlighted in various Royal Addresses. His Majesty The King, during the 109th National Day, 2016 stated, "Bhutan's difficult terrain means that only 7 percent or 664,000 acres of our total land is usable. We must ensure that this small amount of land is put to the best use for the benefit of our people."

In a finite spectrum, such concerns are ensued due to lack of proper sustainable land use management. The National Action Program (NAP) to Combat Land Degradation states that, "at the macrolevel and as a cross-sectoral issue, the policy perspective on national land use and management is presently absent. Consequently, the conflicts of land use between various sectors persists and, in many instances, defy land capability." It also states that programs and activities for proper land use management have remained compartmentalized within various sectors. There is also a lacuna in the institutional setting concerning the overall coordination and management of the technical aspects of land use. For instance, random and haphazard development within the vicinity of critical land uses at times result in the loss of important land uses for other socio-economic development purposes. The land and land based resource management in such a situation demands collaborative and innovative approach. Currently, in the absence of proper zonation of areas for specific purposes, it has been extremely difficult for the responsible agencies to regulate such developments. Thus, the National Land Use Zoning (NLUZ) has been initiated as one of the major collaborative activities in successive plans as one of the key cross-sectorial efforts.

An efficient and judicious use of our limited land by the key stakeholders through proper National Land Use Zoning (NLUZ) has been found crucial for an overall sustainability and to safeguard the national interests and enhance food production in the country. This program shall largely ensure nationwide spatial integration, platform creation and establish coherent land use ordinances in times to come, to facilitate and boost Smart-Growth, Location Intelligence (LI), land based Digital Twinning and spatial planning of the country. The NLUZ can be used for monitoring, multi-disciplinary policy-making and ensuring sustainable use of the scarce land resource in the country.

An essential point of take-off or readiness for NLUZ is the existence of comprehensive cadastral data/ information and 1:25,000 scale topographic base mapping with NLCS, which are the fundamental elements for comprehensive Land Use Land Cover (LULC) mapping. Further, the Geo-Information (GI) Policy of Bhutan, adopted in collaboration with Centre for GIS Coordination (CGISC) member agencies and ongoing National Spatial Data Infrastructure (NSDI) project shall be the enabling policy framework for NLUZ initiatives.

The NLCS and cross-agencies continued the NLUZ exercises despite the COVID 19 pandemic, technical shortcomings, and coordination issues at the initial phase. With constant review, scoping and revitalization of the core working team, the initiative has succeeded in developing this edition which shall be a key component of the ongoing NSDI initiatives. Further, with expectation of additional (reliable) data availability, successive editions of NLUZ will be produced, until NLUZ realizes a robust and dynamic web application to support real time spatially enabled decision making processes at all levels and across all agencies. This Edition comprises three parts, viz. Part I: NLUZ overview; Part II: zone maps of the Country, Dzongkhag and Gewog; and Part III: appendices and references.

#### RATIONALE

The NLUZ is considered a priority exercise, not only from a national stance but also from an international point of view. It emanates from the revered concerns promulgated on varied occasions by the Throne. During the grant of land Kidu on 11<sup>th</sup> March 2009, His Majesty stated, "We must do everything to ensure that our limited land is of greatest benefit to the people and their children. Land must bring social, economic, and political strength to the people. I must give them a stake in the building of a strong nation and a vibrant democracy." In addition, on 16<sup>th</sup> September 2014, during the grant of land Kidu in Zhemgang Dzongkhag, His Majesty the King emphasized that the land is central to the lives of the people since it is the primary source of food, shelter and clothing. His Majesty went on to express that the land provides security of inheritance to individuals and families which in turn would augment the socio-economic development and wellbeing of the nation.

This overarching concern is upheld in numerous national and international obligations in light of land being the most important component of the environment in addition to its indispensability as the critical factor of production. The Intergovernmental Panel on Climate Change (IPPC) declared that mountainous countries will experience a decline in crop yield due to an increase in water stress (either too much or too little) and land degradation (IPCC, 2007). Recognizing soil as the largest terrestrial Soil Organic Carbon (SOC) storage, Bhutan's Intended Nationally Determined Contribution (INDC) mentions soil and land development as a means to both mitigate and adapt to climate change and ensure continuous ecosystem services (INDC, 2015).

Similarly, the National Biodiversity Strategies and Action Plan (NBSAP) mentions that the incomplete physical zonation of the Protected Areas (PA) has resulted in ad-hoc zoning of services/facilities and resource extraction, which at times, challenge the conservation objectives and policies and therefore recommends completion of zonation of the PA by 2018 (NBSAP, 2014).

The State of the Environment 2016 recommends the identification and prioritization of critical forests, habitats, and watersheds; completion of land capability mapping at the earliest to identify areas that can sustainably support various uses such as agriculture or other development activities; and demarcation of boundaries of all PA on the ground by the end of 11th FYP.

There are concerns expounded in the United Nations Convention to Combat Desertification (UNCCD) on poor land uses that cost a nation by GDP share. Based on the 21 countries' land degradation profiles, it was concluded that an average loss for a country is equivalent to 9% of GDP due to its poor land use management practices (UNCCD, 2018). This figure is even higher or bears the highest costs, estimated at USD 84 billion and 65 billion per year respectively for Asia and Africa. As such healthy land is the primary asset that supports livelihoods around the globe, from food to jobs and decent incomes.

Further, the following policies and legal provisions emphasize the need for NLUZ initiative:

- i. Article 5 (b) of the Constitution of the Kingdom of Bhutan 2008 states, "The Government shall ensure a minimum of 60% of the total land area is maintained under forest cover for all time":
- ii. The Economic Development Policy (EDP) of the Kingdom of Bhutan 2016 requires NLC to prepare a national land use plan for State Reserve Forest Land outlining the use of land for optimal use by 2018 and all relevant sectors are mandated to provide sectoral parameters to NLC by 2017:
- iii. The Bhutan National Adaptation Program of Action (NAPA) 2006 requires clear zoning of vulnerable areas of natural hazards:
- iv. Section 303 of the Land Act of Bhutan 2007 requires the assessment of present and future needs by evaluating the land's capability to supply them; identifying and resolving conflicts between competing uses, between the needs of individuals and those of the community, and between the needs of the present generations and those of future generations; and seeking sustainable options and choosing those that bring about the desired economic, social and environmental wellbeing of the citizens of Bhutan; and
- v. Bhutan National Human Settlement Strategy 2017 aims to ensure an integrated balanced development of settlements, both rural and urban inclusive of environmental conservation, preservation of culture and decentralization to promote participatory development.

Despite these mandates and provisions enshrined in various national and international documents, socio-economic development activities continue to take place in a sporadic manner impacting the state of the land and land based resource governance. Various stakeholders go about consuming land on a first-come-first-serve basis. Although all the stakeholders do what they do with the best intentions, these intentions do not help weave an overall fabric that will help use the scarce land resources in a sustainable manner. This is, indeed, largely due to the lack of proper NLUZ put in place nationally. Therefore, to have more resilient and transformative socio-economic development, it is imperative to have a sound NLUZ system to judiciously harness our limited land resources, based on their potential, to provide various ecosystem services for the well-being of the present and future generations.

#### **PRINCIPLES**

The NLUZ initiative is guided by the following key principles:

- $i. \quad \text{Optimize the use of different land resources based on their capability and suitability};\\$
- ii. Minimize land degradation, ensure sustainable agriculture, reduce climate change, and enhance ecosystem services through appropriate land use systems;
- iii. Ensure constitutional requirement of 60% forest cover at all times;
- iv. Safeguard food and nutrition security;
- $v. \quad \text{Enhance socio-economic development while ensuring environmental well-being}; \\$
- vi. Ensure sustainable land resource and environment management to enhance resilience to climate change;
- vii. Promote transformative socio-economic development; and
- viii. Promote Smart Growth, habitats and preserve heritage sites.

#### **OBJECTIVES**

Broadly, the objectives of NLUZ is to ensure a better quality of life for the people, a strong and competitive economic position, and an environment of the highest quality.

Specifically, the NLUZ desires to achieve the following objectives:

- $i. \hspace{0.5cm} \hbox{To establish a harmonized national land use system in the country;} \\$
- ii. To revalidate and delineate designated areas and macro land uses for better management;
- iii. To designate dysfunctional and functional land uses for any categories of development based on capability and suitability;
- To establish a sound online database and maps of national zoning to facilitate a scientificbased decision-making process;
- v. To make optimum, rational and sustainable use of limited arable land by discouraging competition and avoiding land use conflicts;
- vi. To facilitate the establishment of spatial/ land use ordinances; and
- vii. To provide a scientific basis for governance and decision-making process.

#### **EXPECTED BENEFITS**

As the NLUZ initiative segments into three successive editions, the expected benefits corresponding to each edition can be staggered in three stages, viz. immediate, intermediate and impact level. The immediate benefit is in creating a spatial data repository platform that shall serve as a reference for any form of land releases for any sectoral requirement, until next two editions are carried out for higher value addition and benefits. The intermediate and impact level benefits shall be at medium and long term goals as highlighted in Figure 1. However, the instant benefits derived in the course of NLUZ exercises are also highlighted in the separate topic toward the end of this overview report.





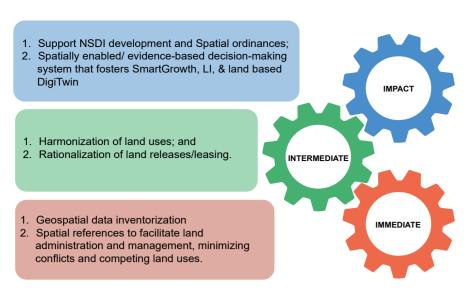


Figure 1. Expected benefits of NLUZ

Generally, the NLUZ would immensely benefit in terms of creating credible spatial information and a platform for cross-sectoral access and use for diverse decision making processes. Internationally, at all levels of governance, spatial and strategic land use plans are considered as critical instruments to guide any form of development plans, policies, programs and projects. For instance, the OECD Land Use Governance Survey has identified 229 different types of plans which are fundamentally based on spatial formation. In the case of Bhutan, spatial importance and sensitivity is yet to be realized optimally. However, with the changing need and spatial integration into certain planning and decision making processes, importance has been increasing over the time. It is estimated that during the 10th and 11th Five Year Plans alone, the Royal Government has invested over Nu. two Billion in geospatial creation and related activities, particularly cadastre, base mapping and spatial planning which is a significant investment and priority by any comparison.

#### **SCOPE**

A nationwide land use zonation as envisaged would take a while and entail intensive resources to realize the overall objectives. However, as the exercise merits national importance and priority, it is essential to at least establish a spatial platform resolving cross-sectoral technical anomalies and potential conflicts in land uses by adopting acceptable process and methodology. Due to these exigencies, a decision to have this edition has emerged, to primarily serve as spatial references for the land and allied sectors in ensuring spatially enabled land and land based resource management.

For this report, all land types that were used for land administration purposes were reclassified into macro land uses based on relevance and actual land uses on the ground beside the creation of spatial inventory. The geo-processing and map analysis were carried out to come up with the zoned outputs. In succinctly, Figure 2 exhibits the overall scope of the NLUZ, in which the scope of this edition is segmented with the broad interventions subsumed within it.

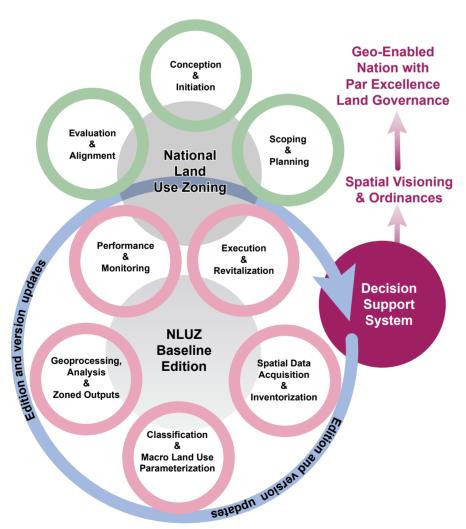


Figure 2. Scoping of the NLUZ

The overall NLUZ initiatives shall constitute successive editions, until finally accomplishes the full cycles of NLUZ as envisaged and contribute to establish relevant spatial ordinances and support any extent of local/ strategic decision making processes for the country.

#### **EXECUTION MODALITY**

In a highly volatile global scenario where development planning and decision-making process becomes more dependent on geospatial analysis and location intelligence, NLUZ has become crucial and thus initiated as a matter of priority for the country. First High Level Consultation (HLC) meeting was convened to discuss the matter, followed by stakeholder consultations to implement the directives and come up with an actionable way forward. The general consensus from the consultation fostered urgent need to take up NLUZ considering any best practices in the region and around that shall have fit-for-purpose land use for the country. Accordingly, a cross-agency TWG was formed and a concept paper was developed and presented to the 14th Gross National Happiness Commission (GNHC) meeting. The proposal was approved on an urgent basis and undertaken as a priority project.

Since land in general cuts across all sectors, NLUZ called for multi-stakeholder engagement and ownership. To foster better coordination and ensure efficiency, effectiveness and accountability in the initiatives, an implementation guideline was developed in 2018 with the phased modalities as indicated in Figure 3. In concurrence, based on the overall implementation guidelines, a technical guideline was developed by NLCS to coordinate and implement technicalities involved in the exercises.



Figure 3. Execution modality of NLUZ

Based on the two guidelines adopted, the in-house TWG (coordinating agency) initiated the Land Use Land Cover (LULC) mapping 2020 which shall be one of the precursors for initiating the NLUZ mapping. Entire activities for NLUZ were scheduled to be carried out in an ideal situation. However, due to inevitable circumstances unrolled from COVID-19 pandemic, most of the specific activities could not be undertaken in time. It was then scoped down to alienable land zonation, which is a segment of macro land use zonation.

It is only in the recent months of this fiscal year that the NLUZ exercise was reinstated to be conducted based on the credible spatial data availability in the country. Revitalizing this scope, in-house TWG was reinstituted and commenced the exercise with intensive study to reinvent the fit-for-purpose methodology and ensure desired zone outputs. All the relevant agencies were then consulted and cross-agency TWG members reinstituted from the agencies as mapped in Figure 4 to collaborate in carrying out initiatives under the revised scope of the NLUZ.

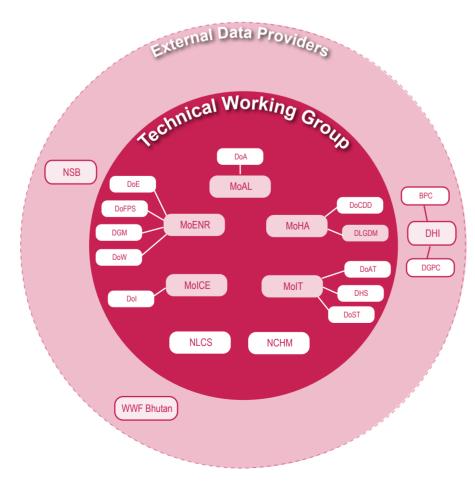


Figure 4. TWG and collaboration

As of date, there has been steady support and spectrum of engagement within RGoB and allied agencies, particularly from the respective ministries, WWF with IKI funding and REDD+ support. Collectively, the NLUZ exercise has now reached this stage to produce this edition report.

#### **METHODOLOGY**

The in-house TWG adopted an appropriate methodology that constitutes five key steps to realize desired map outputs as shown in Figure 5. In inventorying the entire spatial data in the country, exhaustive data validation and cleaning processes have been considered to qualify for the NLUZ mapping. Based on the quality of spatial data obtained, reclassification of land uses was carried out, for which the metadata (Appendix 2) has been established. For every reclassified land use, technical definitions were accorded and validated from all round sources, especially from the concerned agency documents and TWG consultations to support spatial parameterization of land uses. It was then followed by geo-processing, map analysis and zone output steps. The details involved in the five steps in methodology for this edition is indicated in Figure 5.



Figure 5. Methodology for NLUZ mapping

#### **STEP 1: DATA ACQUISITION AND VALIDATION**

The NLUZ report is determined based on the quality inventory of spatial data from cross-agencies. Whatever the spatial datasets obtained were put to a logical validation process, cleaning, and classification based on the geoprocessing and map analysis method adopted by the TWG. The data validations have been carried out for all spatial datasets in the form of point, line, polygon, and raster, received from respective agencies, including in-situ cadastral and Thram (registry) databases. Over 23 land types were found uncovered from the prevailing cadastral data, however, these were condensed to nine macro land uses through an appropriate reclassification process. It was logical and found correct to reclassify the existing land types since these were meant for land administration purposes and found irrelevant for NLUZ, which considers actual land uses on the ground.

Apart from in-situ cadastral datasets used, a large extent of cross-agency spatial datasets were acquired as per abstract in Table 1 and validated through different processes and techniques involving a focal person from respective agencies.

However, the data acquisition and standardization processes were found crucial for not only NLUZ but also to know the processes adopted by individual cross-agencies, prior to and during NLUZ exercises. The data acquisition and method corresponding to every data acquired and data owner is enlisted in Table 2. This is mainly to ensure data ownership and limit the distortion of technical processes adopted by the respective agencies, unless there are basic technical anomalies requiring alignment and corroborate with the latest updated cadastral and administrative boundaries.

#### STEP 2: SPATIAL DATASET INVENTORIZATION

The process of spatial data inventory involves documenting the metadata of all geospatial datasets utilized for NLUZ purposes. According to the International Organization for Standardization (ISO), metadata in the context of the geospatial domain refers to 'information about a resource', essentially representing data that describes the characteristics and properties of the dataset itself. Metadata plays a crucial role in the context of NLUZ by providing essential information and context to enhance understanding and analysis of the data.

The importance of metadata in NLUZ can be highlighted in the following ways:

- Spatial Context: Metadata includes geospatial information such as coordinate systems and projections. This information is vital for accurately visualizing and analyzing land use data on maps or in Geographic Information Systems (GIS), ensuring the proper spatial context of the zoning data;
- Data Source and Quality: Metadata provides insights into the sources of land use data, such as
  government surveys, satellite imagery, or other authoritative sources. It also describes the
  data collection methods and accuracy. Understanding the data source and quality is important
  for assessing its reliability and suitability for specific analyses or decision-making processes;

Thematic Layers							
Data	Туре	Source					
Nine Macro & Twenty Three Micro Land Uses	Polygon, Point						
LULC 2020	Polygon	NLCS					
RoW & Buffers (Road Network, Powerlines, Flight Funnel, Heritage Buffer Zone, and Flood Hazard Map)	Polygon						
Demography	Attribute	NSB					

Fundamental Ge	ospatial Layers	
Data	Type	Source
Admin Boundary	Polygon	NLCS
Admin Points (Gewogs)	Point	NLCS
Airports	Point	DoAT
Bhutan Glacial Lake Inventory	Polygon	NCHM
Bhutan Glacier Inventory	Polygon	NCHM
Building Footprints	Polygon	CID, CGI
Cadastral and Thram Database	Polygon	NLCS
Community Forest	Polygon	DoFPS
Contour (1:50K & 1:25K)	Line	NLCS
Cultural Site Viewpoints	Point	DoCDD
DEM	Raster	NLCS
Existing Hydropower Plant	Point	DoE
Existing Mines	Polygon	DGM, NLC
Feasible Airstrips and Helipads	Polygon	DoAT, NLC
Flight Funnel	Polygon	DoAT
Forest Management Unit	Polygon	DoFPS
Geographical Names	Point	DLGDM
Gyalsung Visibility Area	Polygon	NLCS
Heritage Buffer Zone	Polygon	DoCDD
Heritage Conservation and Village Zone	Polygon	DoCDD
Heritage Sites (Nye Atlas)	Point	NLCS
Institutions	Point	NLCS
Key Biodiversity Area	Polygon	DoFPS
Mini Hydel	Point	BPC
Paro Flood Hazard Map	Polygon	FEMD
Payment for Ecosystem Services	Polygon	DoW
Potential Recharge Area	Polygon	DoW
Powerline Buffer (RoW)	Polygon	DoE
Powerlines	Line	DoE
Prospective Mineral Zone	Polygon	DGM
Protected Area	Polygon	DoFPS
Protected Chhuzhing	Polygon	DoA
PSMP Dam	Point	DoE
PSMP Powerplant	Point	DoE
PSMP Reservoir	Polygon	DoE
PSMP Waterway	Line	DoE
Ramsar Site	Polygon	DoW
Road	Line	DoST, NLO
Road Buffer (RoW)	Polygon	DoST, NEC
, ,		FEMD
Samtse Flood Hazard Map	Polygon	
Satellite Imagery (Google, OSM & Bing)	Raster	Open Soul
Tashigang Flood Hazard Map	Polygon	FEMD
Water Sources	Point	DoW
Waterways	Line	DoE

- Data Currency: Metadata provides information regarding the currency and status of specific
  geospatial data. This includes details on the year of acquisition and the completion status of
  spatial data. By understanding this information, the NLUZ TWG can identify which datasets
  require updating in the subsequent edition of the NLUZ initiatives;
- Data Custodianship: Metadata can include information about the data owner or custodian, indicating the individual, department, or organization responsible for managing and maintaining the data. This information establishes a point of contact for a specific geospatial dataset, enabling users to reach out to the data publisher or acquirer for additional information or inquiries related to the data; and
- Data Integration and Interoperability: Metadata enables data integration and interoperability
  by providing information about data structures, formats, and relationships. It helps users
  understand how different datasets can be combined or linked, facilitating data integration
  across systems and enabling seamless data exchange.

The metadata is created based on the standard and guidelines of ISO, specifically ISO 19115 (Geographic Information-Metadata) considering the entire schema classes and elements. Although the ISO's metadata framework encompasses several components, for this edition, only seven specific metadata schema classes were utilized. These classes include data identification information, contact information, data quality, date information, mode of acquisition, spatial reference system, and distribution. Figure 6 illustrates the metadata classes and their elements used in the context of



SI	Agency	Data	Data Acquisition Model	Geoprocessing Method
1	Department of Forest and Park Services (DoFPS)	Key Biodiversity Area (KBA)	Handheld GPS and SW Maps (Mobile App). Also used Google Earth Pro to map inaccessible areas.	Data submitted as it was maintained previously by the Department.
	` '	Protected Area (PA)	Delineated on Topographical map and Google Earth Pro and processes using ArcGIS and QGIS.	Since protected areas were delineated using old international boundaries, realignment of the map with that of international boundary and district boundaries was perceived necessary and aligned accordingly.
		Community Forests (CF)	Handheld GPS, SW Maps (Mobile App) and Google EarthPro	Entire CF boundaries had to be validated overlaying updated cadastral maps provided by NLCS. The cadastral maps were clip over CF maps area recalculated
		Forest Management Unit (FMU)	Handheld GPS, SW Maps (Mobile App) and Google Earth Pro	Data submitted as it was maintained previously by the Department.
2	Department of Geology and Mines (DGM)	Prospective Mineral Zone and Existing Mines	Total Station, GNSS-RTK, handheld GPS, Back-Bearing	oposheet-wise geological mapping and site-specific detailed studies on larger scales was carried out. These maps were georeferenced and digitized for the purpose of zoning. Wherever large scale maps were absent, small scale maps were used for the zoning process. The "prospective mineral zone and mining area" is created by combining different mineral zones, including industrial minerals, metallic minerals, fuel minerals, and construction materials. Since data from various sources is used to delineate this zone, the highest accuracy of this zone would be on a scale of less than 1:50,000 only. Approximately 11.56% or 4,438 square kilometers of the total area are designated under this zone.
3	Department of Energy (DoE)	Existing and Under Construction Hydropower Plants	Total station, GNSS, DGPS, Satellite imageries, Google Earth Pro	Merged all the point data(Dam & Powerhouse) and line data (waterways) of both the Existing and Under Construction Hydropower plants. Verified the Surface Powerhouse location against the NLCS cadastral data and reclassified the Land Use Zone as "Industrial" zone
		PowerLine and RoW Buffer	Handheld GPS, Spatial Analysis Tool (Buffer)	The line data of the transmission lines were in separate layers, so they were merged in a single layer. Also the RoW buffer has been compiled in one layer.
		Power System Master Plan (PSMP) 2040 sites	Digital Elevation Model (DEM), Google Earth Pro and Satellite Imageries	Data submitted as it was maintained previously by the Department.
4	Department of Surface Transport (DoST)	Road Data and Buffer	GPS Logger, Contour Camera and dash cam, Spatial Analysis Tool (Buffer)	50 feet buffer zones for all national highways data.
5	Department of Agriculture (DoA)	Protected Chhuzhing	Processed by buffering and clustering reclassified cadastral Chhuzhing data provided by NLCS.	5 meter buffer around the chhuzhing plots and dissolving the intersected boundary to cluster the contiguous chhuzhing plots within 10 meter distance. The Chhuzhings within a same buffer polygon with a combined total area of 10 acres and above within an altitude of 2500 meters are classified as protected chhuzhing.
		Regulated Chuzhing	Processed by buffering and clustering reclassified cadastral Chhuzhing data provided by NLCS.	5 meter buffer around the chhuzhing plots and dissolving the intersected boundary to cluster the contiguous chhuzhing plots within 10 meter distance. The Chhuzhings within a same buffer polygon with a combined total area less than 10 acres or located above an altitude of 2500 meters are classified as regulated chhuzhing.
6	Department of Culture and Dzongkha Development (DoCDD)	Conservation zone and Buffer zone of Heritage sites	Extracted from cadastral map and rationalized for inclusion or exclusion of certain necessary features or area of conservation zone.	Buffer zones are generated considering:  300 m buffer from the boundary of the core zone;  Visual integrity with respect to view points, angle of view,foreground and backgrounds of heritage;  Private lands that either falls inside partially or completely'; and  GIS tools are used in generating buffer zones for scientific and rational approach thereby eliminating human discriminations and errors.
7	National Land Commission Secretariat (NLCS)	Cadastral Reclassified	The data is acquired using the Total station and GNSS-RTK equipment.	Extracted ownership and land type based on the cadastral map and Thrar database. Generalised and reclassified the land type to land use with reference to other available data like building footprint, nye atlas, geographical names and satellite images.
8	Department of Human Settlement (DHS)	Urban Boundary	Digitized from 1:50k topo base map	Thromdes and Boundaries 2nd July 2010 has been used as the basis of the Zone. The Zone is established based on the Thromdes and Boundaries of 2nd July 2010. The NLCS provided the spatial data for the thromde boundary of 2010, but the projection system and Datum were not aligned with the DrukRef03. Therefore, in collaboration with NLCS officials a datum transformation was performed on the thromde boundary of 2010, and it was reprojected onto the DrukRef 03 reference system. However, there have been some settlements that have expanded their boundaries, as well as newly planned settlements that have received approval and been implemented on the ground. For these settlements, their latest boundaries have been utilized. In the strategic zones, all planning boundaries have been incorporated.
9	Department of Industry (DoI)	Industrial Parks (IP)	The boundary of IP was demarcated using the total station instrument.	Data submitted as it was maintained previously by the Department.
10	Department of Air Transport (DoAT)	Prospective Industrial Zones	The final boundary for proposed IP is not yet endorsed.	Data submitted as it was maintained previously by the Department.
		Helicopter Landing Spots (Helipads)	Captured from Helicopter V2 Tracking System	Obtained an Excel file containing the coordinates for the operational helicopter landing spot. Converted the coordinates from degrees, minutes and seconds to decimal degrees and verified the location using Google Earth.  Converted the data for the operational helicopter landing spot into a shap file format.
		Flight Funnel Map for Paro International Airport	Surveyed and data captured using GNSS RTK & ToS by DHS Surveyors	Data submitted as it was maintained previously by the Department.
11	Department of Water (DoW)	Payment for Ecosystem Service (PES)	Delineated in Google Earth Pro	Data submitted as it was maintained previously by the Department.
		Potential Recharge Area	Delineated in a Google Earth Pro	Data submitted as it was maintained previously by the Department.
		Water sources	Geocoded using GPS	Data submitted as it was maintained previously by the Department.
		Ramsar Site	Surveyed using GPS	Data submitted as it was maintained previously by the Department.

NLUZ. More detailed and comprehensive metadata can be found in Appendix 3, providing additional information related to the dataset used in the NLUZ.

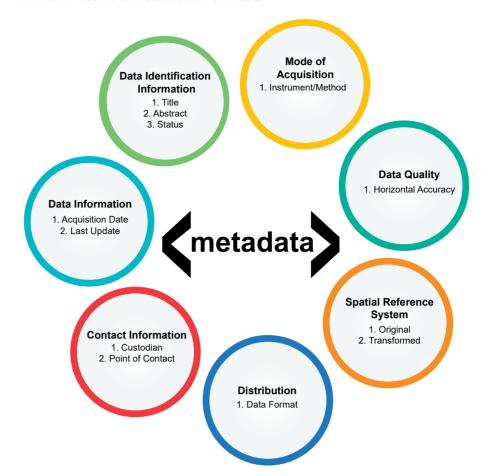


Figure 6: Metadata classes and elements

#### STEP 3: DEFINING FEATURE DATASETS AND ZONES

To support the parameterization, the technical definitions, either in the form of descriptive or normative were used for all thematic as well as fundamental geo-spatial layers used for NLUZ mapping and analysis. The definitions were based on relevant legal documents/references in voyage and credible national and international sources. In the event of the absence of definitions, TWG undertook confirming studies across and adopted the definitions.

#### Thematic Layers

As highlighted in Table 1, the major thematic layers viz. 9 macro zones; 23 micro zones and 23 nano zones; relevant Right of Ways (RoW) or buffers; LULC; and demography components have been considered for technical definitions as enlisted in the following:

Nine Macro, Twenty Three Micro and Twenty Three Nano Land Use Zones

#### Macro Zone 1: Agricultural Land

Agricultural land refers to land devoted to crop production and livestock rearing to produce food, fibre and fuel for human sustenance (DAO, 2023). It consists of four micro land use zones as follows:

MICRO ZONE 1.1. KAMZHING: Means agricultural land (with or without bench terraced) which can be used for multiple agricultural purposes including dryland cropping (cereal crops, vegetables, MAPS), establishment of orchards, plantation crops and improved pasture.

MICRO ZONE 1.2. PROTECTED CHHUZHING: Means irrigated and bench terraced agricultural land that are demarcated and mapped out in clusters to be protected and used for paddy cultivation only to ensure at least 35% rice self-sufficiency for all times to come. Protected chhuzhing will not be allowed for conversion or other agricultural use (DoA, 2023).

MICRO ZONE 1.3. REGULATED CHHUZHING: Means irrigated and bench terraced agricultural land that are outside of Protected Chhuzhing, which can be used for paddy production (if owners are interested) and other agricultural purposes as in Kamzhing (DoA, 2023).

Micro Zone 1.4. Agricultural Leased Land: Refers to productive state land leased for commercial agriculture and livestock farming for a defined period of time with a right to use land but no ownership of land (DoA, 2023).

#### Macro Zone 2: Rural Settlement

Refers to settlement other than defined/ demarcated urban settlements, which includes residential and institutional land used for dwellings or some form of rural habitations in clusters or scattered setups. It is also defined as settlement for displaced populations settled on land outside of cities and towns and the population is often dependent on agricultural and pastoral practices and has fewer community infrastructure systems than in urban settlements (UNHRC, 2020).

MICRO ZONE 2.1. RESIDENTIAL LAND: Means a registered land for dwelling house both in Thromde/urban and rural areas (Land Act, 2007).

MICRO ZONE 2.2. INSTITUTIONAL LAND: Means the registered land for office complexes, research stations, academic, medical, and religious establishments (Land Act, 2007). Institutional land use within Thromde boundary is classified under the urban zone.

#### Macro Zone 3: Sustainable Forest Management Area (SFMA)

Refers to a designated area or region of the forests where the management practices and activities are carried out in a manner that ensures the long-term health and productivity of the forest ecosystem while meeting the social, economic, ecological, and cultural needs of present and future generations. Sustainable forest management involves balancing the utilization of forest resources with the conservation and protection of forests, ecosystems, biodiversity, and other environmental values. It includes scientific management areas such as FMU, working scheme, CF and Local Forest Management (Forest and Nature Conservation Code of Best Management Practices of Bhutan, Vol

MICRO ZONE 3.1. FOREST MANAGEMENT UNIT (FMU): Means an area of State Reserved Forest Land designated for scientific management of forest (FNCA, 2023).

MICRO ZONE 3.2. COMMUNITY FORESTS (CF): Means any area of State Reserved Forest Land designated for management by a local community (FNCA, 2023).

MACRO ZONE 4: NATURE CONSERVATION AREA (NCA): Means any designated area that is primarily established for the conservation and protection of natural ecosystems, biodiversity, and ecological processes to safeguard unique or sensitive habitats, endangered species, or areas of high ecological value. It includes areas declared to be a National Park, Wildlife Reserve, Nature Reserve, Protected Forest, Biosphere Reserve, Critical Watershed, Biological Corridor or any other area meriting protection. The primary focus in these areas is the preservation of natural resources, including flora, fauna, landscapes, and natural features, while restricting or regulating human activities that may harm or disrupt the ecosystems (FNCRR, 2017)

MICRO ZONE 4.1. PROTECTED AREA (PA): Means an area, which has been declared to be a National Park, Wildlife Reserve, Nature Reserve, Protected Forest, Biosphere Reserve, Nature Reserve, Strict Nature Reserve, Critical Watershed, Biological Corridor, or any other area meriting protection (FNCA, 2023).

NANO ZONE 4.1.1. NATIONAL PARK: Means large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities (Forest & Nature Conservation Code, 2021).

NANO ZONE 4.1.2. WILDLIFE SANCTUARY: Is an area where animal habitats and their surroundings are protected from any sort of disturbance (Forest & Nature Conservation Rules & Regulations,

NANO ZONE 4.1.3. STRICT NATURE RESERVE: Means protected areas that are strictly set aside to protect biodiversity and possibly geological/ geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring (Forest & Nature Conservation Code, 2021).

NANO ZONE 4.1.4. BIOLOGICAL CORRIDOR: Means an area set aside to connect one or more Protected Areas (Forest & Nature Conservation Rules & Regulations, 2017).

NANO ZONE 4.1.5. BOTANICAL PARK: Are those areas that are preserved and maintained for insitu conservation of floral diversities.

Except for the biological corridor (4.1.4) and botanical park (4.1.5), the DoFPS has identified four

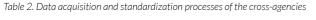
- a. Core Zone: Means an area within a protected area undisturbed by significant human activity having high conservation values for the persistence of flora and fauna of international, national or local importance including resident or migratory fauna (FNCA, 2023).
- b. Transition Zone: Means an area of interdependence between wildlife and local communities within a protected area wherein, traditional and legal rights for sustainable use of natural resources is permitted for a designated period of time in a year (FNCA, 2023).
- c. Buffer Zone: Means an area within a protected area adjacent to core and transition zone that provide cushioning function when the core or transition zones are located in the immediate vicinity of anthropogenic disturbances both from within and outside of the protected area (FNCA, 2023).
- d. MULTIPLE USE ZONE: Means an area within a protected area which may include settlements, built-up areas, private registered lands and resource allocation areas for the protected area residents (FNCA, 2023).

MICRO ZONE 4.2. OTHER EFFECTIVE AREA-BASED CONSERVATION MEASURES (OECM): Are areas achieving the long-term and effective in-situ conservation of biodiversity outside of protected

NANO ZONE 4.2.1. KEY BIODIVERSITY AREA (KBA): means sites contributing significantly to the global persistence of biodiversity (IUCN, 2016). In the context of Bhutan, the word 'global' in this definition may be replaced with 'national' when deemed necessary, and 'sites' shall refer to 'areas outside protected areas'. As such, KBAs are sites outside protected area networks, contributing significantly to the global and/or national persistence of biodiversity.

NANO ZONE 4.2.3. HIGH CONSERVATION VALUE: High Conservation Value (HCV) is an approach to enable informed decision-making [decision makers] on how to maintain the important cultural and natural heritage found outside the protected area system (National Interpretation for the Identification of High Conservation Values in Bhutan, 2022).







MICRO ZONE 4.3. SIGNIFICANT WATERSHED: Refer to an area which is drained by a river or its tributaries, and which protects the supply of water for drinking, irrigation, flood control, hydroelectric projects, and related purposes.

NANO ZONE 4.3.1. CRITICAL WATERSHED: Means any area critical for protecting the supply of water for drinking, irrigation, flood control, hydroelectric projects or related purposes which has been declared to be a critical watershed by the Parliament (Forest & Nature Conservation Rules & Regulations, 2017).

NANO ZONE 4.3.2. POTENTIAL RECHARGE AREA: Shall mean a land area in which water percolates through the soil to recharge under aquifers that forms marsh, fen, bog, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh or brackish, including snow and glaciers, etc. (Draft FNC Bill, 2021).

NANO ZONE 4.3.3. PAYMENT FOR ECOSYSTEM SERVICES: Refers to a "pay for performance" approach to financing the conservation of natural resources whereby Ecosystem Services (ES) providers receive payments (economic incentives) from ES beneficiaries/users that are conditional on specific conservation performance. The common types of PES schemes include watershed services, biodiversity protection, scenic/landscape beauty, carbon sequestration and bundled ecosystem services (Watershed Management Division, MoAF, 2017).

NANO ZONE 4.3.4. WATER SOURCES: These are point data recorded above the water tapping point, an inventory of water sources currently used for drinking, irrigation and commercial purposes by our people in all the 20 Dzongkhags.

MICRO ZONE 4.4. WETLAND: Means areas of marsh, fen, bog, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh or brackish, including snow and glaciers.

NANO ZONE 4.4.1. RAMSAR SITE: Ramsar Sites are wetlands of international importance that have been designated under the criteria of the Ramsar Convention on Wetlands for containing representative, rare or unique wetland types or for their importance in conserving biological diversity (Ramsar Convention, 1971).

NANO ZONE 4.4.2. WETLAND OF NATIONAL IMPORTANCE (INCLUDING WETLAND CATERING TO WATER SOURCES): includes any wetland (marsh, fen, bog, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh or brackish, including snow and glaciers, etc.) that may have spiritual/religious, cultural, socio-economic, habitat of endangered, rare, endemic flora and fauna, etc.

#### Macro Zone 5: Industrial

It refers to a tract of land developed and sub-divided into plots according to a comprehensive plan with the provision of roads, transportation and public utilities, sometimes with common facilities as well, for use by a group of manufacturers (UNIDO, 2019).

MICRO ZONE 5.1. MANUFACTURING AND PRODUCTION INDUSTRY: Refers to physical and chemical transformation of materials or components into new products whether the work is performed by power-driven machine or by hand, whether it is done in a factory or in the worker's home, and whether the products are solid at wholesale or retail. The Manufacturing and Production Industry includes:

- Mineral and Chemical based industry (heavy industries such as Ferro alloys, silicon, lime manufacturing, etc);
- Agro and Food-based industry (Poultry processing, breweries, food, beverage processing, production of drink and bottled water, etc);
- Wood and Forest-based industry (Integrated Wood Based activities, bamboo products, furniture house);
- Other industries (Plastic based industry, manufacture of pipes trays, textiles, bricks); and
- Electricity generation (hydropower projects).

MICRO ZONE 5.2. SERVICE INDUSTRY: The Service Industry covers all the activities where labor is the main input and the activity is geared towards meeting the direct needs. The service Industry includes hotels, consultancies and hiring, repairs and maintenance, transport and communication, financial and insurance services, and education and medical services (MoIT, 1994).

MICRO ZONE 5.3. EXISTING MINES: Means land covered under a mining lease (Mines and Mineral Management Act. 1995).

#### Macro Zone 6: Cultural Heritage

The cultural heritage zone comprises of immovable cultural property, heritage sites and intangible cultural heritage (Cultural Heritage Bill of Bhutan, 2016),

MICRO ZONE 6.1. RELIGIOUS SITES: Means sites which may not be categorized as heritage sites but hold religious importance like new temples, registered under Zhung Dratshang or religious organizations recognized by the law. Religious site also includes old Dzongs and Lhakhangs which hold both religious and heritage value. Example; Wangditse Lhakhang, Tashichho Dzong (DoCDD,2023).

MICRO ZONE 6.2. HERITAGE VILLAGE: Means designated village for cultural, historical, scientific, or other forms of significance that forms the part of national heritage landscape. Example: Rinchengang in Wangdue Phodrang, Trong village in Zhemgang (DoCDD, 2023).

MICRO ZONE 6.3. HERITAGE CONSERVATION ZONE: Heritage Conservation zone is defined as the area surrounding the Registered Heritage Building or the Designated Heritage Building that contribute to enhance the cultural heritage values of the Registered Heritage Building or the Designated Heritage Building and may include few cadastral private plots, cultural elements and natural features such as land, cliff, forest, gorges, river, lake, rock, cave, tree and other geological formations (DoCDD, 2023).

#### Macro Zone 7: Urban

The Local Government Act of Bhutan 2014 designates urban areas as Dzongkhag and Dzongkhag Yenlag Thromde. However, urban zones within the context of this edition are defined based on approved boundaries, which initially originated from the 2010 limits but have been expanded or adjusted over time. The boundaries are determined by the Department of Human Settlements (DHS), considering relevant factors such as urban growth, adoption of new planning boundaries, and conversion of rural land to urban precincts. These boundaries are not limited to a specific year but encompass various versions implemented on the ground. Under NLUZ, all micro zones and land uses within the urban zones are classified as urban, regardless of their development status. The management of micro zones is facilitated through a structural plan developed and implemented by the DHS. These areas, no longer included in the rural land database maintained by NLCS, undergo land pooling or reconfiguration to ensure planned and guided development. It is important to note that while some urban areas may not be fully developed, their land is maintained in an urban registry to accommodate future growth and development. The hybrid approach to urban zones in NLUZ considers multiple boundary versions and relies on the implementation of a structural plan to guide land use and promote sustainable urban development.

#### Macro Zone 8: Rangeland

Rangelands in Bhutan are synonymous with the term "Tsamdro", which basically means grazing land for livestock and wild ungulates (DoL, 2017). As per Land Act 2007, "Tsamdro" means the Government Reserved Forests land leased out (TUT) for grazing and improved pasture management as land use on the ground. The rangelands in Bhutan extend from subtropical zones in the south to the alpine zones in the northern parts of the country. The subtropical and temperate rangelands are found at elevations ranging from 150 to 3600 metres asl and the alpine meadows are found at an elevation range of 3600 – 5000 metres asl. However, in future editions, Rangeland shall subsume alpine shrubs, meadows, moraines, shrubs, snow and glaciers as well for inclusive land use and land cover management purposes, in concurrence with the Royal Command conveyed on 19th October 2017 towards achieving the four broad objectives of EPIC (Environmental conservation; Preserving & promoting culture; Integrity of territorial security and independence; and Conserving environment).

There are about 20 multi-sectoral agencies who are directly or indirectly involved in some activities in the rangelands, mostly in a piece-meal uncoordinated manner and in silos. These activities include, for NLCS to carry out Tsamdro survey and mapping; DoL's program support to herders and livestock; DoFPS's administration and management of forests flora and fauna; NBC's biodiversity initiatives; DAMC's support to the Bhutan Yak Federation and Yak Cooperatives; DoW and NCHM initiatives in managing wetlands and cryospheres; DoT's eco-tourism initiatives; RBA's border surveillance; DoE's electrification/energy supports; and other allied agencies in diverse extant and nature of supports. While the uncoordinated initiatives by different agencies are done with the best of intentions, they do not help weave an overall fabric that is sustainable and beneficial to the country in the long run.

In the meantime, the number of yak herders are in decline, young highlanders migrate to urban areas, grazing grounds are getting depleted and there are no signs of progressive improvement in the livelihood of the highlanders. For example, of the about 12,000 highland households in the 11 highland Dzongkhags, only 1,053 households own and herd yaks. Therefore, there is a compelling need for all the players to collaborate and co-create values through a well-coordinated effort. This recognition of Rangelands as a major land use is an attempt to bring all stakeholders onboard, towards harnessing the hidden potentials of Rangelands and Tsamdros for the larger national interests.

#### Macro Zone 9: Strategic Development

Areas identified for the strategic national priorities, aligned towards realizing the vision of developed Bhutan and onwards (TWG, NLUZ, 2023).

MICRO ZONE 9.1. SPECIAL ECONOMIC ZONES: Means demarcated geographic areas contained within a country's national boundaries where the rules of businesses are different from those that prevail in the national territory. In practice, SEZs may have more specific objectives, such as attracting foreign investment, targeting specific sectors, promoting exports, products, or "crosscutting" activities such as research and development ('Land Tenure and Development' Technical Committee, 2022).

MICRO ZONE 9.2. PROSPECTIVE INDUSTRIES: Means sectors or areas of production, manufacturing and service industries in nature that are expected to experience significant growth, development, or expansion in the future from a strategic stance (TWG, 2023).

NANO ZONE 9.2.1. PROPOSED INDUSTRIAL PARK: These are the potential sites to promote industries in future as and when needed. These sites are identified in consensus with a multi-sectoral team composed of relevant departments/agencies (DoI, 2023).

NANO ZONE 9.2.2. PROSPECTIVE MINERAL ZONE: Prospective Mineral Zone refers to an area that has been identified as having the potential to contain economically viable mineral deposits (DGM, 2023).

NANO ZONE 9.2.3. POTENTIAL SITES FOR STOL (SHORT TAKE-OFF AND LANDING) AIRPORT DEVELOPMENT: The prospective airstrips present in the document are the locations which have the potential to become airstrips based on a study undertaken by BCAA, NLCS & DoAT. The study is very preliminary in nature and is based on desktop analysis using Google Earth and CartoSat DEM. Land selection criteria based on land gradient and flight funnel obstructions were carried out and subsequent analysis led to the recommendation of these potential sites with varying degrees of advantages and disadvantages (DoAT, 2023).

NANO ZONE 9.2.4. PROSPECTIVE ENERGY PLANS: According to the Power System Management Plan 2040 report, prospective energy plan means the overall hydropower potential including the techno-economic potential of the country considering the availability of the detailed hydrological information & data based on the newly established hydrological network and advanced planning technologies (DoE, 2019).

MICRO ZONE 9.3. ALIENABLE LAND: Tentative developable state land identified and mapped considering slope, proximity to water source, distance from urban centers, land use land cover, nature protection, hazard and approved settlement plans. These alienable lands shall constitute the land identified by the rehabilitation program, local government and pilot conducted in Samtse Dzongkhag using the MCDA approach (TWG, 2023).

NANO ZONE 9.3.1. ALIENABLE LARGE-SCALE FARMING: Refers to an alienable state land with 10 acres and above located within an altitude of 2000 msl and slope of within 30 degrees feasible for large-scale commercial agriculture farming (DoA, 2023).

MICRO ZONE 9.4. AESTHETIC STRATEGIC AREA: For the purpose of security, aesthetic and conservation point of view, certain areas are maintained either in the form of buffer or key land uses (TWG, 2023).

NANO ZONE 9.4.1. GYALSUNG VISIBILITY AREA: As per the instruction of Gyalsung Academy, all the state land, especially the peaks surrounding and overlooking the Bongdema Gyalsung site, is to be put under a green zone where the construction won't be allowed (NS/Tareythang/Gen-01/744 dated 18th October, 2021).

MICRO ZONE 9.5. HUMAN SETTLEMENT PLANS: Refers to a comprehensive and strategic blueprint that outlines the systematic development and management of urban and rural areas within the country. It is a well-structured document prepared by the Department of Human Settlement under the Ministry of Infrastructure and Transport, aiming to guide and regulate the growth and transformation of towns, villages, and urban regions in a sustainable manner. The human settlement plan includes National Spatial Plan, Regional Spatial Plan and Local Spatial Plan such as Valley Development Plan, Structure Plan, Local Area Plan and Action Area Plan (TWG, 2023).

NANO ZONE 9.5.1. PROSPECTIVE TOWNS & URBAN AREA: Refers to the towns and urban regions identified by the Department of Human Settlement, where any human settlement plans such as structural plan, valley development plan, local area plan, etc., have not been implemented on the ground, both in the core and periphery areas. Additionally, these areas still have their cadastral database managed under the rural land database maintained by NLCS (TWG, 2023).

NANO ZONE 9.5.2. NATIONAL CAPITAL REGION: Towards sustainable development and expansion of national capital territory concerning its carrying capacity over the time, the National Capital Region (NCR) plan has been initiated with hosts of designated activities that would offload especially to peripheral and crossover towards Paro and across. Activities underscore, viz. industries, auto city, wholesale market and storage, military based and police, satellite towns/villages, olympic city and of similar scopes (DHS and TWG, 2023).

NANO ZONE 9.5.3. LINKED URBAN CENTRES (LUC): The LUC is a concept in which a combination of two towns creates a centre for social services, markets and economic activities in a region (The Project for Formulation of Comprehensive Development Plan for Bhutan 2030 Volume I, 2019).

Nano Zone 9.5.4. Thimphu-Paro Regional Strategy: This refers to the Regional Spatial Strategy for the Thimphu Paro Region - part of the National Capital City Region - which extends from the North Wang Chhu River/Kabesa Valley, to the Upper Paro and Dopshari Valleys. The Strategy established a sustainable Basis for Planning as a range of population and employment figures which constitute the estimated limit of sustainable growth in the region/ It also establishes a regional spatial framework which outlines the possible spatial distribution of the Basis for Planning, following the principles of 'good growth in the right places' (Thimphu Paro Regional Strategy, 2023).

The synopsis of zone categories that have been established through the NLUZ exercise and its basic visualization is as shown in Figure 7.

#### Land Use Land Cover (LULC)

The most recent LULC mapping (2020) carried out by NLCS is considered a key attribute in the NLUZ to ensure the actual land cover on the ground considering the major land cover classes. A total of 13 major land cover classes were adopted based on the Land Use Land Cover 2016 for consistency and proper assessment of the land cover changes over the period of time. Bhutan's first LULC was mapped in 1997 using Spot imageries and aerial photographs through a land use planning project. Second and third were carried out in 2010 and 2016 respectively using ALOS and Landsat imageries (30 m) spatial resolution by the Department of Forests and Park Services (DoFPS), under the Ministry of Energy and Natural Resources, then the Ministry of Agriculture and Forest.

The 13 land classes from LULC are used in the NLUZ with the following technical definitions to support parameterization and comprehend classes clearly:

- i. **FORESTS:** Land with trees spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10%. It does not include land that is predominantly under agricultural or urban land use (National Forest Policy of Bhutan, 2011).
- ii. **ALPINE SCRUB:** Is a woody plant characterized by stunted growth (height less than 5 meters) due to harsh conditions. They are found at higher elevation above 3500- meters above sea level close to tree line.
- iii. **Shrubs:** Perennial plants with persistent and woody stems without any defined main stem with height less than 5 meters. It also includes abandoned agricultural fields with overgrown bushes and other regeneration in disturbed areas.
- iv. **MEADOWS:** Include any areas dominated by grasses or any herbaceous plant without or with few scattered trees or shrubs on it. It occurs at all elevations but is relatively more common at higher elevations.
- v. AGRICULTURE LAND: Includes only cultivated land at the time of land cover assessment. The sub-classes such as Chhuzhing, Kamzhing, and Orchard land type categories are merged in the class.
- vi. **Built UP Areas:** Include artificial constructions covering the land with an impervious (e.g., concrete, CGI sheet, thatch) surface. It includes airports, rural settlements, urban areas, schools & institutes, industrial areas, hospital premises, sewage treatment plant, sports and leisure facilities and roads.

Agricultural Land	_	Cultural Heritage	
Kamzhing		Religious Sites	
Protected Chhuzing		Heritage Village	Ę
Regulated Chhuzing		Heritage Conservation Zone	L
Lease Land		Urban	
Rural Settlement		Urban Zone	F
Residential Land			
Institutional Land		Rangeland	
Sustainable Forest		Tsamdro	
Management Area		Strategic Development	t
Forest Management Unit		Special Economic Zone	2
Community Forest		Prospected Industries	
		Proposed Industial Park	Ş
Nature Conservation		Prospective Mines and Minerals	
Area		Feasable Sites for Airport Development	2
Protected Area		Hydropower Prospected dam	
Core Zone		Hydropower Prospected Powerplant	
Transistion Zone		Hydropower Prospected Waterway	-
Buffer Zone		Hydropower Prospected Reservoir	
Multi Use Zone		Alienable Land	
Biological Corridor / Botanical Park	5 5 5	Alienable Land	
Other Effective Area-based		Alienable Large-scale Farming	
Conservation Measures Key Biodiversity Area	620	Esthetic Strategic Area	
High Conservation Value	A. 11 A.	Gyalsung Visibility Area	
•		Human Settlement Plans	
Significant Watershed Critical Watershed	X	Prospective Town & Urban Area	
Potential Recharge Area		National Capital Region	
Payment for Ecosystem Services		Linked Urban Centres	
Water Sources	ESSECT	Paro-Thimphu Regional Strategic Area	
water Sources		Paro-Thimphu Regional Strategic Sites	
Wetland			
Ramsar Site		Right Of Way / Buffer	
Wetland of National Importance	X	Heritage	Œ
Industrial		Road	Ī
		Powerlines	
Manufacturing and Production		Flight Funnel	Ю
Service		Hazard and Risk	_
Existing mines		Rain Induced Flood	ī
Added data		Glacier Lake Outburst Flood	ī
		7 333 333 3 3 5 5	- t
Airport			
Airport Helipad	0		
·	0		

- vii. Non-Built-Up Areas: This class is defined by an absence of the original (semi-) natural cover mainly due to anthropogenic factors. It includes waste dump sites, mines, stone quarries, and other extraction sites.
- viii. **W**ATER **B**ODIES: This class includes both natural and artificially created water bodies (including rivers and lakes).
- ix. Snow and Glaciers: This class includes both perpetual and seasonal snow cover and glaciers.
  x. Moraines: Refers to a mass of rocks and sediments carried down and deposited by a glacier typically as ridges at its edges or extremity.
- xi. **LANDSLIDE:** This class includes mass movement of soil debris due to gravitational force triggered by other factors such as rainfall and earthquakes.
- xii. Rocky Outcrops: Refer to natural cliffs and rocky areas.
- xiii. SANDY BANK: This class refers to the sandy area that was deposited along the riverbanks. In summer this class may be covered under the river. However, during the winter season, it gets dried up and deposited as a sandy bank along the river.

#### **Demography Component**

As a point-data to form an integral part of a NLUZ, some components of demography are used, such as population composition, household, population density and mean household size. This is taken as the basis for the population density and per capita land use in both aggregated and disaggregated land uses.

#### Right of Way/ Buffer

- Heritage: Heritage Buffer zone is defined as the area surrounding the conservation zone of the Designated Heritage Building or the Important Cultural Site for effective protection of a Designated Heritage Building or Important Cultural Site (DoCDD, 2023).
- II. Road: Construction of temporary, semi-permanent and permanent structures shall not be permitted within the road right of way and road control area except for the purposes of road construction and maintenance. The road right of way shall be 100 feet wide for national highways, district roads and feeder roads except within the designated municipal boundary. The horizontal distance between the edge of the carriageway and the boundary of the road right of way shall be 50 feet on both sides (The Road Act Of The Kingdom Of Bhutan, 2004).



agriculture

Kamzhing

Lease Land

Tsamdro

Protected Chhuzing

Regulated Chhuzing

culture and heritage

Conservation

Religious Sites

Heritage Village

III. Powerlines: means conductors, poles/pylons/towers, and transformers and associated equipment used to transmit, transform, and distribute electrical power to the end user at a voltage of 11 Kilo-Volt and above (RoW Guidelines for Power Lines, 2023 - Draft). RoW is defined as "strips of land used by the electric utilities for the safe and reliable transmission of electricity" (Nowak, et al., 1992, p.828). It is the corridor, in which the transmission company owns its right to use the land for operation and maintenance of transmission facilities for all categories of land ownership, whether state or privately owned. The transmission company owns the right to access within the width of the RoW corridor for maintenance of the facilities without acquiring the land except for land occupied by the tower base but imposes restrictions to the landowners, who hold the land ownership. The Right of Way (RoW) for the powerlines to set a buffer for land use in NLUZ is considered based on the voltage level as below:

Powerlines					
SI No	Voltage Level (kv)	RoW Width (meter)			
1	400 (S/C)	52			
2	400 (D/C)	46			
3	220	35			
4	132	27			
5	66	18			

The RoW requirements specified in the above table are the maximum values of the total to be maintained considering both sides of the line. However, these may vary depending on the site conditions, land type/use, urban/rural settings, etc. as determined by the licensee.

- IV. Flight Funnel: The flight funnel is derived from the obstacle control requirement by the ICAO & BCAA regulations to keep the take off & approach area/surface free from obstacles (DoAT, 2023).
- V. Hazard and Risk: There are different kinds of hazard and risk maps that can be incorporated in the NLUZ. Some of the common hazard maps include earthquake, flood, seismic, landslide, forest fire and GLOF hazard maps etc. In the current phase of NLUZ, critical risk mapping of rivers based on the hazard maps carried out by erstwhile MoWHS is included for the NLUZ. There are three levels of risks identified along the rivers to determine rain-induced flood. However, the data covers only major/ critical settlements for this edition. The Glacier Lake Outburst Flood (GLOF) hazard map is also used.

#### Fundamental Geo-spatial Layers

To describe the way in which a geographic area is utilized for a particular purpose other than macro land uses, it is classified as thematic land uses. It is used to identify and map areas of land that are used for specific activities and purposes.

RIVER & WATER BODIES: The water flowing on land surface, typically of 13 river types as per global classification. However, in the Bhutan context, these shall be classified into four grades as per prevailing topographic map classification. This includes water sources, glaciers, lakes, snow as grade 1; streams originating from the source as grade 2; tributaries from streams as grade 3; and rivers as grade 4. For the purposes of NLUZ, water bodies grades 1 and 2 shall consider a buffer of 15 meters and grade 3 and 4 shall have a buffer of 30 meters. The land allotment within 30 meters of the bank or edge of any river and 15 meters of stream or water source is not considered. However, in cases where the proposed applied land is adjacent/surrounded by existing private registered land, such cases shall be reviewed by the Department" (Forest & Nature Conservation Rules & Regulations, 2017).

**ROAD NETWORK:** A road network shall mean all types of roads to which the public has access including National Highways, Dzongkhag Roads, Farm Roads, Thromde Roads and Access Roads (Road Act of Bhutan, 2013).

**PowerLines:** Powerlines means conductors, poles/pylon/towers, and transformers and associated equipment used to transmit, transform, and distribute electrical power to the end user at a voltage of 11 KiloVolt and above (RoW Guidelines for Power Lines, 2023 - Draft).

**CADASTRAL AND THRAM DATABASE:** A cadastral and Thram database contains information such as land ownership, boundaries, and other relevant spatial and attribute data of a land parcel (Land Act, 2007).

**ADMIN BOUNDARY:** An admin/administrative boundary refers to a defined and demarcated line that separates territorial divisions or administrative jurisdictions such as Dzongkhags, Gewogs, etc.

CONTOUR (1:50K & 1:25K): Contour refers to lines that represent the topography of a land. These contours have been used in the scale of 1:50K and 1:25K in the zoning map respectively.

BHUTAN GLACIAL LAKE INVENTORY: It is a comprehensive survey and database that identifies and assesses glacial lakes in the country. It documents the location, size and other characteristics of glacial lakes which provides information on monitoring and managing the risks associated with Glacial Lake Outburst Flood (Bhutan Glacial Lake Inventory, 2021; NCHM, 2021).

BHUTAN GLACIAL INVENTORY: It is also a comprehensive survey and database that catalogues and documents the glaciers within the country. The inventory was updated using the latest Sentinel-2 MSI (Multispectral instrument) of the European Space Agency. It provides information on the location, size, and other characteristics of the glaciers in the country, contributing to research, monitoring, and understanding of glacial dynamics and their potential impacts on water resources and the environment (Bhutan Glacial Inventory 2018; NCHM, 2019).

**GEOGRAPHICAL NAMES:** It is a name assigned to a location on the Earth's surface, irrespective of the existence or absence of administrative boundaries. It includes names of countries, regions, administrative divisions, populated places, physical features, and other similar entities (United Nations Conference on the Standardization of Geographical Names (UNCSGN, 1967).

HERITAGE SITES (NYE ATLAS): It refers to the geospatial location (coordinates) of the heritage sites documented in the NyeAtlas.

**INSTITUTIONS:** It is the geospatial location (coordinates) of the institutions of Bhutan.

ADMIN POINTS (GEWOGS): It is the geospatial location (coordinates) of the Gewog office of Bhutan.

**BUILDING FOOTPRINTS:** Refers to the areas of a building measured from the outer surface of the exterior of the building multiplied by the depth measured in the same manner to give a square area.

**DEM:** A Digital Elevation Model (DEM) is a digital representation of the Earth's surface that captures the elevation data of the terrain. It consists of a grid of regularly spaced elevation values, allowing for analysis and visualization of topographic features.

SATELLITE IMAGERY (GOOGLE, OSM & BING): Satellite imagery refers to the visual representation of the Earth's surface captured by satellites orbiting the planet that provide access to satellite imagery, allowing users to view and explore high-resolution images of various locations around the world

#### STEP 4: GEO-PROCESSING AND MAP ANALYSIS

A database to store and manage all the valuable information collected from various stakeholders was established. This database served as a central repository, housing the extensive range of data that were gathered, including inputs from the stakeholders involved. The diligent organization and structuring of this database ensured efficient data management and accessibility throughout the analysis process. This allowed seamless integration of the gathered information into the map analysis, enabling a holistic examination of the zones and buffer areas.

In conducting a comprehensive map analysis, the available data of the macro zones defined initially, including buffer data (right of way) was utilized. The usage of GIS software such as QGIS, ArcGIS Desktop, and ArcGIS Pro allowed meticulous calculation of the overlapping areas across all platforms and ensured the accuracy and integrity of the analysis. Furthermore, conflict matrices, both among the eight macro zones and between the macro zones versus the buffer zones, were also developed.

#### STEP 5: MAP DESIGN

In the map design process, we undertook a comprehensive approach to ensure the creation of informative and visually appealing maps considering the following key steps:

- i. Understanding Objectives: We thoroughly understood the specific objectives and requirements of NLUZ to tailor the maps accordingly.
- ii. Analyzing User Needs: By considering the stakeholders and their expertise levels, we ensured
- that the maps were user-friendly and accessible.

  iii. Data Analysis and Organization: We carefully analyzed relevant spatial data, organizing it
- effectively for clear visualization.

  iv. Applying Cartographic Principles: We adhered to established cartographic principles, ensuring clarity, accuracy, and consistency in the map design.
- Iterative Discussions and Refinements: Engaging in iterative discussions, we actively sought feedback to improve the map designs.
- vi. Color, Symbol, and Layout: Thoughtful consideration was given to color and symbol selection, employing distinctive schemes for differentiation. Map layouts were designed for various scales and paper sizes, ensuring clarity and easy comprehension.
- vii. Approval and Finalization: The map designs underwent rigorous reviews, incorporating necessary changes before final consent.

By following this approach, we have successfully produced maps that play a vital role in NLUZ, providing essential information for the land use planning and decision-making purposes. The infographics as shown in Figure 8.1 and 8.2 are the key aspects of the map design process, intended to enhance the overall effectiveness and communication of NLUZ visualization.

#### **STEP 6: ZONED OUTPUTS**

The final map output of the NLUZ would be in two categories as follows:

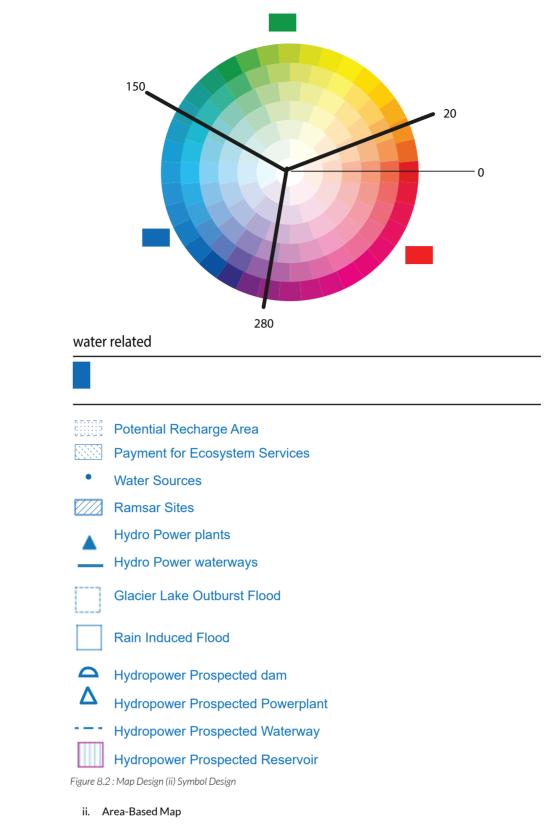
i. Scale-Based Map

In this category, the map output will be generated according to the scale specified by the user for a specific Area of Interest (AoI) and the desired paper size for the output map. The table below will provide more details:

Map output for country coverage							
Scale / Paper size	A0	A2	А3	A4			
300k	1 Sheet	4 Sheets	9 Sheets	16 Sheets			
50k		93 Sheets	186 Sheets	576 Sheets			
25k		370 Sheets	523 Sheets	2320 Sheets			
5k		9320 Sheets	13185 Sheets	37280 Sheets			

Table 3: Scale-based maps for the whole country without marginal informations

The scale determines the level of detail on the map, with larger scales providing more detailed representations of smaller areas. The AoI can range from a city or town to an entire country, depending on the chosen scale. The paper size options include A4, A3, A2, A1, and A0, with larger sizes accommodating maps with more detailed information.



This category includes two subcategories, viz. Dzongkhag Map and Gewog Map, wherein Dzongkhag Map focuses on a specific Dzongkhag, which is a district-level administrative confines. The map will provide detailed Dzongkhag level zone information and land use conflict about the selected Dzongkhag; and Gewog Map is a sub-district within a Dzongkhag, which will zoom in further to grassroot level and provide a detail representation of a specific Gewog with some demographic information, including its zones and land use conflict.

The area-based maps aim to provide detailed information about specific administrative confines of the country, catering to the user's needs for analysis, planning and references. This would be first of its kind in the geospatial initiatives of the country that would bring out and provide spatial references and platform at the grassroot Local Government (LG) level to facilitate their decision making processes.

#### **ANALYSIS AND FINDINGS**

As per the registry or Thram database, there are over 23 conventional land types which appear to have been recorded for administrative purposes. But most of them on the ground do not have land uses pursuant to the registration. The land types as per the database and its uses on the ground discrepancy misleads the land's functional aspect. The seamless match of registration and uses have numerous benefits including critical policy and planning decision-making processes. For instance, the match of registration and uses would foster rationalized land taxation, valuation and facilitate efficient conveyances. It would also discourage or curb unrealistic speculations, and support spatial and empirical-based land use planning. Based on these underpinnings, the exercise attempts to determine the actual land uses on the ground considering the current contexts and dynamics

The exercise decides to retain only eight land uses on the ground from the total of 23 land types as per the registry including the Strategic Development Zone (SDZ) as another land use type. Therefore, the exercise determines a total of nine macro, 23 micro and 23 nano land uses. The nine macro land uses are, Agricultural Land, Cultural Heritage, Industrial, Nature Conservation Area (NCA), Rangeland, Rural Settlement, Sustainable Forest Management Area (SMFA), Urban and Strategic Development Zones (SDZ). These macro land uses are classified under the thematic layers of the zoning, within which, there are other thematic layers, viz. Right of Way (RoW), Hazard and Risk maps, Land Use Land Cover (LULC) 2020 and Flight Funnel zones.

To ensure comprehensive determination of land use conflicts, about 16 fundamental geospatial layers were also considered for this edition. The layers are; river and water bodies, cadastral and Thram database, administrative boundary, contour, Bhutan glacial inventory, Bhutan glacial lake

inventory, geographic names, heritage points (Nye Atlas), institution points, administrative points, powerlines, road network, hydropower plants, building footprints, DEM and satellite imagery.

Manufacturing and Production

Existing mines

industry

The exercise also inventoried about eight prospective land uses within the Strategic Development Zone (SDZ) category such as Special Economic Zones, Prospective Industrial Zones, Prospective Mineral Zones, Potential Sites for STOL (short take-off and landing) Airport Development, Prospective Energy Plans, Alienable Land, Aesthetic Strategic Area, and Human Settlement Plans. However, these are not used for determining land use conflicts with eight other macro land uses and RoWs/buffers for now in this report.

#### **MACRO ZONES BY LAND USES**

nature related

Core Zone

Buffer Zone

Transistion Zone

Multi Use Zone

**Biological Corridor** 

Key Biodiversity Area

Community Forest

human development

Residential Land

Urban Zone

\_\_\_\_ Institutional Land Service

settlements

Forest Management Unit

forest

The eight macro land uses, excluding SDZ constitute about 6,210,176.574 acres (65.46%) of the country's total geographical area, and from the overall land uses, NCA constitutes 79.18% of the land uses, followed by SFMA with 11.63% and agricultural land with 6.59% as illustrated in Figure 9. The rest of the land uses constitute only between 0.50% to 1.50%. This indicates Bhutan's land uses are conservation and agrarian predominance.

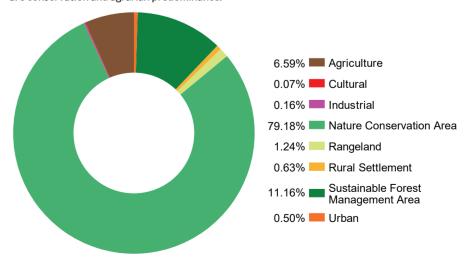
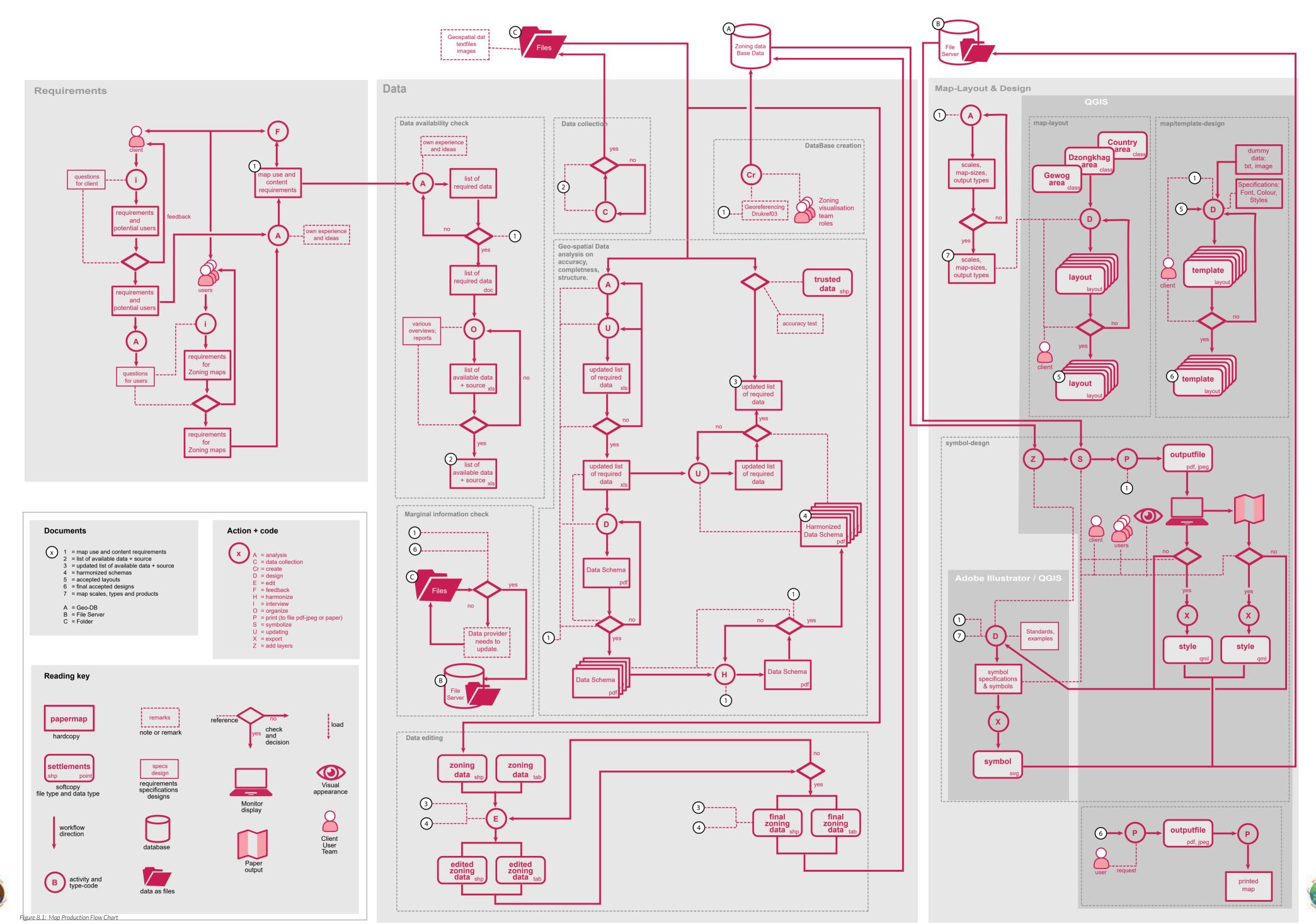


Figure 9. Macro Zones by Land Use Share.

Similarly, from the overall country area, the nature conservation area (NCA) inclusive of sustainable forest management area (SFMA) constitutes 60.85%, followed by agriculture with 4.41%, industrial (manufacturing/ production and services) with 0.11%, human settlements (rural and urban) with 0.76% and others (culture and rangeland) with 0.88% as highlighted in Table 4.







An inconsistent and multiple land use data exists in absence of a common platform or single source of truth. This exercise attempts to resolve data unreliability and inconsistencies by establishing one reliable data repository platform for seamless dissemination of geospatial data within and across agencies in the country. For instance, FAO and World Bank reports 13.45% against 4.41% agricultural land coverage discovered by this NLUZ exercise. This is further corroborated by agricultural land zoning which has land use share of 6.59% as indicated in Table 4 and Figure 9. The calculation has not discounted the prevailing 66,120 acres of fallow land in the country.

	Area and percentage of key land uses in the country								
SI	Area Under Key Land Uses (Other than SDZ)	Area in Acres	Perce By County Area	ntage By Macro Zonation					
1	TOTAL Country area	9,487,364.000	100.00	65.46					
2	TOTAL macro land use zones	6,210,176.574	65.46	100.00					
3	Nature Conservation Area (NCA)	5,032,772.230	53.05	81.04					
4	Sustainable Forest Management Area (SMFA)	739,432.446	7.79	11.91					
5	NCA & SMFA	5692741.484	60.00	91.67					
6	Agricultural	418,561.253	4.41	6.74					
7	Industry (Manufacturing/Production & Service)	10,260.717	0.11	0.17					
8	Human Settlement (Rural and Urban)	71,719.156	0.76	1.15					
9	Other Macro Zones (Culture & Rangeland)	83,428.884	0.88	1.34					

Table 4: Area and Percentage of key land uses in the Country

The exercise has also delineated the entire Unzoned Areas (UA) which excludes macro zones and buffers, but includes the Strategic Development Zones (SDZ) areas. However, the topographical limitations are not considered in determining the actual areas of Unzoned Areas for now. There were about 3,360,113.938 acres, constituting 35.07% of the total country area under Unzoned Areas (UA). At this point in time, these Unzoned Areas (UA) may remain as potential for future uses and expropriations through scientific ways to confirm the alienability for right uses. To uncover these area of Unzoned Areas (UA), following geospatial analysis and steps were considered:

- From LULC 2020, selected the snow and glaciers, moraines, rocky outcrop, water bodies, landslides and sandy banks leaving behind agriculture, shrubs, alpine scrubs, forests, meadows, built-up and non-built-up areas;
- ii. Merged final buffer areas consisting of Right of Way for transmission lines and roads, flood hazard prone area map, heritage buffer zones and flight funnel;
- iii. An overall 8 macro zoned areas excluding SDZ were merged;
- iv. Merged all the three land uses, viz. selected areas from LULC 2020, merged buffer and macro zone areas; and
- v. Subtracting the sl.iv defined above from the overall country area gives the Unzoned Areas (UA) of about 3,361,506.088 acres which can be explored for the possible use and various expropriations in times to come.

#### POPULATION DENSITY AND PER CAPITA LAND USE

Population density (Dp) is the number of people per unit of area, usually transcribed as 'per square kilometer' or square mile, and which may include or exclude, such as, areas of water, glaciers, moraines, rocky outcrops and other irrelevant land covers. Generally, this is calculated for a designated geographic area, county, city, country, territory or the entire world. However, in this report, units used are 'per square acre' and calculated based on two categories, viz. i) settlement

based Dp which is a combination of rural and urban settlements; and ii) country based Dp as aggregated national level indicated in Table 5.

The per capita land use has been calculated in five categories, viz. i) conservation land use (combination of NCA and SFMA); ii) agricultural land use (not discounting 66,120 acres of fallow land); iii) Settlement land use (combination of rural and urban); iv) Industrial land use; v) total macro land uses. To account average per household (hhs) land use, a consolidated number of households at the country level as per PHCB, 2017 is used and cross checked with mean household size of 3.9.

As enlisted in Table 5, land use Dp against both settlement and country based, and per capita land use in five categories are calculated corresponding to projected population for the next 10 years, intending to align with the country's 10 years development strategy 'Developed Bhutan 2034'.

On an average, settlement based Dp (rural and urban area based) stands at 11.433 people per acre and country based (aggregated) at 0.085 people per acre, which is also equivalent to 19.88 people per kilometer2. The per capita land use in conservation comes to 7.102 acres, agriculture 0.522 acres, settlement 0.88 acres, industrial 0.013 acres, and total macro land uses 7.697 acres. In the case of per household land use share, it falls between 30-38 acres based on consolidated national household figures and mean household size (3.9).

By any standard, given the geographical situation, Bhutan has one of the lowest per capita land holding in terms of land use point of view. The aggregate Dp comparison for the year 2020, Bhutan stands at 19.88 per person per kilometer<sup>2</sup>, which is closer to the OECD and high income countries, especially Scandinavian countries. However, given the lower middle income position, it is irrelevant to compare Bhutan with such a high income country. Bhutan must at least attain 125 people per kilometer2 or 5.345 people per acre by its income position. The reality is that the country's Dp still stands at 0.085 people per acre only, with a difference of 193.74%.

Similarly, to highlight some of the global scenarios on the land based resources available in per capita, in 2019, the global per capita value of agricultural land (0.6 hectares per person - 1.483 acres) marked large differences between the regions. With nearly 22.240 acres, Oceania had a value per capita nearly ten times larger than other regions. In 2019, Northern America had 3.213 acres per capita, followed by Latin America and Africa with similar values (2.719 and 2.224 acres per person each). Europe and Asia are 1.483 and 0.990 acres per capita respectively. Over 1990–2019, all the regions showed a reduction in the per capita value. Oceania and Africa both recorded a 50 percent decline since 1990. They were followed by Latin America and Europe, where the values of agricultural land per capita decreased by 35%. In Northern America, the value in 2019 was almost 30% smaller than in 1990. In Asia, where regional values and trends were largely driven by China, the per capita value declined by 14% since 1990 (FAO, 2022).

Furthermore, the average farm size was 3.213 acres in low income countries, 42.001 acres in lower middle-income countries, 58.812 acres in upper middle-income countries (excluding China) and 132.696 acres in high-income countries. In this regard, Bhutan falls far under the low income category in terms of per capita land holding in agriculture or any category of land uses apart from conservation and total macro land uses as indicated in Table 5. It is even 144.10% lower than low income countries.

Considering Bhutan's geographical limitations and allied challenges, it may be more pragmatic to address the landholdings or smallholdings issues through land optimization schemes for farming or any form of land use management and planning. With challenges faced from its limited arable land, like in Singapore, optimization would be the last resort for Bhutan. The "Limited Land, Unlimited Space" is how it is looked into in Singapore.

#### LAND USE CONFLICT ASSESSMENT

Generally, the competing sectoral interests within the prevailing system of decision-making process under the same political, economic and social context remains fundamental for any extent of perceived/actual land use conflict. However, there are cases, due to undue eminent domain prevailed often in some sectors resulting in land use conflicts. Nonetheless, land use conflicts at the national level are not necessarily in themselves a negative phenomenon. They can be an essential component of change and development at that reference point in time. However, conflict becomes problematic

Projected population density (Dp) and per capita land use									
			Dp per acre²			Per Capita Land Use (acre)			
Year	Projected Population	Settlement Based Dp	Country Based Dp	Conservation (NCA+SFMA)	Agricultural	Settlement (Rural & Urban)	Industrial	Total Macro Land Uses	
2022	763,249	10.877	0.080	7.459	0.548	0.092	0.013	8.137	
2023	770,276	10.977	0.081	7.391	0.543	0.091	0.013	8.062	
2024	777,224	11.076	0.082	7.324	0.539	0.090	0.013	7.990	
2025	784,043	11.173	0.083	7.261	0.534	0.090	0.013	7.921	
2026	790,718	11.268	0.083	7.199	0.529	0.089	0.013	7.199	
2027	797,264	11.361	0.084	7.140	0.525	0.088	0.013	7.789	
2028	803,626	11.452	0.085	7.084	0.521	0.087	0.013	7.728	
2029	809,785	11.540	0.085	7.030	0.517	0.087	0.013	7.669	
2030	815,755	11.625	0.086	6.978	0.513	0.086	0.013	7.613	
2031	821,485	11.707	0.087	6.930	0.510	0.085	0.012	7.560	
2032	826,957	11.785	0.087	6.884	0.506	0.085	0.012	7.510	
2033	832,218	11.860	0.088	6.840	0.503	0.084	0.012	7.462	
2034	837,288	11.932	0.088	6.799	0.500	0.084	0.012	7.417	
Average	802,299	11.433	0.085	7.102	0.522	0.088	0.013	7.697	

when mechanisms for managing and resolving them break down and give way to discord in land uses at sectoral and national levels. Uncoordinated institutional framework and tenuous systems in spatial governance can be drawn into cycles of land use conflict and issues.

At the outset, to have better insight and to discern what exactly the land use conflicts means, few of the conflict cases/instances are highlighted in the following frame, uncovered during the due course of the NLUZ exercises.

#### INSTANCES OF LAND USE CONFLICTS

CASE 1 (NCA Vs. AGRICULTURAL LAND): Bayling Central School in Trashiyangtse is constructed entirely on the prime/protected Chhuzhing, as well as disturbed the portion of roosting ground for endangered species (black-necked cranes).

CASE 2 (URBAN Vs. NCA): Urban boundary demarcation conjoining/crisscrossing the biological corridor in Nganglam. There hasn't been any cross-sectoral engagement or negotiations so far.

CASE 3 (INDUSTRIAL Vs. SETTLEMENT): Pasakha school within the industrial estate has been relocated due to emission standards and health hazards. There were numerous social issues/inconveniences associated with the relocation besides costing huge for the state.

CASE 4 (AGRICULTURAL LAND Vs. URBAN): Bajo and Babisa urbanization is entirely on the prime/ protected chhuzhing. This has not only lost the aesthetic landscape beauty forever but a chunk of agricultural land is lost due to lack of foresight land use zonation.

CASE 5 (SETTLEMENT Vs. NCA): Minjey Central School in Lhuntse is constructed on a critical watershed/ water source and disrupted the entire water supply for the entire lower settlements.

CASE 6 (SETTLEMENT Vs. INDUSTRIAL): School including a large number of residents relocated due to Gypsum mining expropriation in Pemagatshel due to improper mining prospectus with land use zoning.

CASE 7 (SETTLEMENT Vs. BUFFER): Ranjung VTI in Trashigang constructed within the river buffer not determining flood risk, due to which half of the VTI campus was affected by the 2004 flooding and still the institute is under hazard/risk prone area.

By and large, in this edition, land use conflict is found predominant in conservation efforts. The Nature Conservation Area (NCA) as macro zonation in land use stands highest with 42.29% conflict, followed by Sustainable Forest Management Area (SFMA) zone with 24.70% and Rangeland and Agricultural zones with 15.31% and 12.78% respectively. In terms of acreage conflicts corresponding to each individual zone is highlighted in the figure 10. Considering the total area of macro zones at 6,210,176.574 acres, the conflict area accounts to 436,560.588 acres, which is 6.87% of the total land use under macro zones. Prior to NLUZ exercises with no spatial integration and sectoral engagement, the area of conflict existed as high as 1,851,074.302 acres, which is 29.12% of total macro land uses.

The conflict matrix amongst 8 macro land use zones, excluding Special Development Zones (SDZ) in this edition is shown in Table 6, wherein each macro zone is cross-assessed with the other macro zones and area of conflict is deduced through geo-processing of attribute data against individual zones. The pair zone assessment gives the actual conflict area amongst each pair; and macro zones conflicting across other zones gives a conflict area with 6 or more macro zones. Of 8 macro zones, NCA and Agricultural Land macro zones conflict across 7 other macro zones, while Industrial, SFMA, Rural Settlement and Culture cuts across 6 macro zones in land use conflicts.

Similarly, the land use conflicts with regard to RoW/Buffer conflicting macro zones are also computed and it is found out that there are about 14,166.942 acres of land use conflicts as highlighted in Table 7. With the total buffer zones prevailing with 5 key fundamental geospatial layers accounts



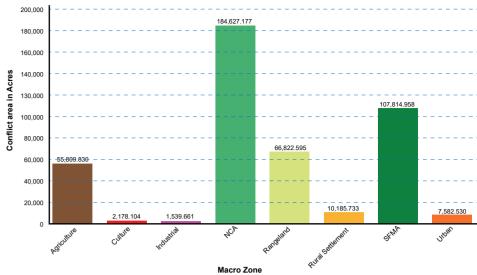


Figure 10: Land Use Conflicts in individual zones

to 33,026.962 acres, the RoW/Buffer conflit area with macro land use zones constitutes 42.63%. Amongst 5 key RoW/Buffers considered for this exercise, road RoW stands highest with 49.63% of total buffers conflicting with macro land uses, followed by powerline RoW with 41.79%.

An outright conflict determination has been highlighted in Table 6 and 7. However, in order to comprehend and deep-dive on the conflicts ranking and analysis, assessment matrix is outlined in Table 8. The TWG represented from the cross- agencies along with in-house (coordinating TWG) carried out the popular ranking based on the sectoral judgement and prevailing systems and processes in place. Prior to the comprehension, TWGs carried out exhaustive permissibility assessment against each macro and micro zones (Appendix 4). The ranking shows the prevalence of land use conflicts for top ten conflicts amongst the macro zones (SI. A) and RoW/buffer conflicting with the macro zones (SI. B).

The NCA with SFMA (in pair) ranks top most macro land use conflicts, followed by NCA with rangeland and agricultural land. In case of RoW/buffers, Road RoW leads the conflict with three macro land use zones, viz. NCA, SFMA and Urban. The powerline RoW conflicting with SFMA, Urban and NCA stands next to Road RoW with insignificant conflict margins. Flood hazard, heritage buffer and flight funeral are some of the RoW/buffers conflicting with some macro land use zones.

The conflict assessment matrix also outlines evaluation considering level and impact from the conflict and assesses existing control mechanisms in place to mitigate/ resolve the conflicts. In the event, if there are requirements to consider further actions corresponding to each conflicting land use, proposed mitigation with lead and collaborating agencies are underlined. This would at least give an outline for the next NLUZ edition to completely negotiate any form of perceived/ actual land use conflicts and come up with mitigation measures that ensures proper harmonization of land uses in the country.

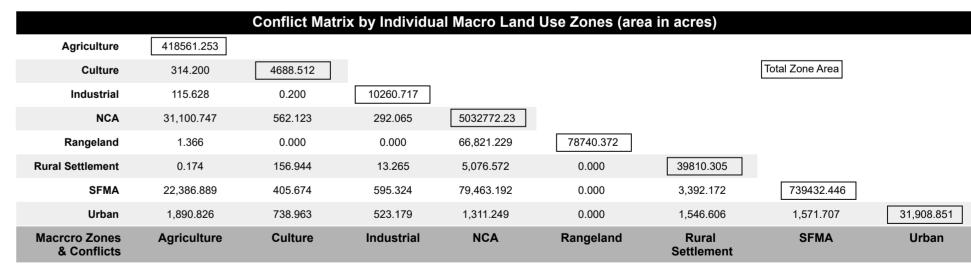


Table 6. Conflict Matrix by Individual Macro Land Use Zones (area in acres)

Conflict Matrix by RoW/Buffer Vs. Macro Land Use Zones (area in acres)									
Conflict Area	Agriculture	Culture	Industrial	NCA	Rangeland	Rural Settlement	SFMA	Urban	Total
Powerline_ROW	2,025.304	7.234	95.213	2,071.780	0.000	141.685	1,337.037	242.128	5,920.381
Road_ROW	1,334.337	9.341	60.046	2,703.264	0.000	305.421	2,617.724	0.000	7,030.133
Flood Hazard Zone	104.696	0.031	205.209	0.000	0.000	11.832	93.405	106.729	521.902
Flight Funnel Zone	219.241	0.287	84.950	0.000	0.000	23.663	168.499	3.159	499.799
Heritage Buffer Zone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	194.727	194.727
Total	3,683.578	16.893	445.418	4,775.044	0.000	482.601	4,216.665	546.743	14,166.942

Table 7. Conflict Matrix by RoW/Buffer Vs. Macro Land Use Zones (area in acres)



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Table 5: Projected population density (Dp) and per capita land use

	Conflict Assessment Matrix										
	Analysis & Evaluation		Evaluation		Existing Control			Further Action			
SI	Pair Zones and Buffer Conflict Ranking	Conflict (High, Medium, Low)	Impact (High, Medium, Low)	Existing Controls Described & Evaluated	Current Effectiveness (Good, Fair, Poor)	Conflict Response (Attended, Neglected, Shared)	Proposed Mitigation/ Opportunities for Improvement	Lead Agency	Collaborators		
Α	A PREVAILING TOP TEN MACRO LAND USE CONFLICTS										
1	NCA Vs. SFMA (79,463.192)	High	Low	FNCC 2017	Good	Negotiated	Micro zonation and management plan	DoFPS	DoW		
2	NCA Vs. Rangeland (66,821.229)	High	Medium	FNCA, 1995 & FNCRR, 2017	Fair	Negotiated	Micro zonation and management plan	DoFPS	DoL & NLCS		
3	Agricultural Vs. NCA (31,100.747)	High	High	Not defined	Not defined	Not defined	Defined land use integration and ordinances	DoA	DoFPS		
4	Agricultural Vs. SFMA (22,386.889)	High	High	Not defined	Not defined	Not defined	Defined land use integration and ordinances	DoA	DoFPS		
5	NCA Vs. Rural Settlement (5,076.572)	High	High	FNCA 1995, FNCRR 2017	Not defined	Not defined	Defined integration and ordinances	DoFPS			
6	Rural Settlement Vs. SFMA (3,392.172)	High	Medium	Not defined	Not defined	Not defined	Defined integration and ordinances	LG	DoFPS		
7	Agricultural Vs. Urban (1,890.826)	Medium	Medium	Urban settlement as per 2010 & 2015 demarcation	Not defined	Not defined	Defined integration and ordinances	DoA	DHS		
8	SFMA Vs. Urban (1,571.707)	Medium	Medium	Not defined	Not defined	Not defined	Defined integration and ordinances	DoFPS	DHA		
9	Rural Settlement Vs. Urban (1,546.606)	Medium	Low	Urban settlement as per 2010 & 2015 demarcation	Not defined	Not defined	Defined integration and ordinances	LG	DHS		
10	NCA Vs. Urban (1,311.249)	Medium	Medium	Urban settlement as per 2010 & 2015 demarcation	Poor	Neglected	Concern sector negotiation and resolve taxation issue	DoFPS	DHS & NLCS		
В	PREVAILING RoW/	BUFFERS C	ONFLICTING	WITH MACRO LA	AND USES						
1	Road RoW Vs. Macro Land Uses (7030.133) - SFMA, NCA & Urban (Major 3)	High	High	Not defined	Not defined	Not defined	Integration based on changing develop- ment need	DoST	DoFPS & DHS		
2	Powerline RoW Vs. Macro Land Uses (5920.381) - SFMA, Urban & NCA (Major 3)	High	High	Draft RoW formulated	Yet to determine	Undertaken drafting RoW	Adopt reasonable land expropriation tools	DoE	DoFPS & DHS		
3	Flood Hazard Vs. Macro Land Uses (521.902) - Industrial, Agricultural & Urban (Major 3)	Medium	High	Not defined	Not defined	Not defined	Defined risks sharing mechanism and ordinances	NCHM	Dol, DoA & DHS		
4	Flight Funnel Vs. Major Land Uses (499.799) - Urban, NCA & Industrial (Major 3)	Medium	Medium	Urban settlement as per 2010 & 2015 demarcation	Poor	Neglected	Concern sector negotiation and resolve taxation issue	DoAT	Dol, DoHS & NLCS		
5	Culture Buffer Vs. Macro Land Uses (194.727) - Agricultural (Alone)	Low	Medium	Unknown	Not determined	Not determined	Defined integration and ordinances put in place	DoCCD	DoA		

Table 8. Conflict Assessment Matrix

Generally, the causes of conflicts in land use/planning are encapsulated within the 'trigonal triggers' as highlighted in Table 9. The trigonal (three) triggers are, increasing scarcity vis-a-vis inability to ordinances, lack of defined land accounting and coordination, and lack of geo-enabled decision address; poor institutional structure and governance; and cross land use dynamics /influences. and these subsumes a set of deficiencies under each trigger. In the case of trigger one, conflicts are resulted either through demand-induced scarcity (due to increasing changing need) or supplyinduced scarcity (due to limited resource/ optimization) or structural scarcity (due to unequal/

limited rationalized access). Likewise, trigger two resulted from absence of national spatial planning/ making system in place. The trigger three subsumes limited cross-sectoral engagement in land use harmonization, inflexible use and integration based on changing needs/ priorities and lack of trust and credence in having a common spatial platform.

Trigonal Triggers of Land and Land-based Resource Planning Conflicts							
Trigger 1. Increasing scarcity vis-a-vis inability to manage it:	Trigger 2. Poor governance and institutional structure:	Trigger 3. Cross land use dynamics and influence:					
Inadequacy in optimization (supply-induced scarcity);	Absence of spatial policy/ land use ordinances;	Limited cross-sectoral engagement in land use harmonization;					
Lack of timely need assessment (demand-induced scarcity);	Lack of geo-enabled decision making system;	Inflexible use/integration based on changing needs/ priorities;					
Limited in rationalized access (structural scarcity).	No timely land accounting & coordination mechanism.	Dubious trusts and credence in a single spatial platform.					

Table 9. Trigonal triggers of land and land based resource planning conflicts

#### LESSONS LEARNT

Along with the verification exercises, TWG has carried out stock-taking of lessons learnt, in the form of issues and challenges; limitations and error tolerances; and the best practices. Examining detailed issues and challenges and resolving them at an appropriate time would ensure better zoned maps, conflict negotiation and foster land use ordinances in times to come. Besides, the best practices observed in the process of NLUZ exercises are also enlisted to continue a smooth transition to the next editions and successful implementation of the projects.

#### ISSUES AND CHALLENGES

With the given technical expertise, issues and challenges identified were resolved as much as possible, however many of them merit escalating to higher decision-making bodies or addressing through appropriate negotiation platforms cross-sectorally. Of many, the following are some the pertinent issues and challenges uncovered in the due course of realizing this report:

#### i. Cadastral Data

- The Thram database is not integrated into the cadastral geo-database on a real-time basis which will restrain real-time land use management/zoning in times to come. Adopting map analysis (ArcGIS Enterprise) would still persist as an issue, since the frequency to update and reconcile between two databases is undefined. This would even appear worst with an increasing need for cross-sectoral spatial data integration;
- The conventional or cadastral land type has no direct land use type. There are over 23 land types but requires not more than 9 land uses to be reclassified for NLUZ as macro land use zones.
- Almost 1300 residential plots do not have building footprints, impeding settlement/ residential land use zoning at some level; and
- There are over 3,521 Chhuzhing plots with structure on them. These have been uncovered while overlaying the building footprints on the land types. This leads to inaccurate settlement/ residential land uses.

#### ii. Urban Boundary

- In the process of amending the Local Government (LG) Act for three successive times (2007, 2009 & 2014), the urban classification has narrowed down to two types, viz. Dzongkhag and Yenlag Thromde by LG Act 2014, due to which urban boundaries of 2010 and 2015 come into force. However, despite a decision from the National Assembly on 10th July 2015, the latest version of urban boundary is not enforced. It is seen that about 75% of 2015 boundary is implemented on the ground. As a result, comprehensive urban zones could not be carried out. However, the entire urban spectrum is included in the SDZ as prospectus land use zones; and
- In the PAVA listing for tax purposes, the list does not match the urban boundary defined by the concerned agency.

#### iii. Protected Agricultural Land (PAL)

- The field validation on the overall PAL data based on the ground feasibility considering capability and suitability aspects needs to be carried out nationwide. Also, some of the PAL on the ground have changed the land uses over time due to context, benefits and economic returns. Carrying out PAL zoning without ground feasibility would not be appropriate.
- According to the concerned agency, taking current per capita consumption into account requires 282,296 MT (from 162,930.68 MT in 2021) of cereals, 136,605 MT (from 124115.55 MT in 2021) of vegetables, pulses, fruits, roots and tubers, mustard and spices, 81,981MT of milk (from 54,654.06 MT in 2021), 6,180.24 MT of meat (from 4,120.16MT in 2021), and 199 million eggs (from 133 million eggs in 2021) annually by 2030. However, corresponding to such urges, the actual PAL requirement is not determined spatially, based on the location and population dynamics.
- In order to fully materialize the intended purpose or objectives of the PAL, government's support in the form of incentives, cash compensation or any other form of subsidies will be critical. Without such investment, it would be very unfair on the land owners to enforce protection, especially Chhuzhing where economic return from paddy cultivation is extremely low (due to high costs of production) as compared to other crops or economic activities.

#### vi. Community Land

• Most of the registered community lands are found used as residential and institutional on the ground with some structures developed, which requires field validation to confirm the actual land uses on the ground.

#### vii. Nonconforming Land Uses

• There are a number of nonconforming land use cases as per plans. For instance, some plots registered as CSO but commercial and industry in nature are found not within its designated land uses.

#### ix. Religious Sites

• 510 residential plots reflected in the cadastral database are observed religious institutions on the ground. Moreso, the Chhuzing and Kamzhing of the religious institutions are still reflected as institutions, resulting in tedious exercises to validate for NLUZ.

#### x. Irrational Acquisition of Land

• There are cases observed, institutions like schools, in particular, have occupied/acquired chunks of land which are not put into use as institutional on the ground, leading to economic loss for the locals as well as inaccurate use of such data for NLUZ to ensure actual land uses on the

#### xi. Existing Mines

• DGM currently maintains a record of 88 active mines and it was discovered that 78 of these mines are common with the NLCS geodatabase. During the reconciliation and validation process, NLCS identified an additional 40 mining plots that were leased out but missing from the DGM database. These 40 additional plots were integrated into the final mapping through collaborative efforts, resulting in a comprehensive total of 128 mining plots for NLUZ mapping.

#### x. Absence of Critical Dataset

- Dataset on critical watersheds is not provided. While 186 numbers of watersheds merely cover the whole country and do not provide critical priorities to include in NLUZ; and
- Soil data in spatial form is not available to support NLUZ initiatives, to determine the suitability and capability of land uses.

#### **Limitations and Error Tolerance**

The report incorporates various data sources and methodologies to classify and map land use zones across the country. It is essential to understand the potential errors and limitations associated with the data used in order to provide accurate and reliable information. This section focuses on the concept of error tolerance and highlights key considerations regarding data acquisition, validation, harmonization, and map scaling.

#### i. Reclassification and Validation

The reclassification of NLUZ cadastral data involves utilizing spatial data from different sources such as facility points, building footprints, religious site points, etc. Open-source satellite imagery from platforms like Google, Bing, and OpenStreetMap is employed to validate the reclassified data. However, it is important to note that satellite imagery is often outdated in remote areas, leading to potential discrepancies in those regions. Ground truthing, although incomplete in this edition, remains crucial for validating the reclassified data.

#### ii. Data Transformation and Harmonization

Certain datasets, including urban boundaries (2010), heritage conservation zones, hazard maps and similar datasets have undergone transformations, conversions, and alignment processes to ensure compatibility with other data sources. Some datasets required datum transformation to maintain the same coordinate reference system (i.e Drukref 03) while some harmonized with the standard base data (Administrative Boundary), and some datasets were converted to the standard ESRI Shapefile format. These efforts aim to harmonize the data, some information loss might have occurred during these processes. If it becomes necessary to consider the original versions of such data, it may be prudent to refer to them separately. It is essential to acknowledge that each dataset serves its specific purpose, and combining them into a comprehensive zoning map involves dealing with diverse perspectives, resulting in a significant volume of data.

#### iii. Varied Data Acquisition Methods

The acquisition of data for land use zoning involved different methods, such as raster data, handheld GPS, satellite imagery, precise surveying instruments, smartphones, and topo-base maps. The different modes of acquisition introduced variations in accuracy and precision. Ground truthing and re-acquisition of data are recommended to achieve precise demarcation and accurate implementation. Only the zones derived from cadastral data have undergone this process, ensuring higher accuracy in those areas.

#### iv. Map Scaling and Base Data Usage

The production of maps at different scales, including 5k, 25k, 50k, and 300k, requires careful consideration. While the base data derived from the 50k topo map covers the entire country, the 25k topo map is used for the southern belt. However, using the 50k topo base for 25k scale maps in the northern region or employing the 50k or 25k base for 5k scale maps may result in reduced accuracy. Therefore, the base data is primarily utilized as a positional reference for thematic maps. It should be noted that some information provided by the base data may have been updated in reality over time.

#### v. Data Availability

This edition prides itself on its comprehensive data; however, it is crucial to acknowledge that certain spatial datasets are not complete, and they only cover specific parts of the country. The figures and analysis in NLUZ are derived from spatial data sourced from various agencies until 30th June 2023, with additional data acquired for visualization purposes on 19th July 2023. Despite our concerted efforts to collect data from all agencies, some datasets are still under acquisition or not readily available, resulting in a shortfall in overall coverage. Nonetheless, we have utilized the available spatial data from multiple sources to yield valuable insights into land use patterns within the covered areas, while acknowledging the limitations of incomplete data.

#### vi. Area Calculation

For the purpose of area calculation in the report, the unit considered is acres, rounded to the third decimal place. Any values below the third decimal place may appear as zero in the report, but this





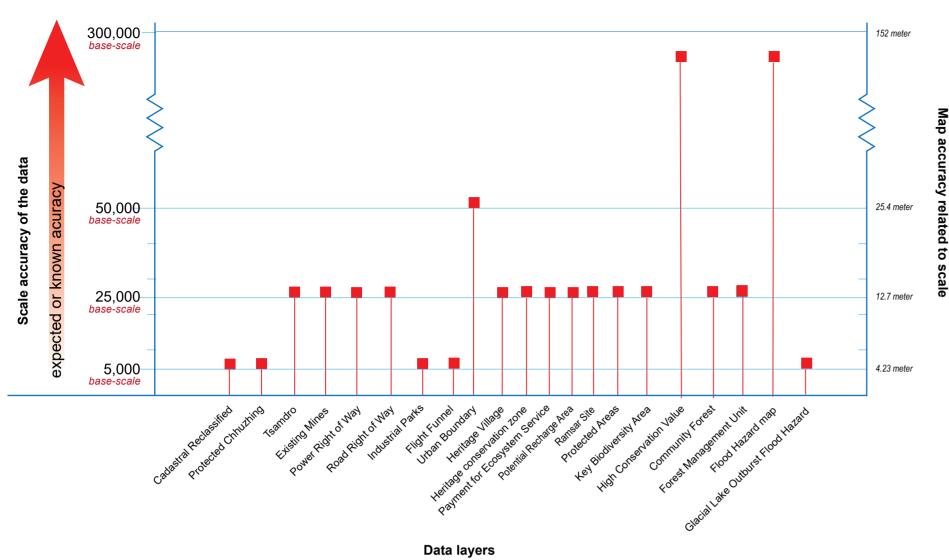


Figure 11: Spatial data accuracy chart

rounding does not significantly affect the overall analysis of macro land use conflicts. In cases where more precise measurements are required, square feet can be considered as an alternative unit. However, it is important to note that the impact of rounding to the third decimal place is negligible in the context of the broader land use assessment.

Error tolerance is a critical aspect of the National Land Use Zoning Report for Bhutan. Understanding the limitations and potential errors associated with data acquisition, validation, harmonization, and map scaling is crucial for ensuring accurate and reliable zoning maps. Detailed information on accuracy and usage is reflected in the metadata inventory in Appendix 2 of this report.

In a nutshell, the report aims to provide a comprehensive understanding of the land use zones while acknowledging the need for further improvements and refinement in future editions. The data accuracy chat is shown in Figure 11, which inherently indicates the accuracy and corresponding error tolerances.

#### Instant Benefits

While carrying out this exercise, it is observed that there are a couple of benefits derived along the way, both at coordinating agency and cross-sectoral levels. Certain sectors have already realized the importance of proper geo-spatial data creation and use in their planning and decision-making processes. This exercise provided them to update and validate their own geo-spatial data repository through proper geo-processing methods and align to the overall national and sector requirements. They have constantly cooperated in inventorying the entire spatial data in a single platform, to which sectors shall have access, use and reduced costs, efforts and duplication in geo-spatial creation and management.

Some of the sectors, like DoFPS, DoCDD and DoA have already started rationalizing land uses based on the changing requirement and importance, regardless of the land use classes prevailing prior to

the initiative. For instance, most of the micro zones under Nature Conservation Areas (NCA) zone have defined the micro land uses, segregated into four zones, viz. core, transition, buffer and multiple use zones. Similarly, heritage has segregated conservation and buffer zones; and over eight land types in agriculture have already been indicated to subsume in three land uses on the ground, viz. Kamzhing (dry land); protected and regulated chhuzhing (wetland); and agricultural lease land.

The geospatial inventory through this NLUZ initiative indicated the land use conflicts across all sectors, which enabled them to realize that the land use conflicts and issues associated over time have bearings to the state and sectors, in terms of costs and turnaround time. For instance, as the issues related to not having water sources mapping and not protecting its discharge-areas are glaringly spiraling over time, the concerned sector has realized the importance of NLUZ mapping. Similarly, to facilitate the protection of critical reservoirs for storage-hydropower to ensure sustainable river flow to generate the power in lean seasons are some of the value additions that NLUZ mapping ensures.

There is substantial reduction in the land use conflicts in due course of spatial inventorization with this edition. This is merely through the sectoral engagement and consensus reached between the sectors. However, exhaustive ground truthing in the next edition shall provide the nature and extent of conflict reductions.

All in all, there were numerous instant benefits obtained associated with the overall NLUZ initiatives so far. To enlist a few but not limited to the following:

• Community Forest (CF): There were about 6,699.278 acres of CF overlapping with the cadastral plots, indicating a conflict with the demarcated CFs entailing numerous issues at household and community levels. The NLUZ could resolve entire such issues and delineate CFs clearly. The CF is now 262,330.7054 acres in total as compared to earlier 233,475.728 acres. This will help for better CF management and support for land use prioritization in the coming editions.

Future Course of Action for NLUZ						
Aspects	Limited Edition (2023)	First Edition (2024)	Second Edition (2025)			
Data acquisition	Major GI producers	All GI Producers within the preview of GI Policy	All GI Producers within the preview of GI Policy			
Validation	Critical field validation, including LULC	Complete field validation	Complete field validation			
Parameterization	Based on land use definitions	Critical land uses based on technical definition (suitability & capability)	All land uses based on technical definition (suitability & capability)			
Access and sharing	All agencies shared complete maps & explore dynamic (web-based)	Web-based access and sharing established. NLUZ Decision Support System (through support of UNITAR).	NLUZ Decision Support System put in place and all agencies have access and seamless sharing.			
Land use conflict resolution	Start negotiations on land use conflicts	Cross agency negotiations on all land use conflicts	Land use ordinances adhered at all levels			
Definition of Zonation Interval	Not applicable	Definition of zonation interval started and proposed	Zonation interval defined			
Issues & challenges	Few out of identified resolved	All identified resolved	All identified resolved			
Error tolerance	Accepts identified error tolerances	Ensured no mismatch between land use on the ground and land data.	No mismatch between land use on the ground and land data.			

- Urban Boundary: There has been ambiguity on the actual urban boundary and numbers. After
  the 2010 approved boundary, there is a parliament approved urban boundary of 10/07/2015
  with 33 towns. However, due to confidence in data and implementation issues, only about
  75% of the 2015 urban boundary is included in urban zones (based on implementation status
  on the ground). However, with this exercise, due to a series of rounds of engagement with the
  concerned agencies, a consensus has arrived to move forward with prospectus urban land use
  under SDZ for now.
- Administrative Boundary: Succeeding with the 68th National Assembly and 267th Lhengay
   Zhungtsho, the national administrative boundary has not changed. As a basis, a common
   administrative boundary is agreed and used in this report, regardless of uses in different
   agencies so far, which has bearings on overall spatial data quality.
- Strategic Development Zones (SDZ): The NLUZ exercises could carry out stocktaking of all
  foresight/prospective development agenda which has data in spatial form. This is intended
  to ensure a single spatial platform for futuristic land use management and spatial planning.
  There are about 14 spatial datasets included/used in this edition under SDZ.
- Strategic Data Sharing Platform: As the use and demand for credible spatial data becomes more
  and more critical, for instance with the onset of free zone planning, the spatial data in a single
  source would not have been possible if this NLUZ exercises was not undertaken. About 43
  spatial data sets are now built within the NLUZ maps for any form of sharing and use.
- Delineated State Land (Unzoned Area): Any scope of outright land expropriation can be easily carried out in the Unzoned Areas (UA), which are delineated from macro zones, except SDZ without any form of land use conflicts. Through this NLUZ, Unzoned Area (UA) of about 336,4753.500 acres have been delineated in the zoned maps. This also excludes buffers and nonessential components from LULC 2020, viz. Alpine Scrub/ Shrubs, Water Bodies, Snow and Glaciers, Moraines, Landslides, Rocky Outcrops & Sandy banks.

#### **FUTURE COURSE OF ACTION**

Considering the extensiveness in scope and objectives of the NLUZ initiatives, it was recommended in numerous in-house discussions and cross-agency engagement to bring about Three Editions in NLUZ. In the course of consultations and validation processes, a gamut of issues and challenges have surfaced along with instant benefits derived from the exercises. These need to be resolved in a phased manner at appropriate stages in the successive editions. The common aspects to address in next editions are highlighted in Table 10 as activity wayposts. Similarly, to resolve any form of land use conflicts and reach to harmonized land use zoning, including integrated land uses wherever possible, the conflict resolutions/negotiations shall only happen with the commencement of Second Edition.

In terms of zoned map sharing, the maps shall be published in limited hard copies to circulate amongst key stakeholders until a web application is established for defined access and protocol. Meanwhile, since the Thram database is not integrated with cadastral geodatabase on a real-time basis, data cleaning and updating are required on a timely basis to support successive editions, until full integration happens and a common API is established. The data cleaning and validation protocols need to be established and adhered strictly, for the benefits of NLCS and cross-agencies. Moreso, a few dedicated fast processing workstations with technical NLUZ focal is necessary due to enormous data management tasks and technical coordination at NLCS along with capacity development on advanced geoanalysis and WebGIS.

The Land Use Accounting (LUA) on a frequent basis as per UN-ESCAP's System of Environmental-Economic Accounting Central Framework (SEEA-CF) may be recommended to ensure land use change and proper land use accounting, at least for all macro zones. This shall foster proper spatial governance resolving most of the trigonal triggers as highlighted in Table 9.

On the whole, this report shall form a basis for national spatial envisioning and formation of spatial policy at a national level under an appropriate institutional structure. Based on several inferences drawn from the NLUZ exercise, it becomes evident that the country lacks spatial vision for informed developmental planning and policies which hampers facilitation of strategic land uses across entire sectors. The common understanding is that the nationwide zoning exercises be the basis for rationalizing the national spatial envisioning, in order to,

- Tackle inherited spatial divisions the division that perpetuated spatial creations, use and management:
- Unlock development potential unlock development potential through spatially enabled targeted interventions;
- Guide and inform infrastructure investment and prioritization spatial investment framework to support growth and inform the long-term infrastructure investment strategy;
- Manage contemporary economic and demographic shifts support economic dynamics by concentrating productive activity, entrepreneurs, workers and consumers in a place without congestion; and
- Facilitate spatial coordination between agencies and across used to bring different actors and interests together to define a common future, binding all spheres and sectors.

The following normative principles may be considered in carrying out spatial envisioning and adopting the spatial policy thereto:

- Sustainability sustainable patterns of consumption and production should be supported, and ways of living promoted so that damage to natural environment is minimized;
- Resilience vulnerability to environmental degradation, resource scarcity and climatic shocks must be reduced;
- Conservation biological and ecological systems are protected and conserved reasonably;
- Quality the aesthetic and functional features of infrastructure and the built environment need to be improved to create more livable, vibrant and valued community;
- Efficiency productive activity and jobs should be supported, and burdens on business minimized. Efficient commuting patterns and circulation of goods and services should be encouraged, with processes that do not impose unnecessary costs on the development; and
- Righteousness the ordinances that facilitate seamless land use harmonization and establish rational access and progress.

Thus, NLUZ report as fundamental geospatial creation shall be an indispensable precursor for spatial envisioning and adoption of national spatial policy and allied land use systems hereafter. This shall ultimately ensure a 'Geo-Enabled Nation with Par Excellence Land Governance' vision of the land sector defined under the Sazhi 2034+ aligned with the development vision of the country, 'Developed Bhutan by 2034'.

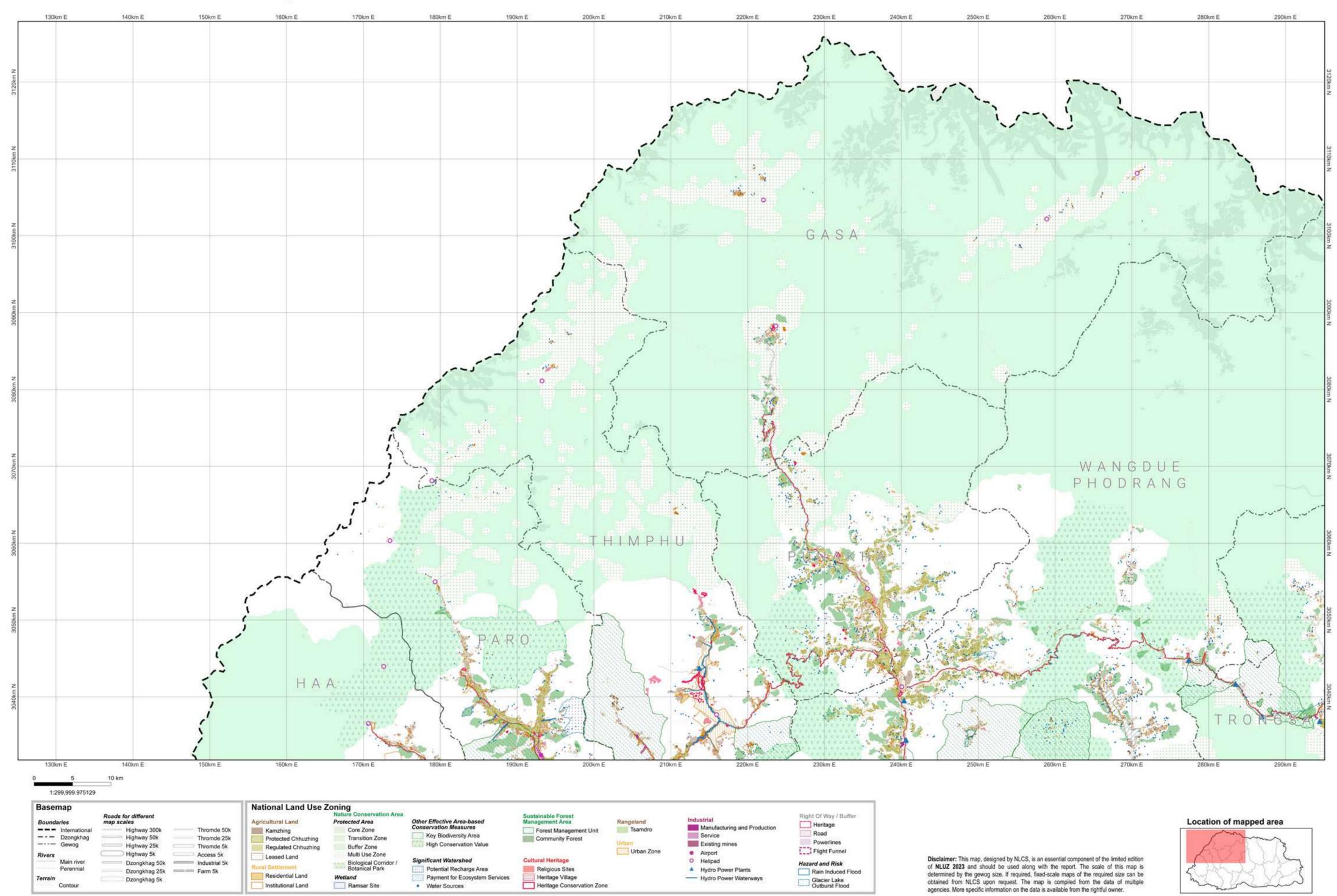


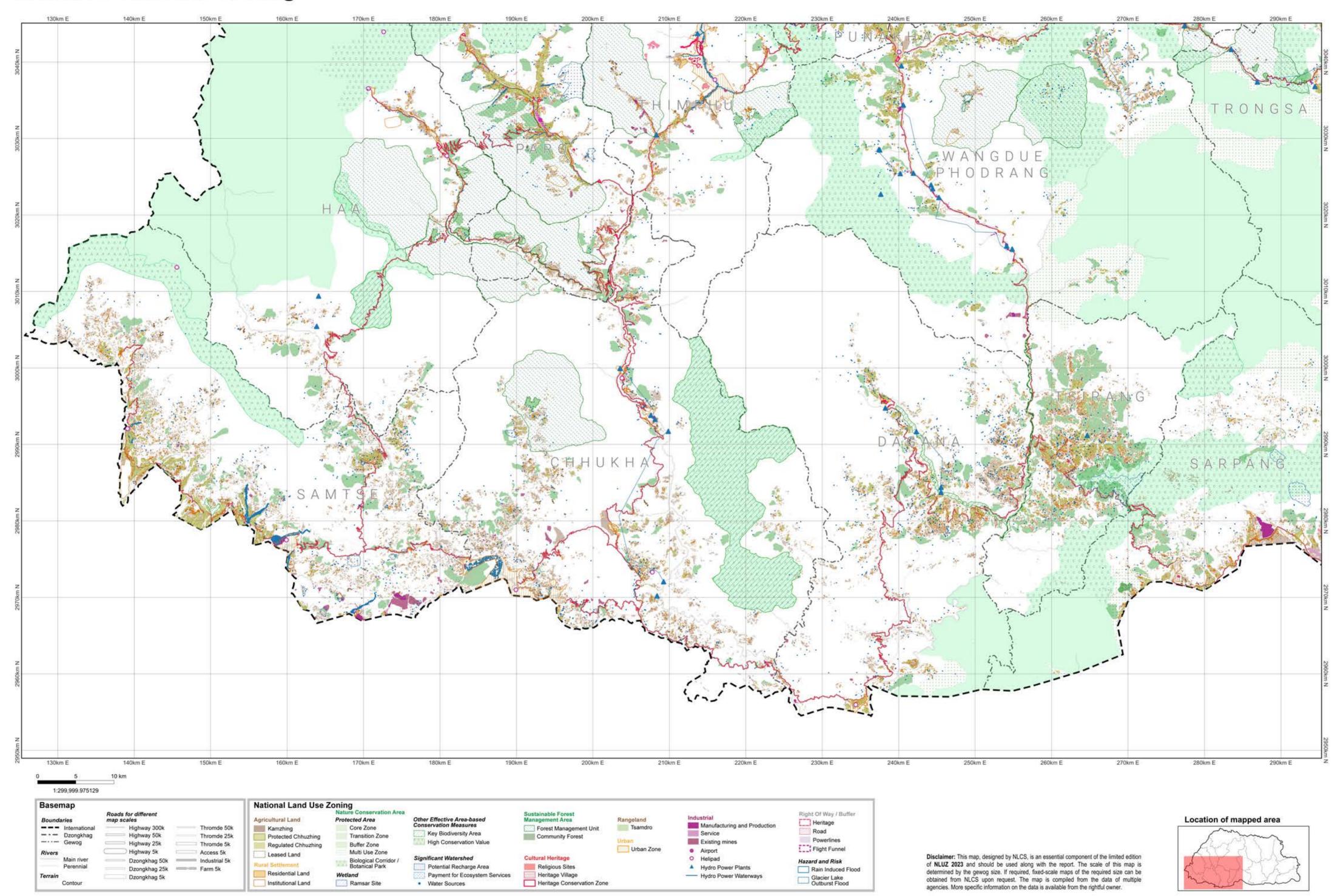


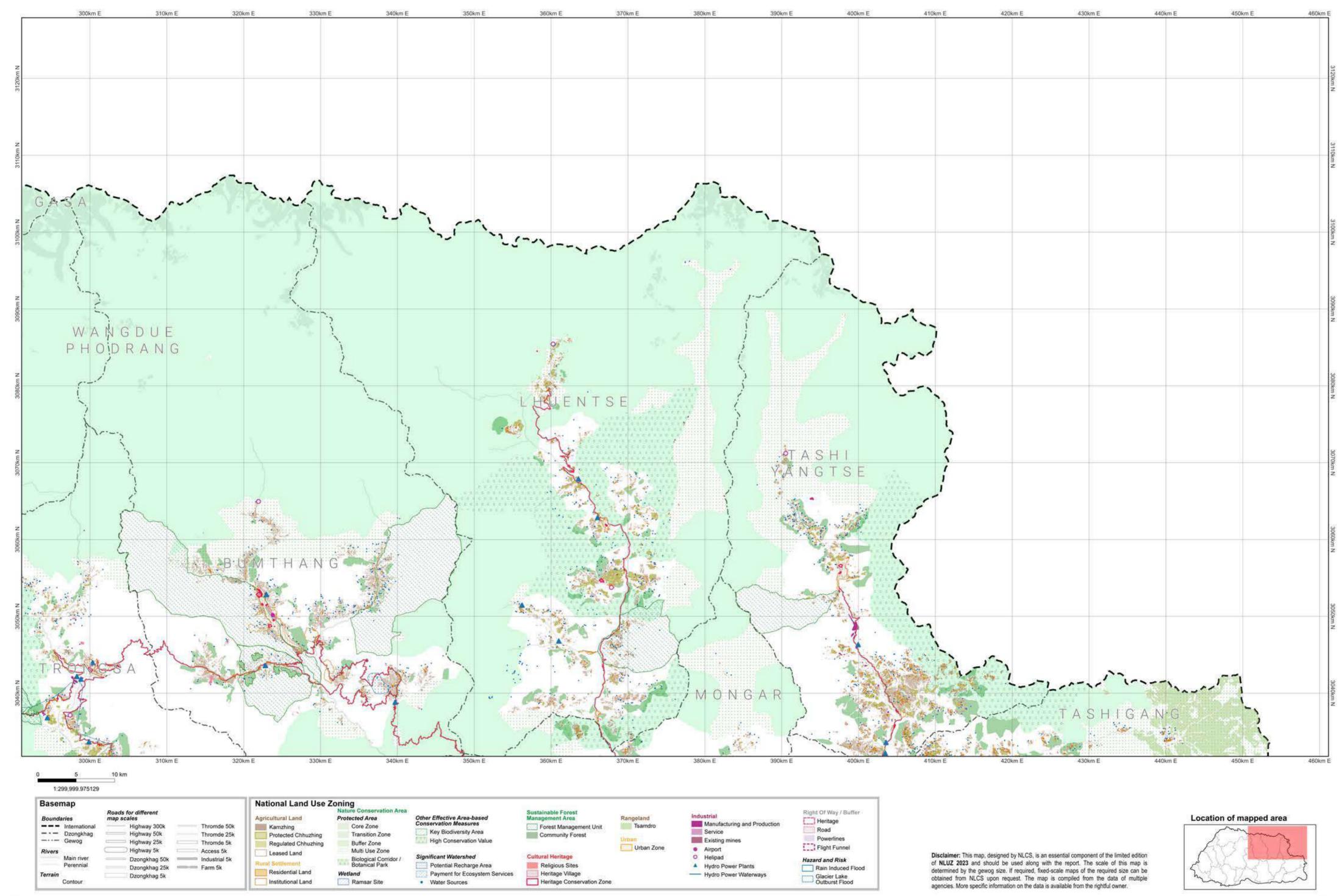
able 10: Future Course of Action for NLUZ

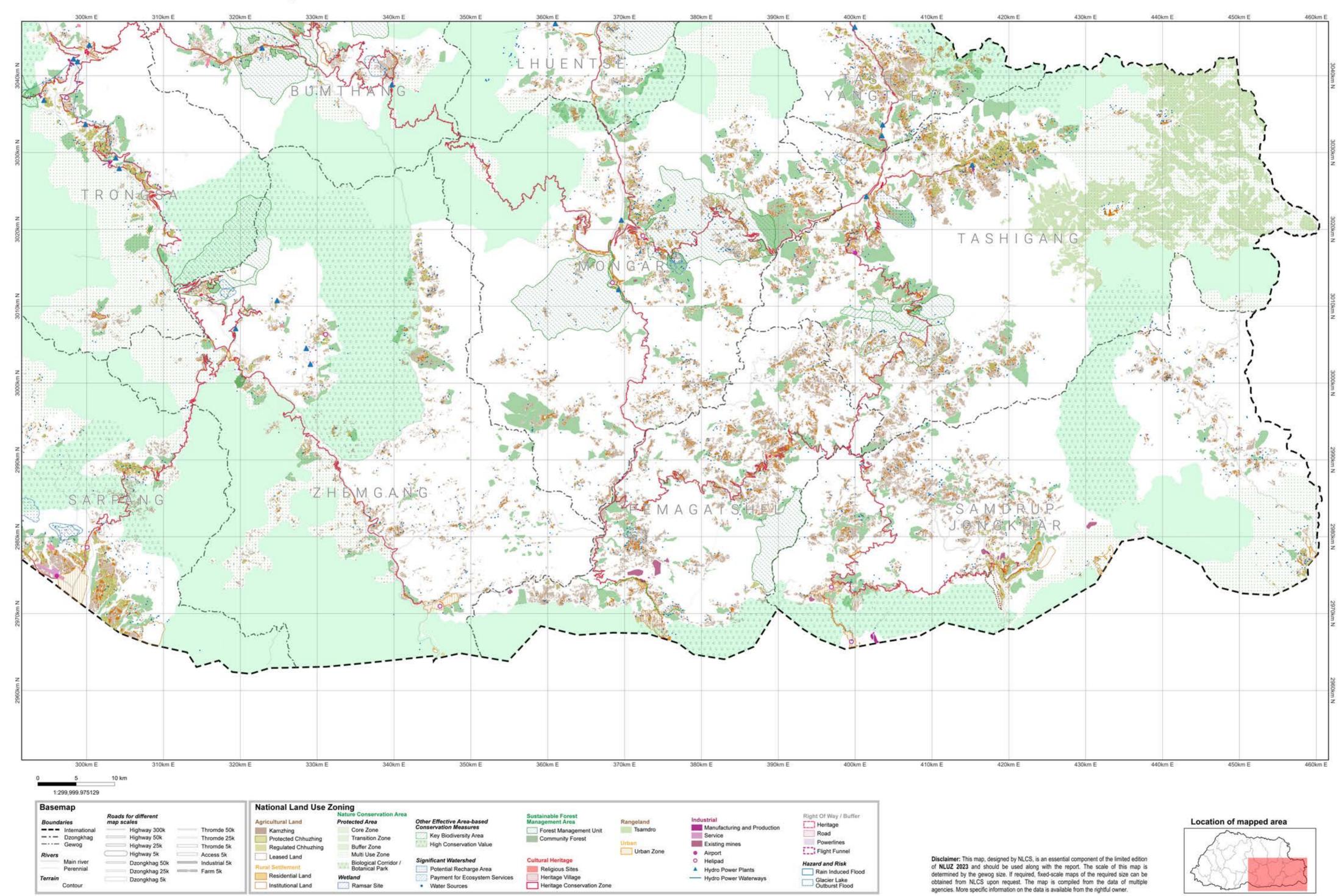
# **PART II**

COUNTRY,
DZONGKHAG AND
GEWOG WISE
ZONED MAPS

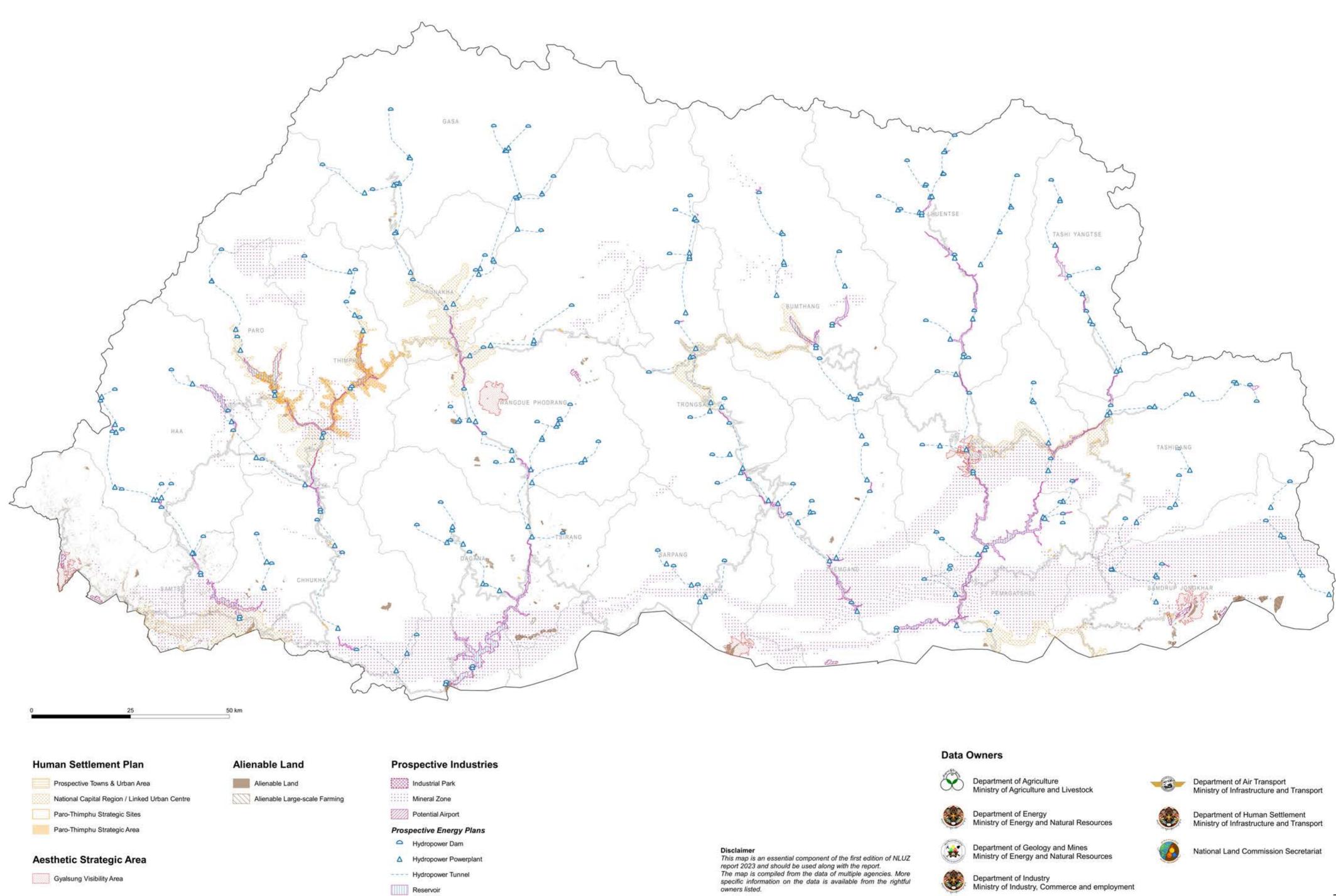




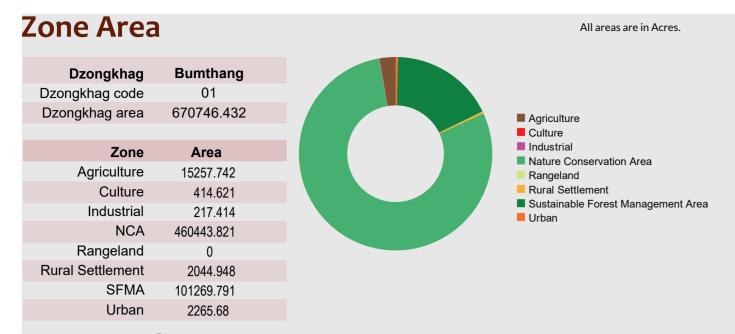




# **Strategic Development Zone**



#### August 2023



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	3958.599	3,739.29	1101.706	158.295	25.347	466.946	0
NCA	3958.599	0	3,303.78	0	26.265	0.458	105.2	0
Agriculture	3,739.29	3,303.78	0	147.511	20.493	0	0	0
Urban	1101.706	0	147.511	0	109.708	144.968	27.054	0
Culture	158.295	26.265	20.493	109.708	0	0	0.199	0
Industrial	25.3470	0.458	0	144.968	0	0	6.972	0
Rural Settlement	466.9460	105.2	0	27.054	0.199	6.972		0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	143.317	245.738	77.259	0	0.17	2.416	24.684	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	1053.175
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**



Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

#### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

#### Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

#### Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

# Basemap

Boundaries International --Dzongkhag - -

# Perennial

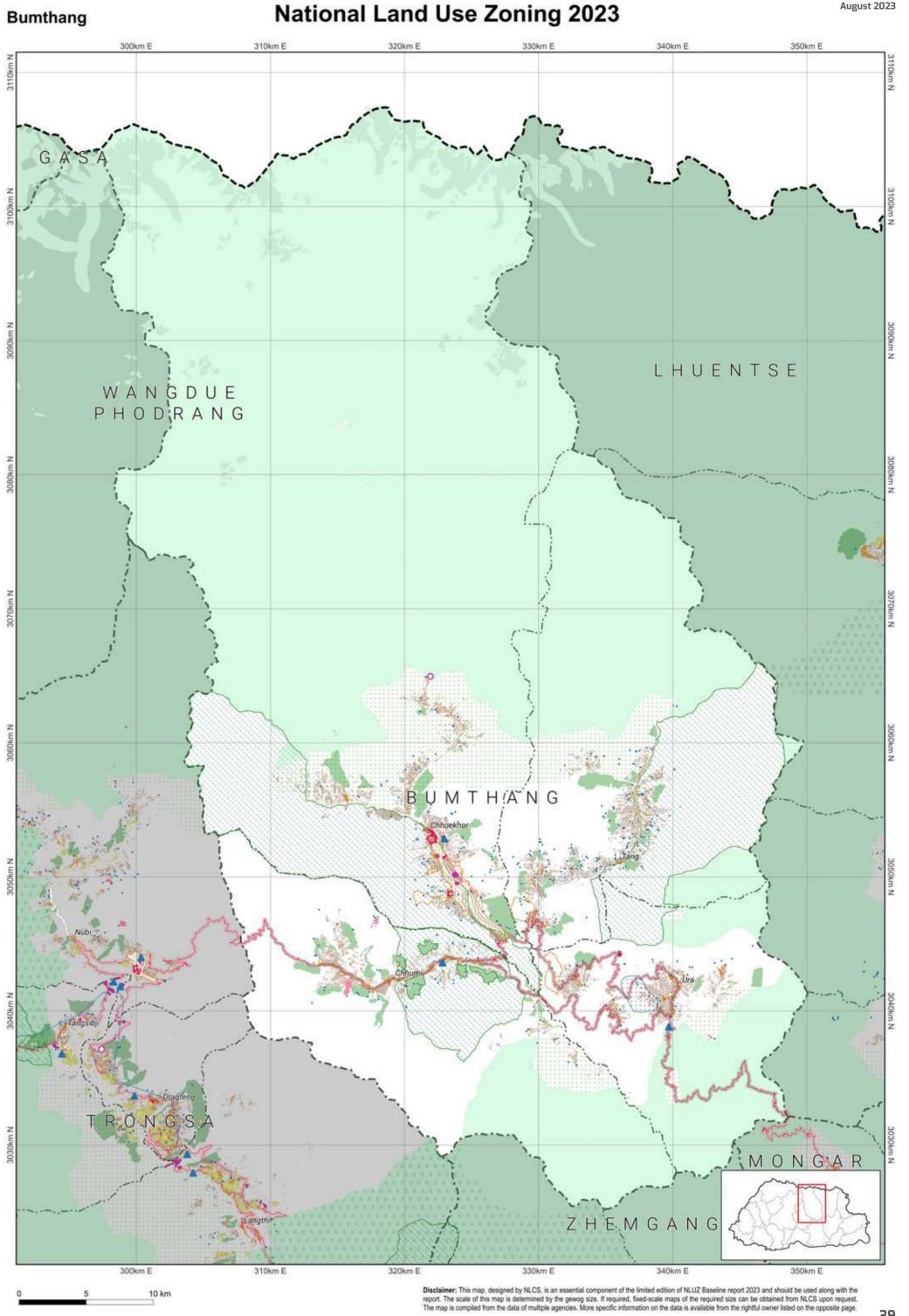
Terrain

# Roads for different

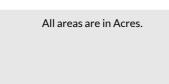
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k ≡
zongkhag 5k	

#### Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Total Population		Sex ratio	Aging Index	Number of household	Mean Household size	
Dzongkhag	Male	Female	Total				
Bumthang	9,396	8,424	17,820	111.5	25	3,770	3.9



Gewog	Chhoekhor
Gewog code	101
Gewog area	378105.099
Zone	Area
Agriculture	5063.854
Cultural Heritage	185.604
Industrial	156.527
NCA	326768.664
Rangeland	0
Rural Settlement	509.142
SFMA	44273.591
Urban	2265.68



Agriculture

Industrial

Rangeland



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	3493.376	1,583.17	1101.706	142.438	10.549	374.378	0
NCA	3493.376	0	2,414.34	0	9.419	0.357	93.476	0
Agriculture	1,583.17	2,414.34	0	147.511	20.493	0	0	0
Urban	1101.706	0	147.511	0	109.708	144.968	27.054	0
Culture	1 42.438	9.419	20.493	109.708	0	0	0.199	0
Industrial	10.549	0.357	0	144.968	0	0	6.972	0
Rural Settlement	374.378	93.476	0	27.054	0.199	6.972	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	32.042	0	3.994	0	0	0	0.037	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage Zone	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer	Area
Transmission Line	0
Road	43.306
Flood Hazard	0
Flight Funnel	0
Heritage	0



#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Total Population		Total Population		Total Population		Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total						
Chhoekhor	2,042	1,905	3,947	107.2	26.4	805	4.3		

# **Map Legend**





#### Forest Management Unit Community Forest **Cultural Heritage**





Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

#### Wetland Ramsar Site

#### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

#### High Conservation Value Rangeland

# Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

#### Industrial Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A

#### Hydro Power Waterways ----Basemap

#### Boundaries International --

Dzongkhag - -Gewog ---Perennial Terrain

#### Contour Roads for different map scales

nigriway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k ==
Dzongkhag 5k	

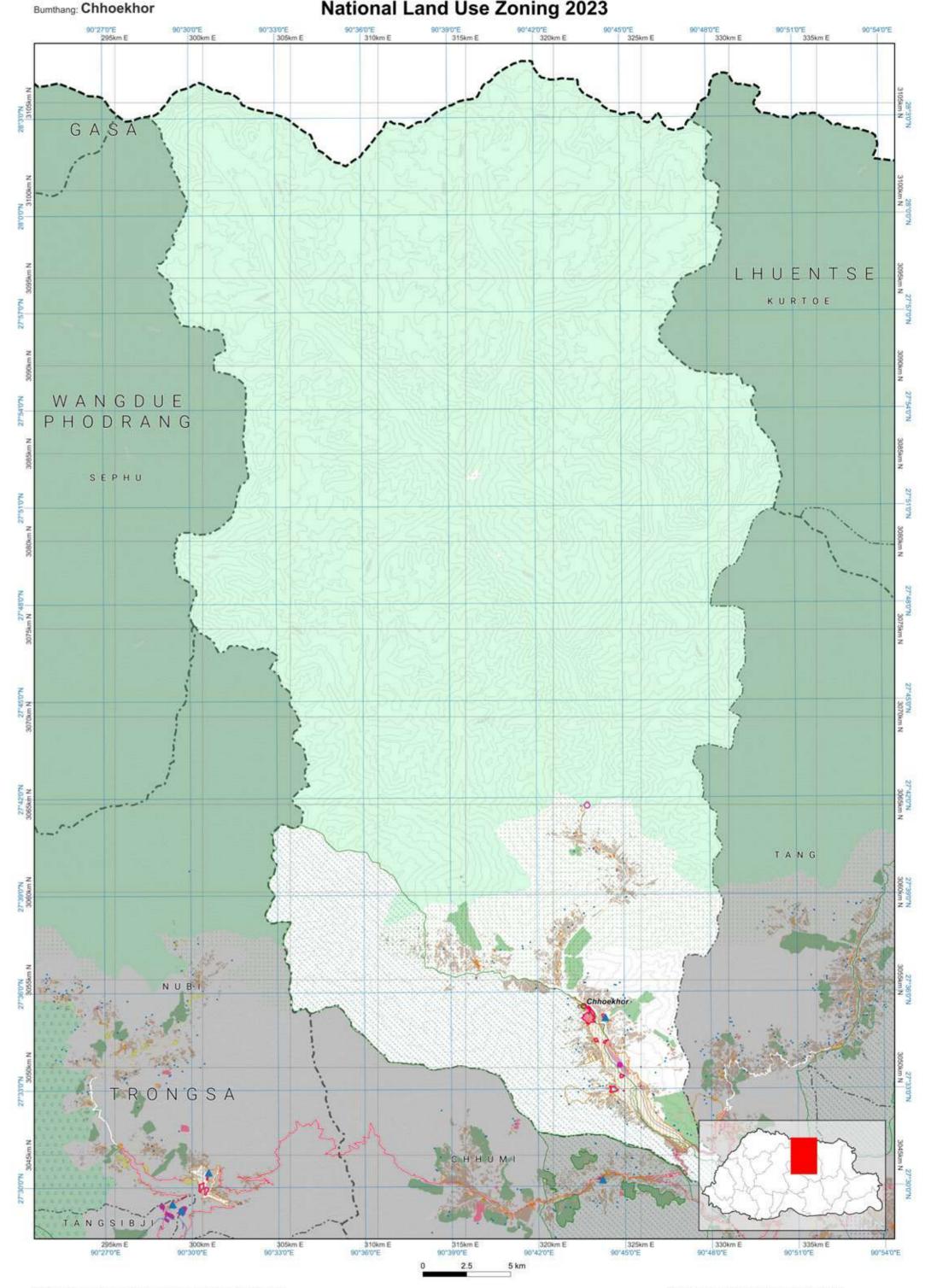
## **Data Ownership**

Data Owner of the Map Content	
Bhutan Power Corporation Limited Druk Holding and Investment	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Geology and Mines Ministry of Energy and Natural Resources	

Department of Water Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs

# Department of Air Transport Ministry of Infrastructure and Transport Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

National Centre for Hydrology and Meteorology National Land Commission Secretariat



# CHHUMI

#### **Zone Area** All areas are in Acres. Gewog Chhumi Gewog code 102 99171.586 Agriculture Gewog area Cultural Heritage Industrial Zone Area ■ Nature Conservation Area Agriculture 3071.411 Rangeland Rural Settlement Cultural Heritage 161.664 ■ Sustainable Forest Management Area Industrial 24.426 29345.798 Rangeland **Rural Settlement** 196.577 SFMA 18161.697

# **Zone Conflict**

Urban

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	1,110.27	0	14.218	14.591	78.388	0
NCA	0	0	119.473	0	0	0	2.339	0
Agriculture	1,110.27	119.473	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	14.218	0	0	0	0	0	0	0
Industrial	14.591	0	0	0	0	0	0	0
Rural Settlement	78.388	2.339	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer	Area
Transmission Line	0
Road	272.551
Flood Hazard	0
Flight Funnel	0
Heritage	0

# RoW / Buffer Conflict

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	105.4	0	28.461	0	0.17	0.652	5.831	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage Zone	0	0	0	0	0	0	0	0

# **Map Legend**

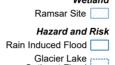




Forest Management Unit







Right Of Way / Buffer
Heritage Road

# Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area
High Conservation Value

# Tsamdro Significant Watershed

Potential Recharge Area
Payment for Ecosystem Services
Water Sources
•

# Industrial Manufacturing and Production Service

Airport Helipad Hydro Power Plants

Existing mines

# Hydro Power Waterways —

# Basemap Boundaries International --

Dzongkhag — •
Gewog — •

Rivers

Main river
Perennial

#### **Terrain** Contour

	map scar
Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k =

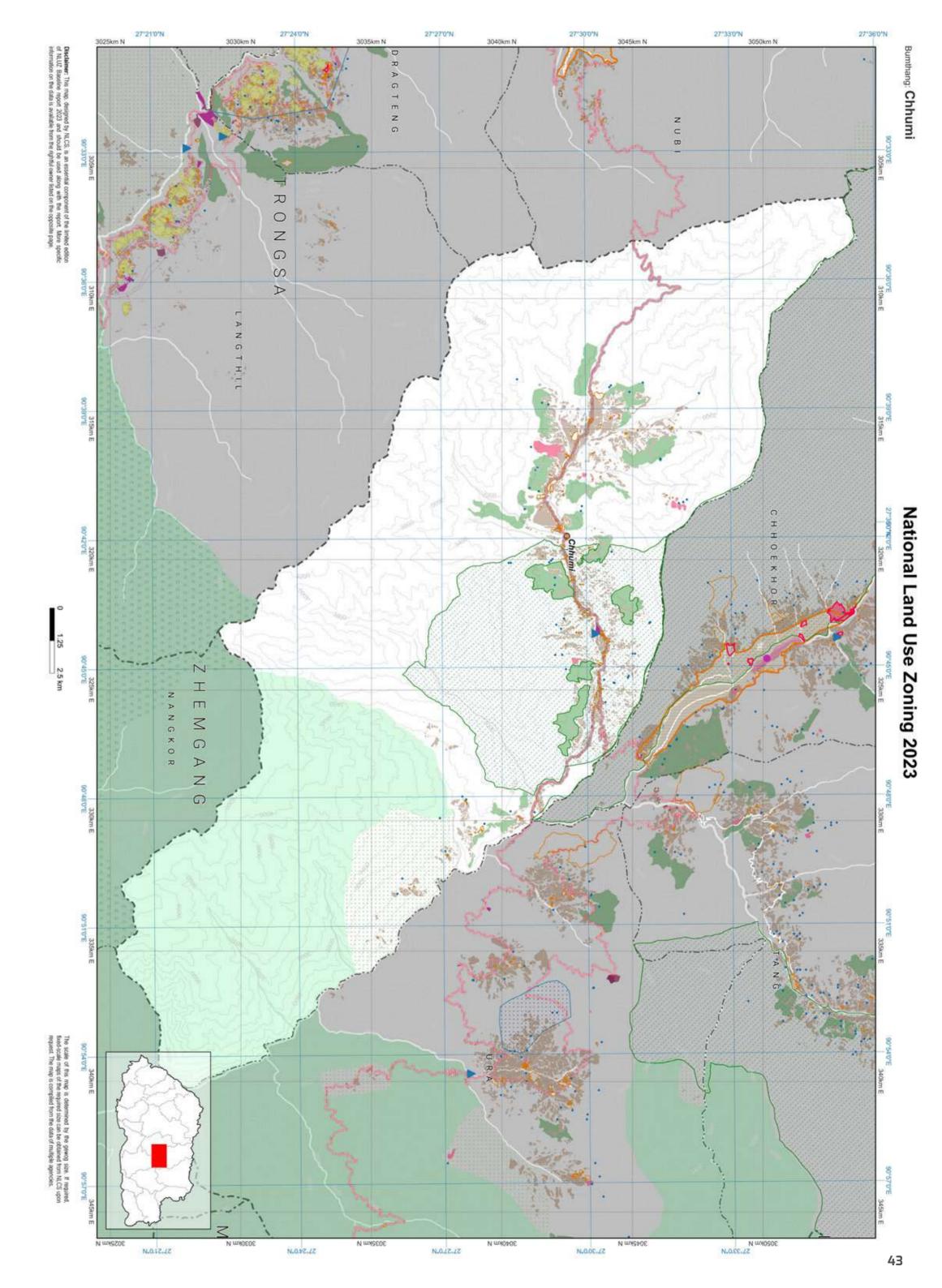
#### **Data Ownership**

	Data Owner of the Map Content
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	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Geology and Mines Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Total Population Sex ratio Aging Index Number of household Mean Household size									
Gewog / Throm	Male	Female	Total							
Chhumi	1,748	1,447	3,195	120.8	32.7	637	3.9			
Chhumi Town	189	204	393	92.6	11.9	72	3.6			



Gewog	Tang
Gewog code	103
Gewog area	128027.592
Zone	Area
Agriculture	3980.683
Cultural Heritage	33.322
Industrial	0.578
NCA	70555.931
Rangeland	0
Rural Settlement	648.717
SFMA	34490.021
Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	79463.192	22,386.89	0	405.674	595.324	3392.172	0
NCA	79463.192	0	31,100.75	0	562.123	0	5076.572	0
Agriculture	22,386.89	31,100.75	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	405.674	562.123	0	0	0	0	0	0
Industrial	595.324	0	0	0	0	0	0	0
Rural Settlement	3392.172	5076.572	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

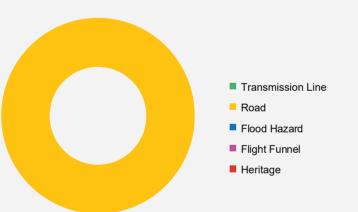
# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	9.257	0	0	0	4.024	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage Zone	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer	Area
Transmission Line	0
Road	80.656
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



# **Map Legend**

All areas are in Acres.

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Residential Land Institutional Land

Forest Management Unit Community Forest

# **Cultural Heritage**

Urban Zone

Religious Sites Heritage Village Heritage Conservation Zone

#### **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

#### Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer

Heritage \_\_\_\_

Powerlines

#### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

#### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Water Sources • Industrial Manufacturing and Production

Existing mines Airport

Helipad O Hydro Power Plants A

Hydro Power Waterways —

#### Basemap

Boundaries International --

Dzongkhag - -Gewog ---

Perennial

#### Terrain Contour

Roads for different Highway 300k —— Thromde 50k Highway 50k === Thromde 5k

Highway 25k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k

Dzongkhag 25k Farm 5k ====

# Data Owner of the Map Content

Ministry of Energy and Natural Resources

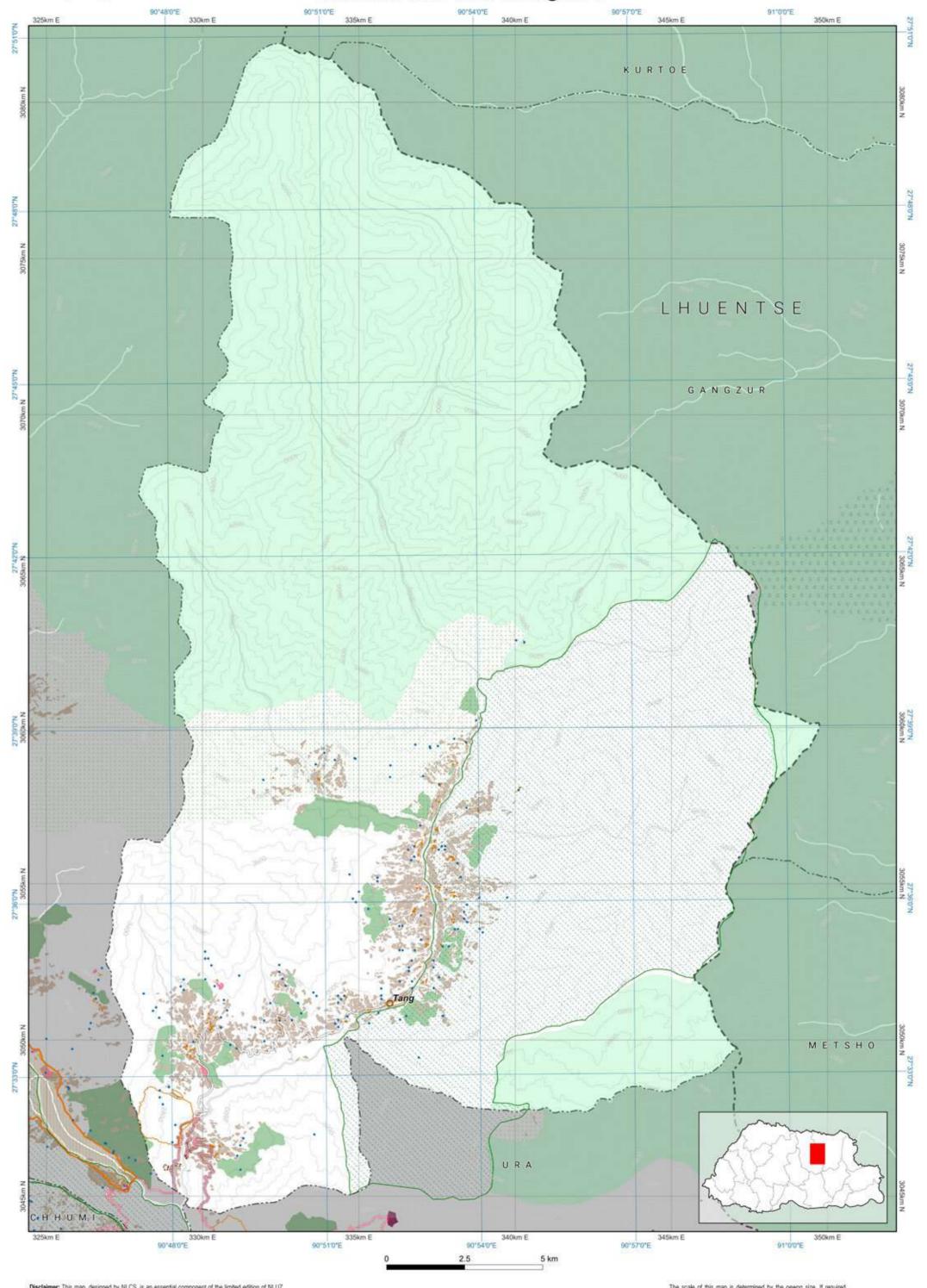
#### **Data Ownership**

Department of Forests and Park Ser Ministry of Energy and Natural Reso	
Department of Water	

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

Bumthang: Tang

# **National Land Use Zoning 2023**



Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

	Gewog	Ura
Gew	og code	104
Gew	vog area	65442.154
	Zone	Area
Ag	riculture	3141.794
Cultural I	Heritage	34.031
lr	ndustrial	35.882
	NCA	33773.428
Ra	ingeland	0
Rural Se	ttlement	690.512
	SFMA	4344.482
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	35.035	0	0	0	0	0	0
NCA	35.035	0	280.931	0	13.806	0.101	4.098	0
Agriculture	0	280.931	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	13.806	0	0	0	0	0	0
Industrial	0	0.101	0	0	0	0	0	0
Rural Settlement	0	4.098	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	5.875	245.738	35.546	0	0	1.764	14.791	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage Zone	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer	Area
Transmission Line	0
Road	656.662
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

# National Land Use Zoning Agricultural Land Kamzhing

Agricultural Land
Kamzhing
Protected Chhuzhing
Regulated Chhuzhing
Lease Land

Bumthang: Ura

Residential Land Institutional Land

**Cultural Heritage** 

Management Area
Forest Management Unit Community Forest

Religious Sites
Heritage Village
Heritage Conservation Zone
Urban

Urban Zone Nature Conservation Area

Protected Area

Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone
Biological Corridor /
Botanical Park

Wetlar
Ramsar Site

Hazard and Ris

Rain Induced Flood
Glacier Lake
Outburst Flood
Right Of Way / Buffer
Heritage
Road
Powerlines

Flight Funnel Cother Effective Area-based Conservation Measures

Key Biodiversity Area
High Conservation Value

Rangeland Tsamdro

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services

Water Sources
Industrial
Manufacturing and Production
Service
Existing mines

Airport Helipad Hydro Power Plants
Hydro Power Waterways

Basemap

Boundaries
International — Dzongkhag — Gewog — - -

Rivers
Main river
Perennial
Terrain
Contour

Roads for different map scales Thromde 50k

Highway 50k Thromde 25k Highway 25k Access 5k Dzongkhag 50k Industrial 5k Dzongkhag 25k Farm 5k

#### Data Ownership

#### Data Owner of the Map Content

Highway 300k ---

Bhutan Power Corporation Limited Druk Holding and Investment Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Geology and Mines Ministry of Energy and Natural Resources

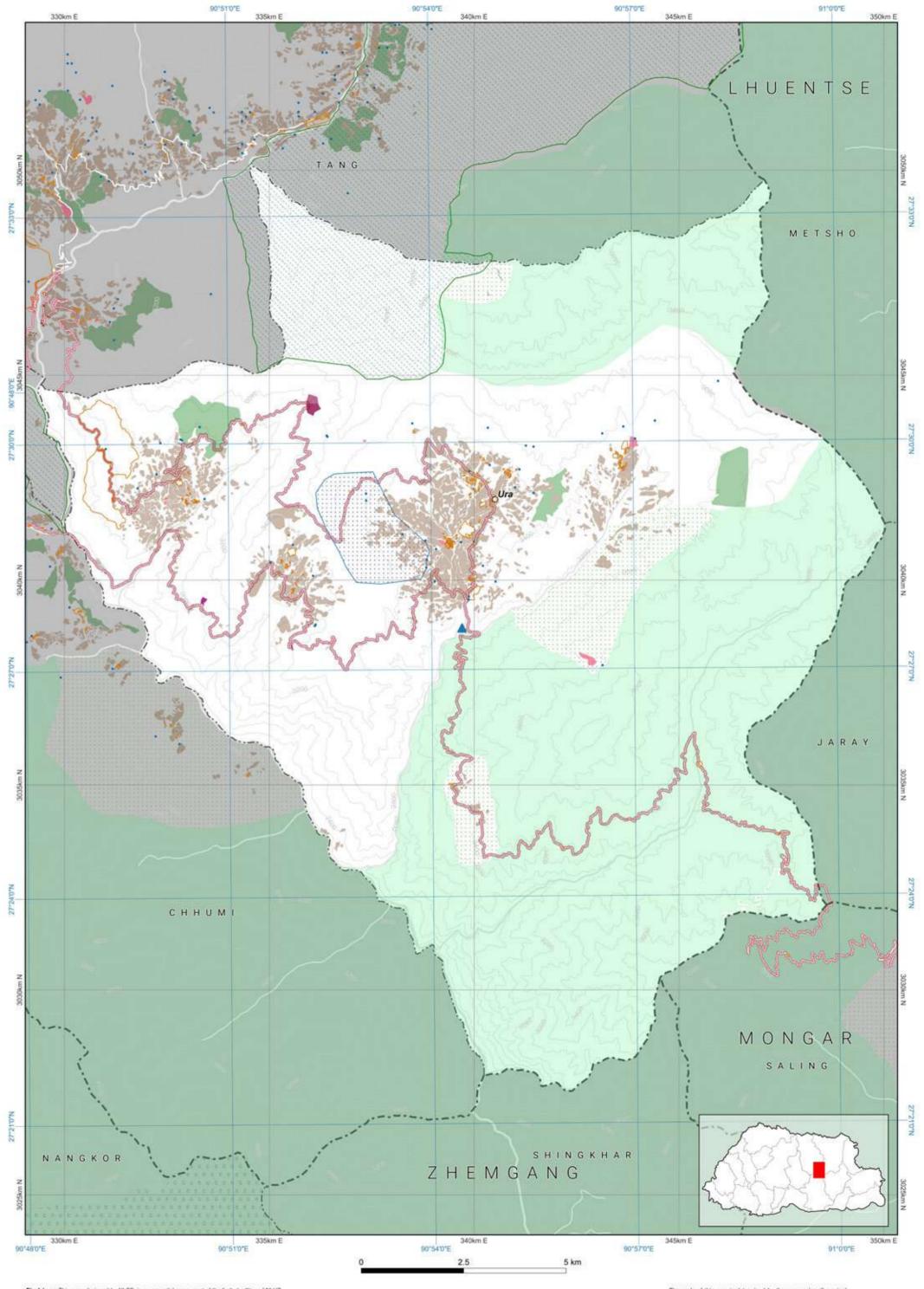
Department of Water Ministry of Energy and Natural Resources Department of Surface Transport Ministry of Infrastructure and Transport

# Demographic Table





Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)



#### **Zone Area** All areas are in Acres. Chhukha Dzongkhag 02 Dzongkhag code Dzongkhag area 465731.083 Agriculture Culture Industrial Zone Area ■ Nature Conservation Area Agriculture 29475.07 Rangeland Rural Settlement 104.627 Culture ■ Sustainable Forest Management Area 679.469 Industrial NCA 62011.375 Rangeland 0 **Rural Settlement** 2173.377 SFMA 43617.141

# **Zone Conflict**

Urban

4662.645

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	102.249	0.00	3.244	2.183	0.17	31.755	0
NCA	102.249	0	64.44	6.39	0	0.1	8.44	0
Agriculture	1,357.47	64.44	0	21.086	0.034	0	0.001	0
Urban	3.244	6.39	21.086	0	32.193	4.425	310.843	0
Culture	2.183	0	0.034	32.193	0	0	12.304	0
Industrial	0.17	0.1	2.245	4.425	0	0	0	0
Rural Settlement	31.755	8.44	0.001	310.843	12.304	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	134.207	3.059	431.196	80.285	1.475	7.578	43.945	0
Road	58.317	0.193	89.927	0	0.505	2.669	21.404	0
Flood Hazard	0.000	0.000	0.000	0	0	0	0	0
Flight Funnel	0	0	0.000	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	2062.543
Road	1788.546
Flood Hazard	0.000
Flight Funnel	0
Heritage	0

Chhukha



# Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways -

> > Basemap

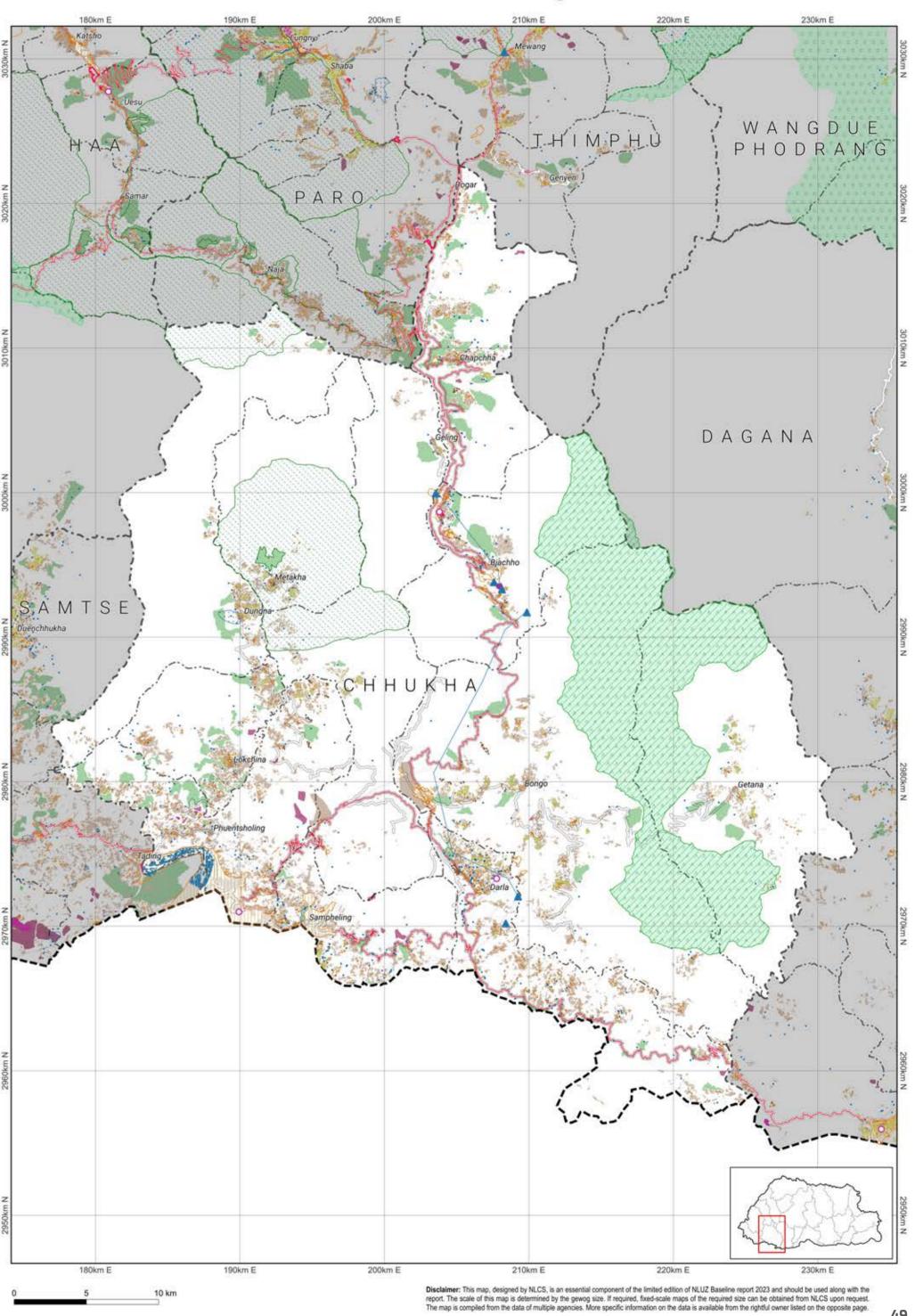
Boundaries International --Dzongkhag - -

Perennial

Highway 300k = Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

# Demographic Table

		Dzo	ngkhag Ke	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Dzongkhag	Male	Female	Total				
Chhukha	36,041	32,925	68,966	109.5	17.1	16,075	3.9



20n	e Area	
	Gewog	Bjachho
	Gewog code	202
	Gewog area	34980.208
	Zone	Area
	Agriculture	1233.769
	Cultural Heritage	27.962
	Industrial	75.239
	NCA	7326.296
	Rangeland	0
	Rural Settlement	604.285
	SFMA	1065.816
	Urban	190.205

# **Zone Conflict**

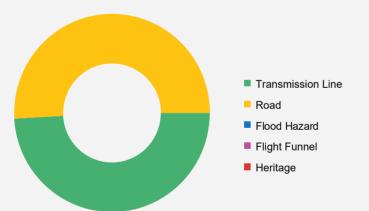
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	9.088	0.034	0	0	0
Urban	0	0	9.088	0	25.167	3.184	120.5	0
Culture	0	0	0.034	25.167	0	0	12.304	0
Industrial	0	0	0	3.184	0	0	0	0
Rural Settlement	0	0	0	120.5	12.304	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	55.813	1.553	0.308	7.578	17.969	0
Road	9.668	0	24.363	0	0	0.743	8.503	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	257.391
Road	267.013
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Chhukha: Bjachho

GELING

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Institutional Land

Residential Land

Forest Management Unit Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone Nature Conservation Area

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value Rangeland

Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A

Hydro Power Waterways -Basemap

Boundaries International --

Dzongkhag - -Gewog ---Perennial Terrain

Roads for different

Highway 300k —— Thromde 50k Highway 50k === Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k = Industrial 5k Dzongkhag 25k Farm 5k ====

#### **Data Ownership** Data Owner of the Map Content

	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Culture and Dzongkha Development Ministry of Home Affairs
	Department of Air Transport Ministry of Infrastructure and Transport

Department of Human Settlement Ministry of Infrastructure and Transport

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Bjachho	1,523	1,364	2,887	111.7	14.2	708	3.9	
Tsimasham Town	1,125	1,010	2,135	111.4	12.9	484	3.8	
Chhukha Town	871	971	1,842	89.7	5.3	483	3.7	

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

# The scale of this map is determined by the gawog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

215km E 89\*39\*0\*E

51



BONGO

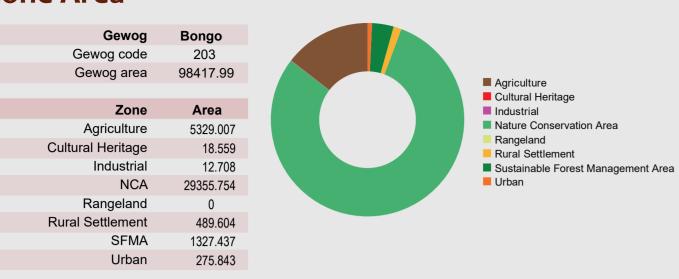
National Land Use Zoning 2023

DAGALA

THIMPHU

DAGANA

TSEZA



# **Zone Conflict**

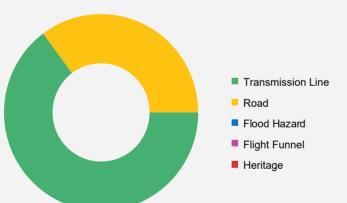
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	1.091	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	10.274	0	0	0	0
Urban	1.091	0	10.274	0	7.025	0.304	190.223	0
Culture	0	0	0	7.025	0	0	0	0
Industrial	0	0	0	0.304	0	0	0	0
Rural Settlement	0	0	0	190.223	0	0	0	0
Rangeland	0	0	0		0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	46.298	0	35.294	5.898	0	0	4.771	0
Road	0	0	8.406	0	0.034	0	0.508	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	288.125
Road	156.416
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

Chhukha: Bongo

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

> Residential Land Institutional Land

Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

> **Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park Ramsar Site

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Hazard and Risk

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial Manufacturing and Production

Existing mines Airport • Helipad O

Hydro Power Plants A

Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -Perennial Terrain

Roads for different Highway 300k —— Thromde 50k Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k

#### **Data Ownership**

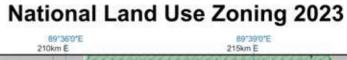
Dzongkhag 25k

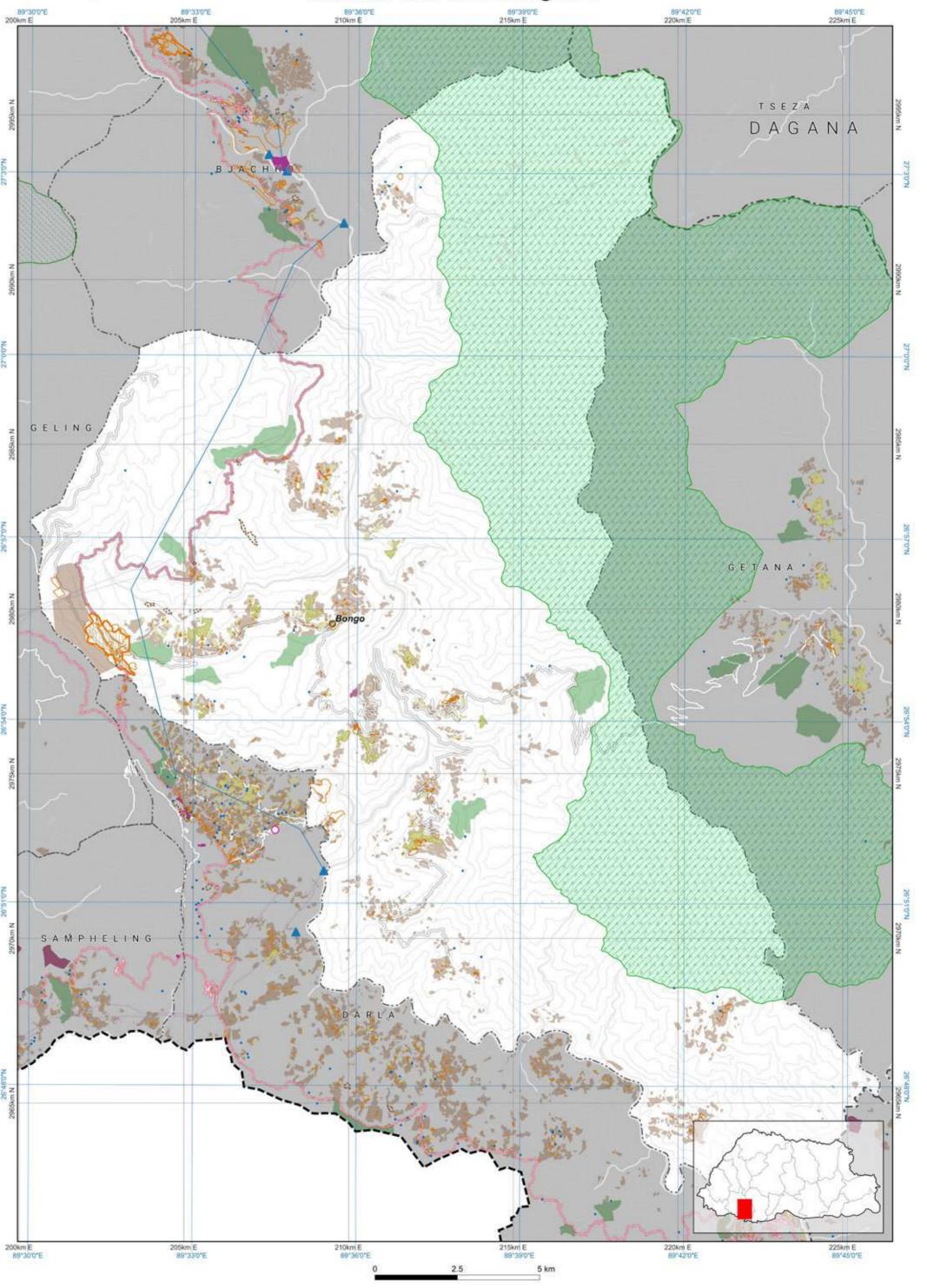
Data Owner of the Map Content
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Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

#### **Demographic Table**

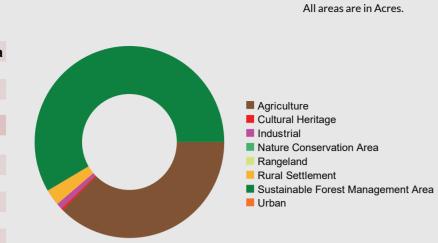
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population			Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total					
Bongo	1,758	1,905	3,663	92.3	28.7	786	4.4	
Gedu Town	1,437	1,412	2,849	101.8	11.2	461	3.7	





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Gewog	Chapchha
Gewog code	204
Gewog area	31999.197
Zone	Area
Agriculture	2009.02
Cultural Heritage	18.569
Industrial	54.724
NCA	0
Rangeland	0
Rural Settlement	147.593
SFMA	3136.738
Urban	0



# **Zone Conflict**

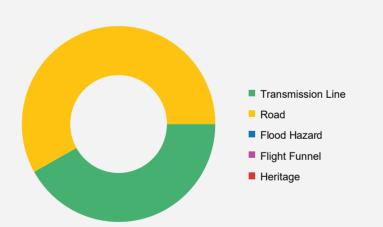
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	65.011	0	43.308	0	0.03	0	1.709	0
Road	23.812	0	26.905	0	0	0	4.443	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	329.056
Road	456.631
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**





#### Transistion Zone Buffer Zone

#### Hazard and Risk Rain Induced Flood

#### Powerlines Flight Funnel

#### Tsamdro

Potential Recharge Area

# Manufacturing and Production

#### Hydro Power Plants A

# Basemap

International --

Perennial

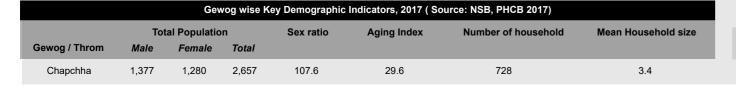
ighway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ongkhag 25k ===	Farm 5k

#### **Data Ownership**

# Department of Agriculture Ministry of Agriculture and Livestock

#### **Demographic Table**





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BJACHHO

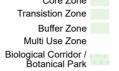
DAGALA

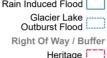
THIMPHU

# 55

#### Lease Land Residential Land Institutional Land Forest Management Unit Community Forest **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area**

# Protected Area Core Zone





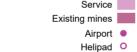
# Heritage \_\_\_\_

# Other Effective Area-based Conservation Measures

#### Key Biodiversity Area High Conservation Value

# Significant Watershed





# Hydro Power Waterways -

# Boundaries

Dzongkhag - -Gewog ---

#### Terrain Contour

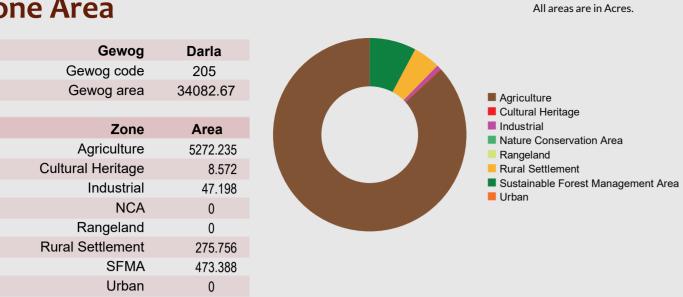
	map scales
ay 300k	Thromde 50k
vay 50k ===	Thromde 25k
vay 25k ====	Thromde 5k
ıway 5k	Access 5k

Chhukha: Chapchha





Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	34.270	0	0	0	0.262	0
Road	18.878	0	14.423	0	0	0.044	4.579	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

_	
Buffer Zone	Area
Transmission Line	151.782
Road	415.337
Flood Hazard	0
Flight Funnel	0
Heritage	0



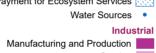
# Biological Corridor / Botanical Park



#### Other Effective Area-based Conservation Measures Key Biodiversity Area

#### High Conservation Value Tsamdro





	Service
	Existing mines
•	Airport
$\sim$	11-1

# Hydro Power Waterways -

#### Basemap Boundaries International --

Dzongkhag - -Perennial Terrain

# Roads for different

Highway 300k ===	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k
zongkhag 25k ===	Farm 5k
Dzongkhag 5k	

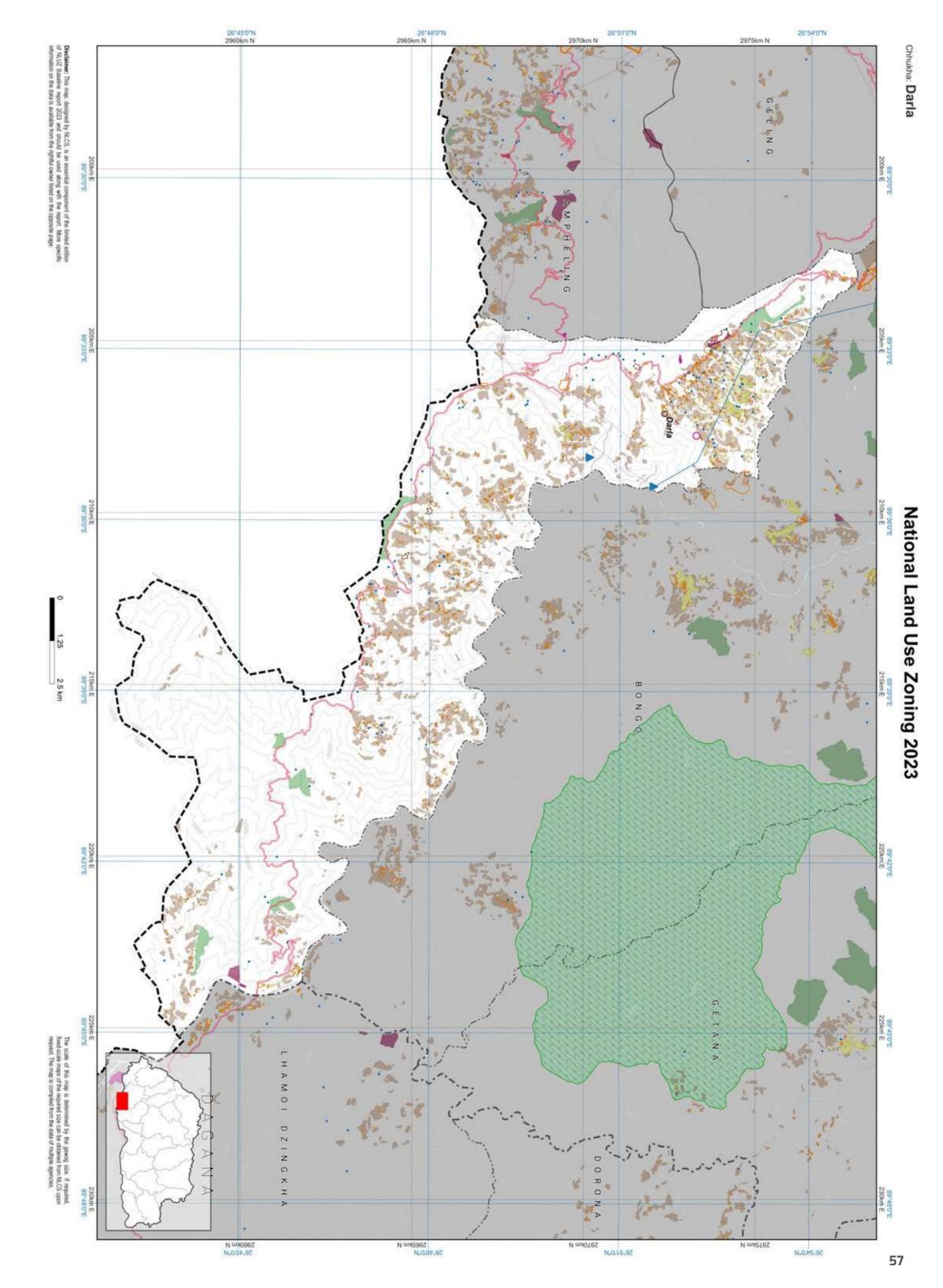
# **Data Ownership**

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Department of Forests and Park Services Ministry of Energy and Natural Resources	
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Department of Water Ministry of Energy and Natural Resources	
Department of Air Transport Ministry of Infrastructure and Transport	
Department of Surface Transport Ministry of Infrastructure and Transport	

National Land Commission Secretariat

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Mean Household							Mean Household size	
Gewog / Throm	Male	Female	Total					
Darla	3,798	3,706	7,504	102.5	19.7	1,749	4.1	
Darla Town	496	541	1,037	91.7	13.6	266	3.9	



one Area	
Gewog	Dungna
Gewog code	206
Gewog area	50036.015
Zone	Area
Agriculture	1363.273
Cultural Heritage	2.395
Industrial	0.1
NCA	252.093
Rangeland	0
Rural Settlement	46.844
SFMA	6322.101
Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	49.635	114.157		2.05	0	3.669	0
NCA	49.635		11.318	0	0	0	7.416	0
Agriculture	114.157	11.318	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	2.05	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	3.669	7.416	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



# **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Residential Land Institutional Land

Lease Land

Forest Management Unit Community Forest **Cultural Heritage** Religious Sites Heritage Village

Heritage Conservation Zone Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood Right Of Way / Buffer

Ramsar Site

Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Manufacturing and Production

> Existing mines Airport Helipad O Hydro Power Plants A

Hydro Power Waterways -

Basemap

Boundaries International --Dzongkhag - -Perennial

Roads for different

Highway 300k —— Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

#### Data Ownership

# Ministry of Energy and Natural Resources

4.8

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water

National Land Commission Secretariat

#### Chhukha: Dungna

89°18'0"E 180km E

HAA

GAKILING

DUENCHHUKHA

SAMTSE

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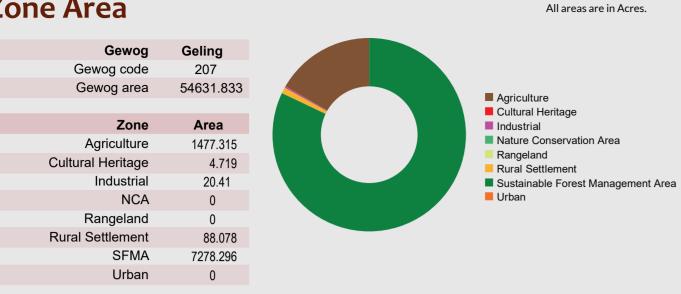
SAMAR

National Land Use Zoning 2023

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GELING

METAKHA



# **Zone Conflict**

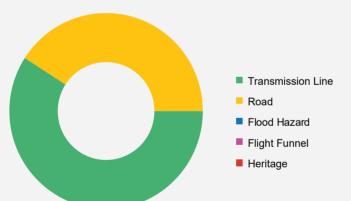
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	280.286	0	0	0.12	0.494	0
NCA	0	0	0	0	0	0	0	0
Agriculture	280.286	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0.12	0	0	0	0	0	0	0
Rural Settlement	0.494	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	10.162	0	0	0	3.194	0
Road	0	0	1.369	0	0.181	0.184	0.357	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer	Zone	Area
Transmissio	n Line	177.731
	Road	122.947
Flood H	lazard	0
Flight F	unnel	0
He	eritage	0



# **Map Legend**

Chhukha: Geling

#### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

## Residential Land Institutional Land

Lease Land

#### Forest Management Unit Community Forest **Cultural Heritage**

#### Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

#### Nature Conservation Area Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

#### Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

## Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

# Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production Existing mines

> Airport • Helipad O Hydro Power Plants A

## Hydro Power Waterways —

Basemap Boundaries

International --Dzongkhag - -

Perennial Terrain

# Roads for different

nway 300k ===	Thromde 50k
ighway 50k ===	Thromde 25k =
ighway 25k ===	Thromde 5k =
Highway 5k	Access 5k =
ngkhag 50k ===	Industrial 5k =

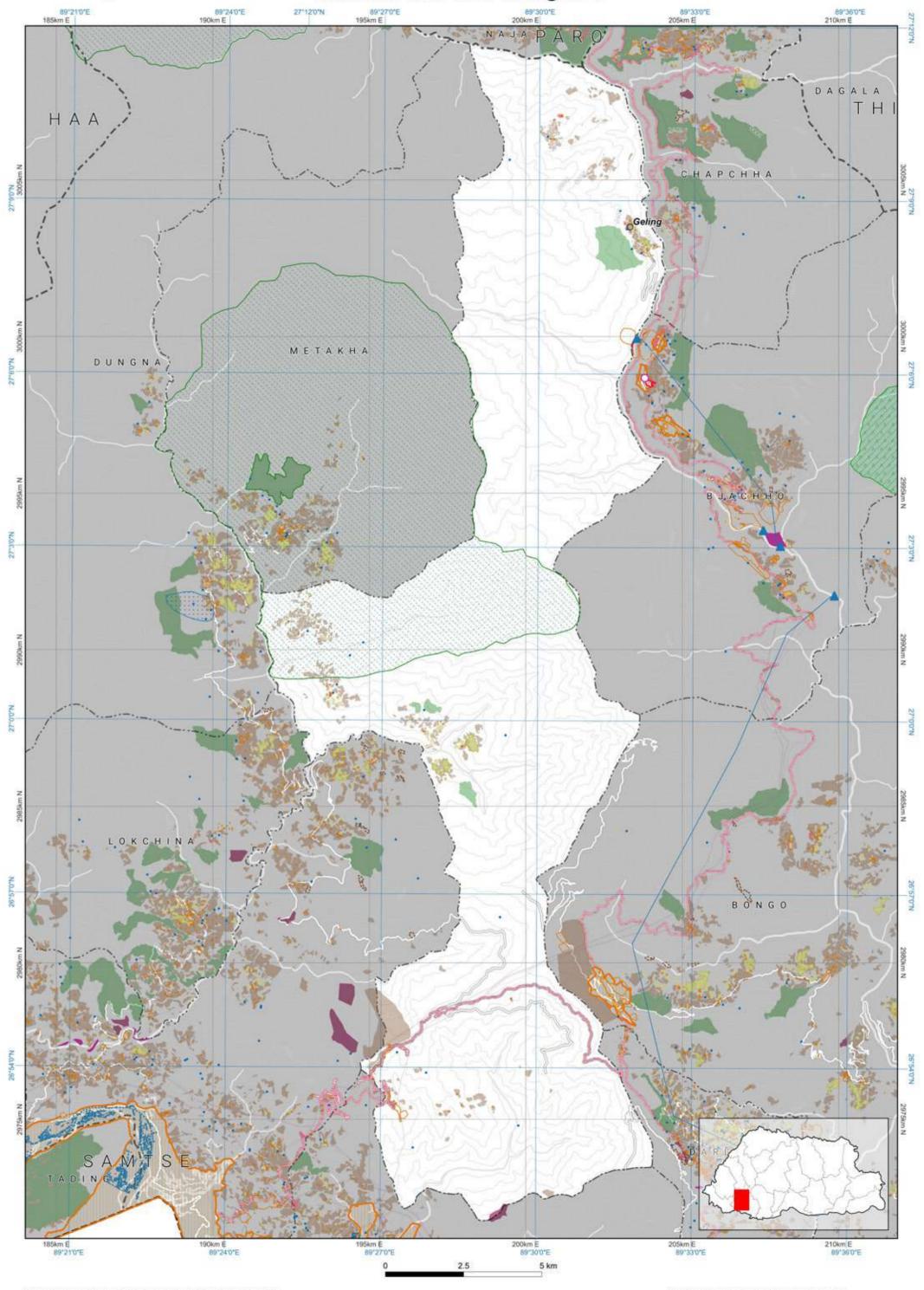
#### **Data Ownership**

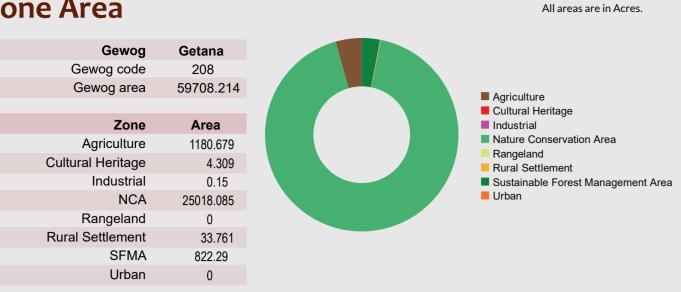
Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	
Department of Energy Ministry of Energy and Natural Resources	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Geology and Mines Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
Department of Surface Transport	

Ministry of Infrastructure and Transport National Land Commission Secretariat

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population Sex					Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Geling	853	756	1,609	112.8	18.5	295	4





# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	52.005	0	0	0.1	0.871	0
Agriculture	0	52.005	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0.1	0	0	0	0	0	0
Rural Settlement	0	0.871	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0.159	0.643	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	5.592
Flight Funnel	0
Heritage	0

# **Map Legend**

Chhukha: Getana



#### Residential Land Institutional Land

Lease Land

**Cultural Heritage** 

#### Forest Management Unit Community Forest





Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park Ramsar Site

#### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

## Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

#### Industrial Manufacturing and Production

Existing mines Airport

#### Hydro Power Plants A Hydro Power Waterways —

#### Basemap Boundaries

Helipad O

International --Dzongkhag - -

#### Perennial Terrain

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zonakhaa 25k —	Form 5k

#### **Data Ownership**

Data Owner of the Map Content

#### Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services

willistry of Effergy and Natural Resource
Department of Water Ministry of Energy and Natural Resource
National Land Commission Secretariat

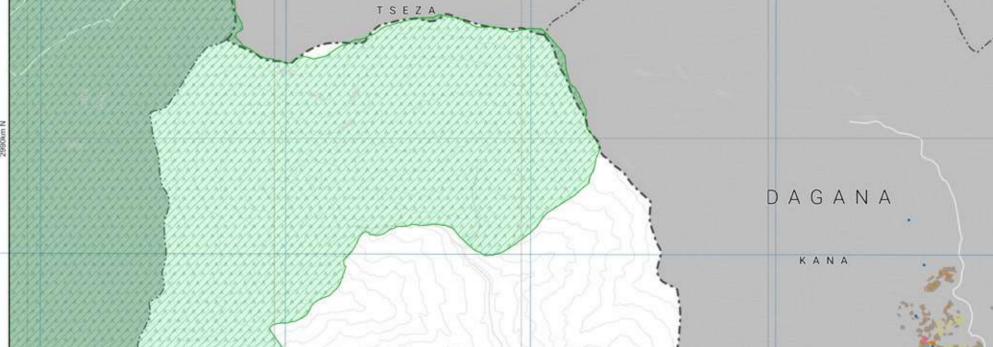
# **Demographic Table**

Comog microsof Domographic maliculates, 2017 ( Courses MCD, 1100 2017)											
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Getana	392	428	820	91.6	24.3	157	5.2				

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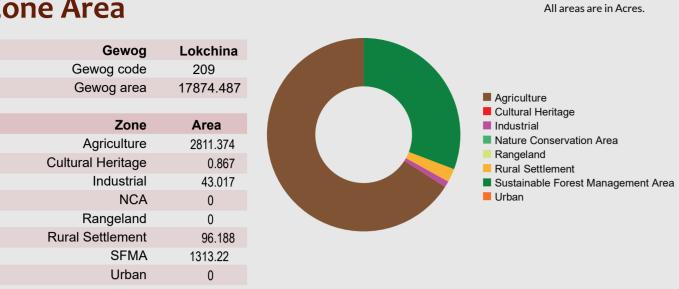
# National Land Use Zoning 2023



BONGO

LHAMOI DZINGI

220km E 89"42"0"E



# **Zone Conflict**

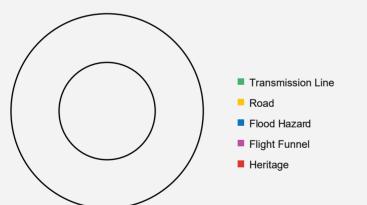
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0





Chhukha: Lokchina



Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines Airport • Helipad O

> Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries International --Dzongkhag - -Gewog ---Perennial Terrain

Roads for different Thromde 50k

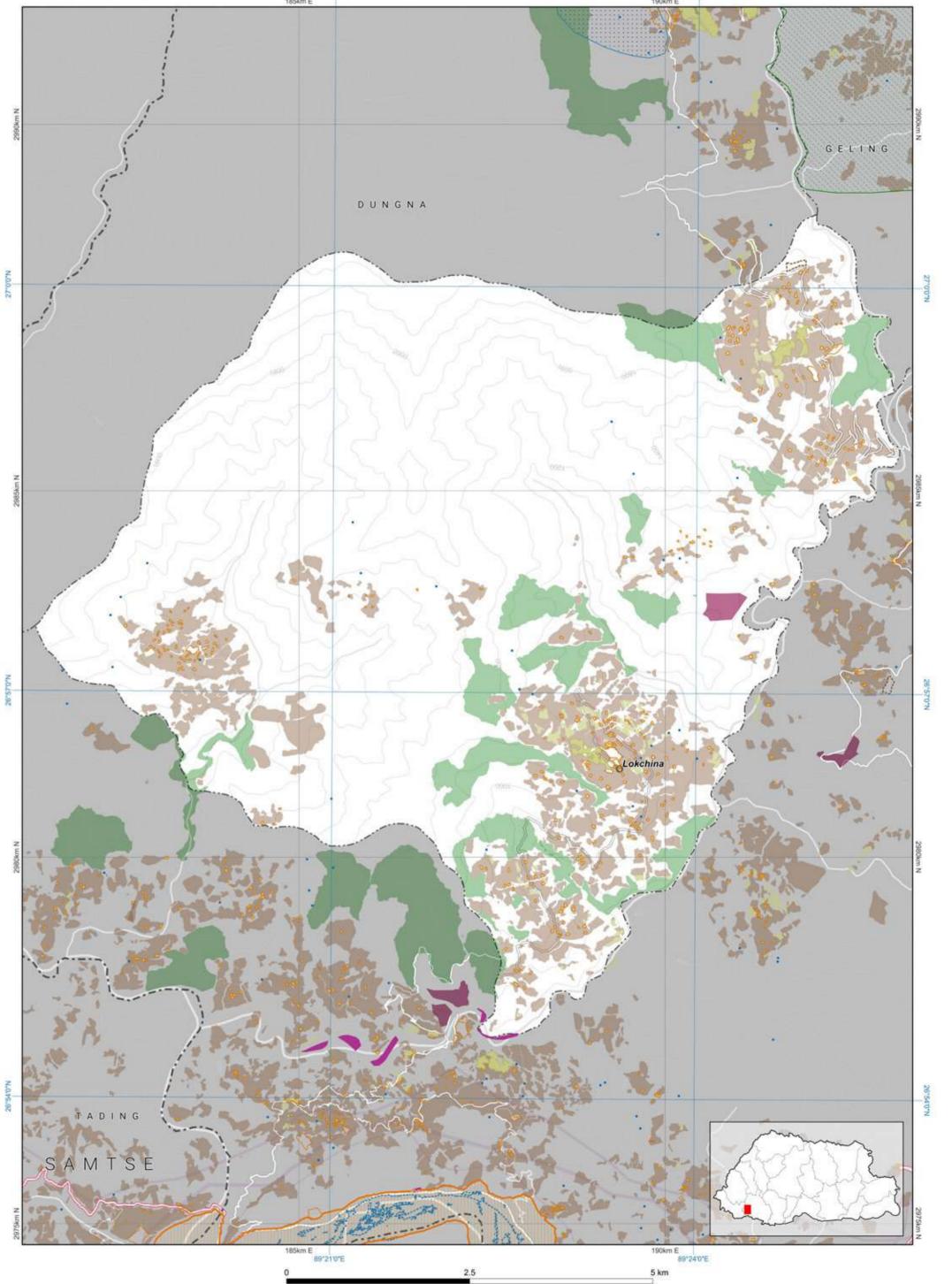
Highway 300k —— Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k = Farm 5k ====

#### **Data Ownership**

# **Demographic Table**

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)												
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size						
Gewog / Throm Male Female Total													
Lokchina	1 386	1 308	2 604	106.0	10.0	550	4.6						

#### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources National Land Commission Secretariat



.OI	ie Area	
	Gewog	Metakha
	Gewog code	210
	Gewog area	32080.063
	Zone	Area
	Agriculture	962.991
	Cultural Heritage	0.132
	Industrial	0.05
	NCA	0
	Rangeland	0
	Rural Settlement	27.591
	SFMA	19966.19
	Urban	0

# **Zone Conflict**

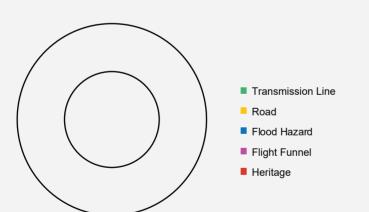
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	962.912		0.132	0.05	27.589	0
NCA	0	0	0	0	0	0	0	0
Agriculture	962.912	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0.132	0	0	0	0	0	0	0
Industrial	0.05	0	0	0	0	0	0	0
Rural Settlement	27.589	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Chhukha: Metakha

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Lease Land

Residential Land Institutional Land Sustainable Forest Management Area

Forest Management Unit

Community Forest

Cultural Heritage
Religious Sites
Heritage Village
Heritage Conservation Zone

Urban Zone \_\_\_\_\_

Nature Conservation Area

Protected Area

Core Zone

Transistion Zone
Buffer Zone
Multi Use Zone
Biological Corridor /
Botanical Park

Right Of Way / Buffer

Heritage Road

Powerlines

Key Biodiversity Area
High Conservation Value
Rangeland

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services
Water Sources

•

Industrial

Manufacturing and Production

Service

Existing mines

Airport

Helipad O
Hydro Power Plants 
Hydro Power Waterways —

Basemap

Boundaries
International = = Dzongkhag = - Gewog = - Rivers
Main river Perennial = Terrain
Contour

Roads for different

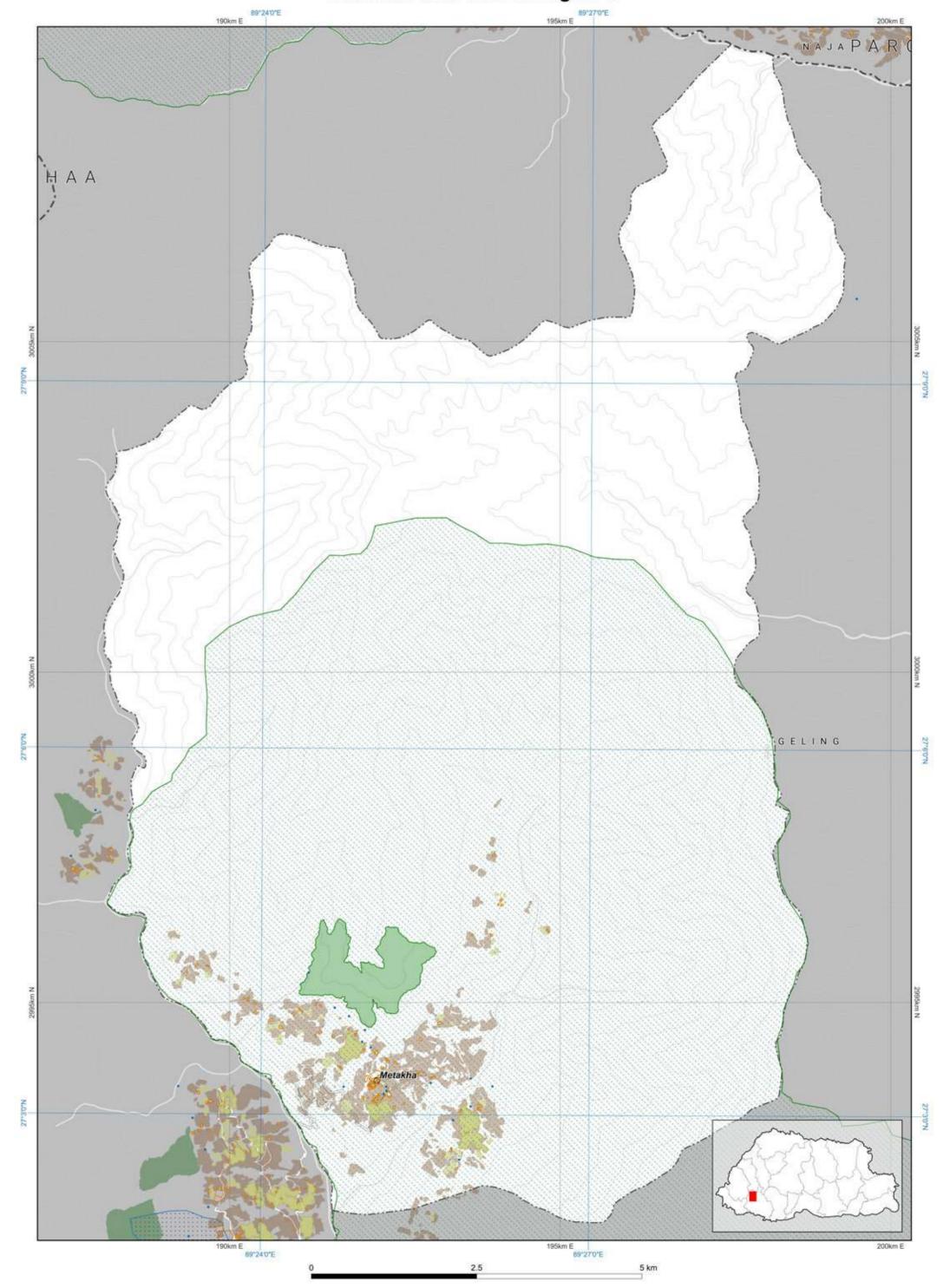
Highway 300k Thromde 50k Highway 50k Thromde 25k Highway 25k Access 5k Dzongkhag 50k Industrial 5k Dzongkhag 25k Farm 5k

#### Data Ownership

# Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

#### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Gewog / Throm	Total Population Throm <i>Male Female Total</i>		Sex ratio	Sex ratio Aging Index Number of household Mean Hou		Mean Household size	Department of Water Ministry of Energy and Natural Resources			
Metakha	322 335 657		96.1	21.6	125	5.3	National Land Commission Secretariat			



**Zone Conflict** 



**RoW / Buffer Conflict** 

RoW / Buffer Area

Road

Area

348.008

128.953

0

**Buffer Zone** 

Flood Hazard

Flight Funnel

Heritage

**Transmission Line** 



■ Agriculture

Industrial

0.937

Transmission Line

Flood Hazard

Flight Funnel

Heritage

Road

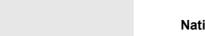
Rangeland

Rural Settlement

Cultural Heritage

■ Nature Conservation Area

■ Sustainable Forest Management Area





# Institutional Land





# Urban Zone Protected Area

# Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park Wetland

# Hazard and Risk Glacier Lake Outburst Flood

Heritage \_\_\_\_

# Flight Funnel

Key Biodiversity Area

# Significant Watershed

Water Sources •

Existing mines

# Hydro Power Plants A

### Boundaries International --Dzongkhag - -

Gewog — Perennial

### Roads for different map scales

Highway 300k ——	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k ==
Dzongkhag 25k ===	Farm 5k =
Dzonakhaa 5k	

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Phuentsholing	2,991	2,795	5,786	107.0	21.6	1,279	4.4		
Phuentsholing Thror	nde 15,052	12,606	27,658	119.4	12.2	6,817	3.6		

1.722

0.102

0.001



Disclaimer: The demographic statistics provided in the table above for Phuentsholing thromde encompass not only the area falling under the Phuentsholing gewog but also include the demographic statistics of the town area falling under the Sampheling and Tading gewog. The same statistics for Phuentsholing thromde can be found under the Sampheling and Tading gewog.

# **Map Legend National Land Use Zoning**





### Forest Management Unit Community Forest **Cultural Heritage**

# Religious Sites Heritage Conservation Zone

# **Nature Conservation Area**

Core Zone Transistion Zone

# Ramsar Site

Rain Induced Flood Right Of Way / Buffer

Powerlines

# Other Effective Area-based Conservation Measures

High Conservation Value

# Tsamdro

Potential Recharge Area Payment for Ecosystem Services

Industrial Manufacturing and Production

> Airport • Helipad O

# Hydro Power Waterways -

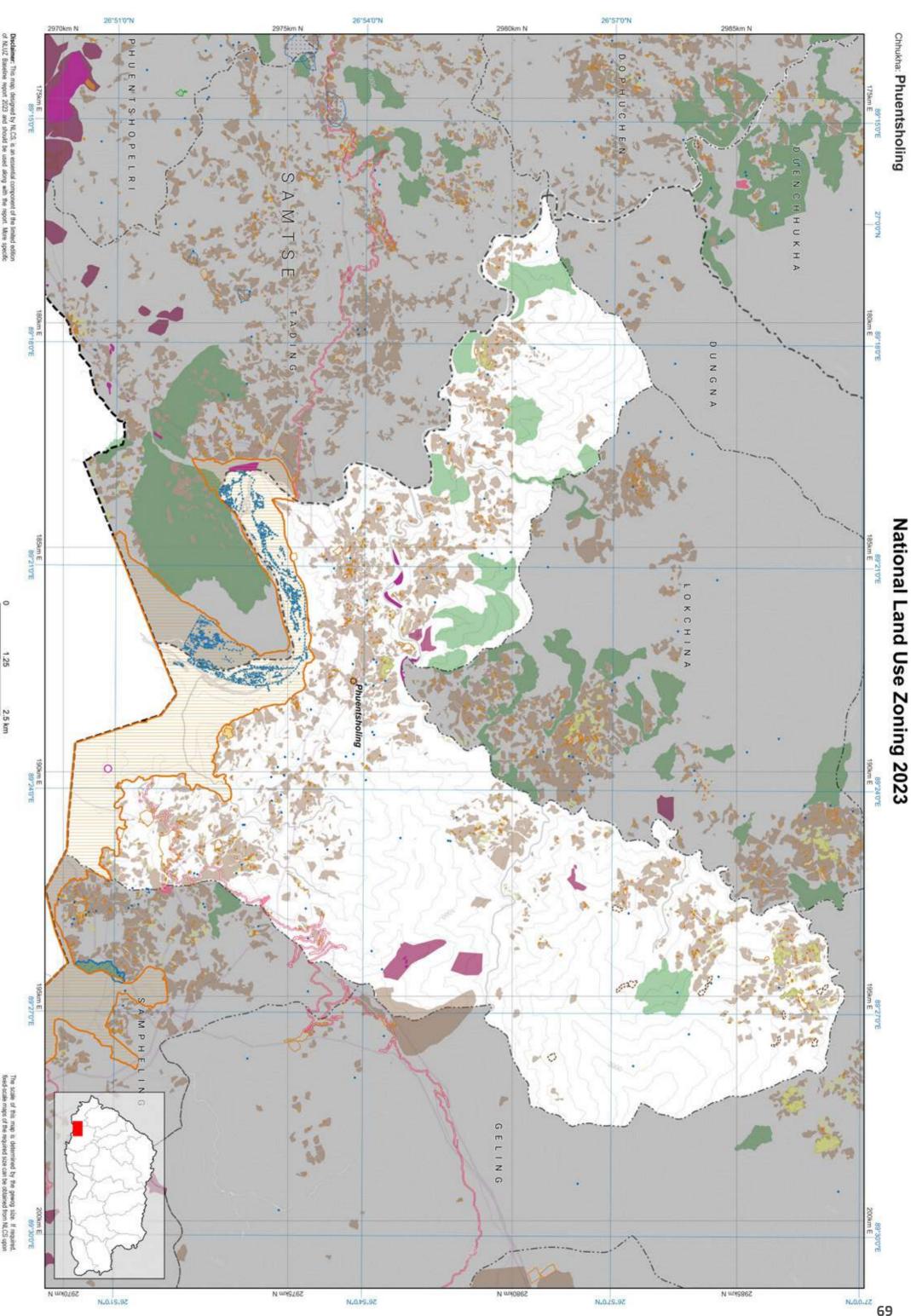
# Basemap

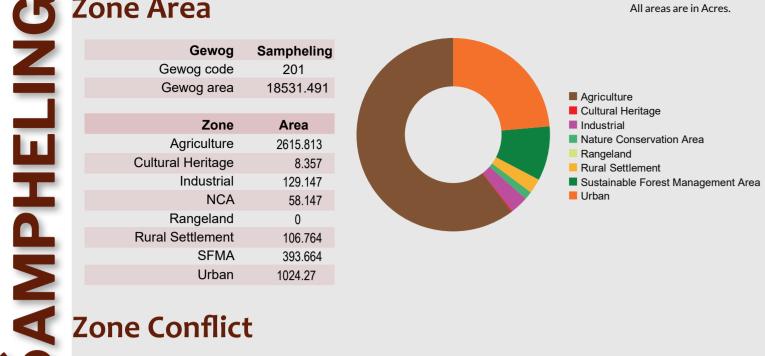
### Terrain Contour

### **Data Ownership** Data Owner of the Map Content

Department of Agriculture

- 1	Ministry of Agriculture and Livestock
	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Geology and Mines Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Air Transport Ministry of Infrastructure and Transport
	Department of Human Settlement Ministry of Infrastructure and Transport
	Department of Surface Transport Ministry of Infrastructure and Transport
	National Centre for Hydrology and Meteorology
	National Land Commission Secretariat





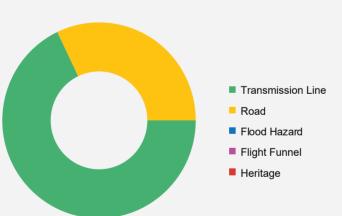
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	52.605		2.153	0	0	0	0
NCA	52.605		1.117	6.389	0	0	0.152	0
Agriculture	0	1.117		0.001	0	0		0
Urban	2.153	6.389	0.001	0	0	0	0.001	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.152	0	0.001	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	12.942	3.059	142.470	35.921	142.47	0	5.649	0
Road	14.73	0.193	4.580	0	0	1.698	0.316	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	510.45
Road	241.249
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning** Protected Chhuzhing



### Residential Land Institutional Land

## Forest Management Unit Community Forest

### **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone



### Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Ramsar Site

Hazaro an	a RISK
Rain Induced Floo	d
Glacier Lak	e ,
Outburst Floo	di

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value Tsamdro

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

### Basemap Boundaries

International --Dzongkhag - -

Perennial

# Terrain

Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zonakhaa 25k ===	Farm 5k ≡

### **Data Ownership**

Dzongkhag 5k

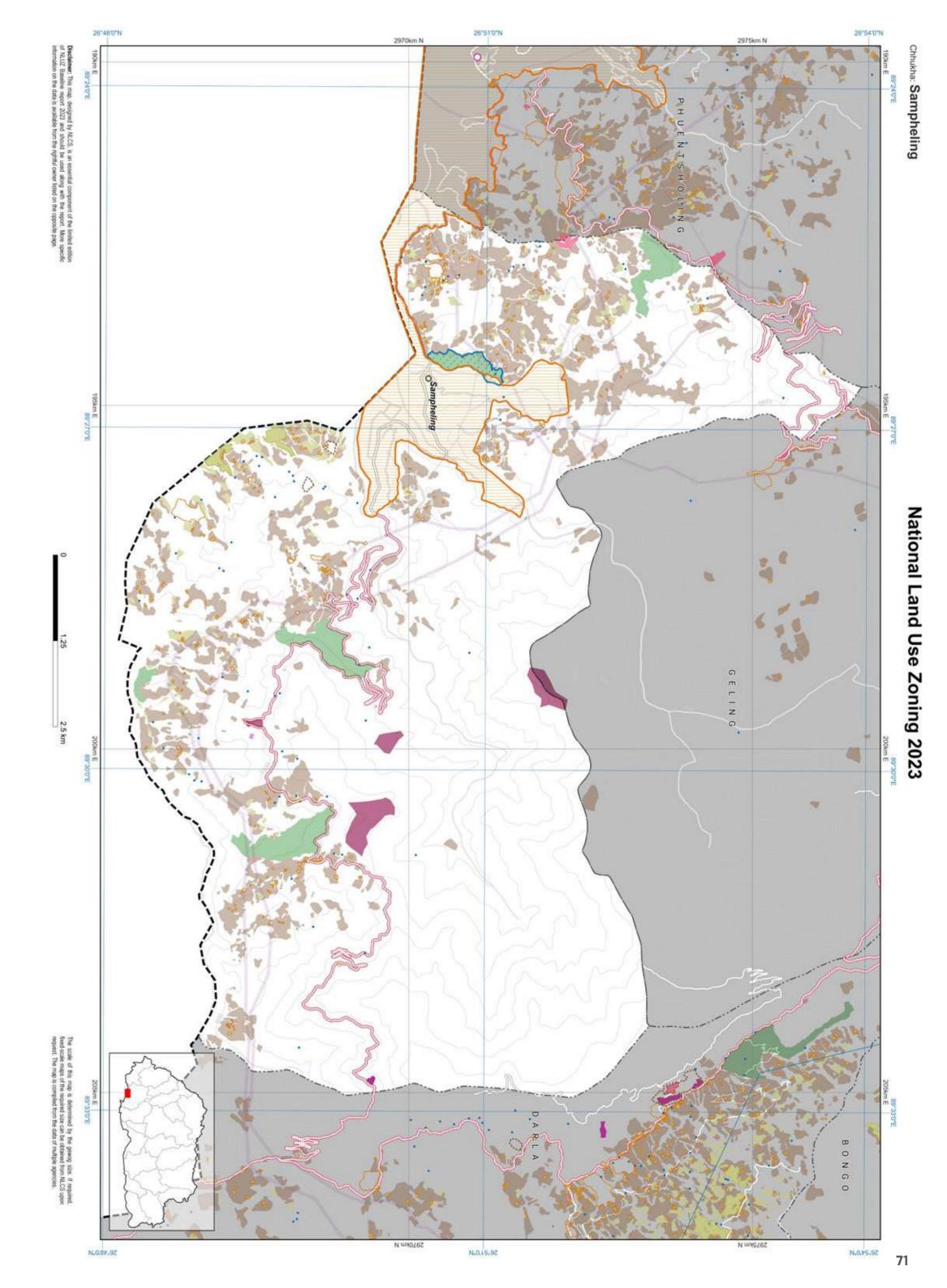
# Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources



**Demographic Table** 

Disclaimer: The demographic statistics provided in the table above for Phuentsholing thromde encompass not only the area falling under the Sampheling gewog but also include the demographic statistics of the town area falling under the Phuentsholing and Tading gewog. The same statistics for Phuentsholing thromde can be found under the Phuentsholing and Tading gewog.

### Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



### **Zone Area** All areas are in Acres. Dzongkhag Dagana Dzongkhag code 03 425964.272 Dzongkhag area Agriculture Culture Industrial Zone Area ■ Nature Conservation Area Agriculture 25259.189 Rangeland Rural Settlement Culture 86.579 ■ Sustainable Forest Management Area Industrial 166.469 Urban NCA 33067.741 Rangeland 0 Rural Settlement 1753.469

# **Zone Conflict**

SFMA

Urban

8284.965

1226.594

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	11.429	0.583	0	0	0	0	0
NCA	11.429	0	68.668	0	0.906	0	9.209	0
Agriculture	0.583	68.668	0	347.131	0.033	0.021	0	0
Urban	0	0	347.131	0	33.213	0.317	200.073	0
Culture	0	0.906	0.033	33.213	0	0	25.979	0
Industrial	0	0	0.021	0.317	0	0	0	0
Rural Settlement	0	9.209	0	200.073	25.979	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	39.787	21.439	280.624	21.915	0	2.674	4.982	0
Road	47.826	10.214	100.857	0	0.107	0.446	13.044	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area		
Transmission Line	1573.627		
Road	1335.276		
Flood Hazard	0		■ Transmission Line
Flight Funnel	0		Road
Heritage	0		Flood Hazard
			Flight Funnel
			Heritage

# **Map Legend**



# Biological Corridor / Botanical Park Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A Hydro Power Waterways -

> > Basemap Boundaries

Airport •

International --Dzongkhag - -

Perennial

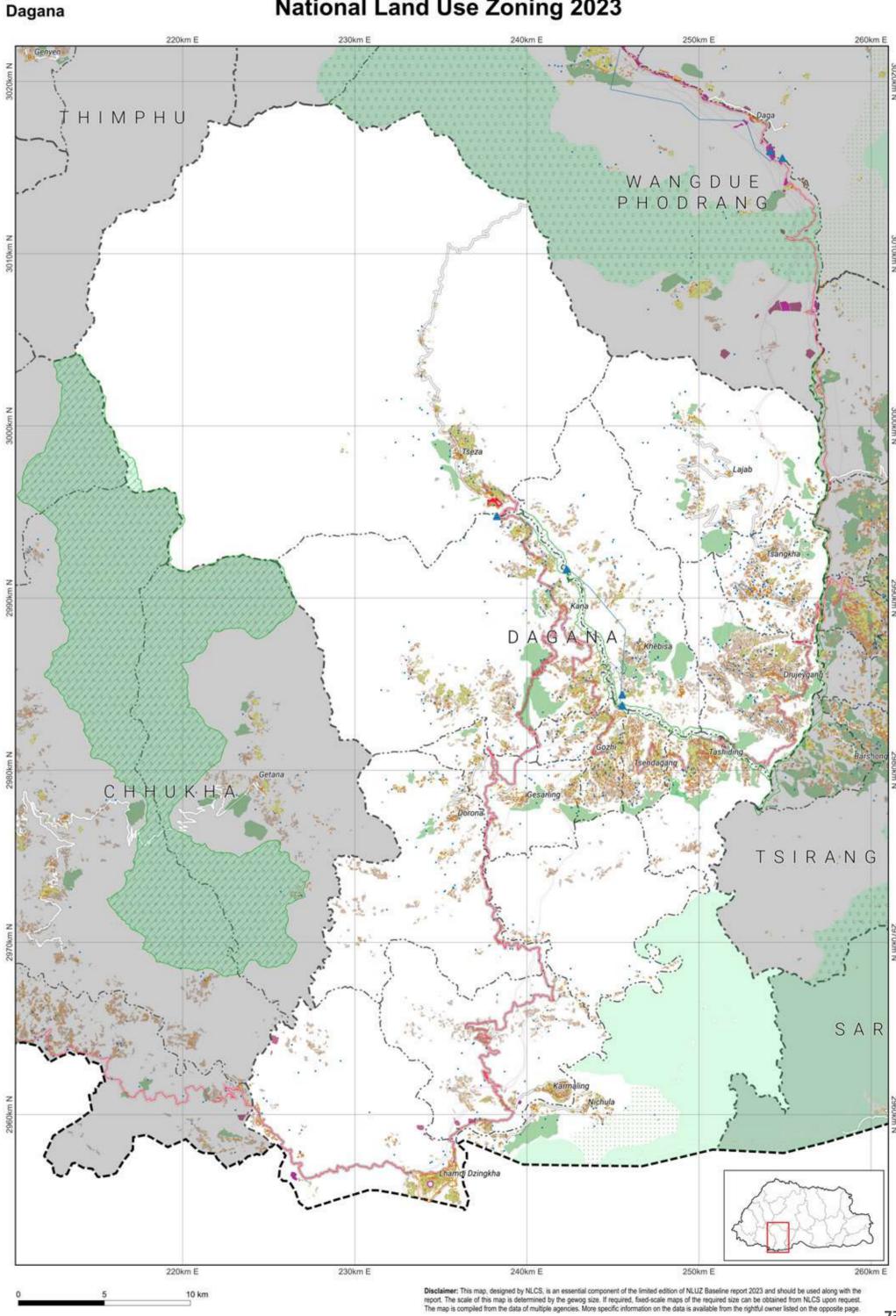
Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Dzongkhag 25k

# Highway 300k ---

Industrial 5k

# Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size		
Dzongkhag	Male	Female	Total						
Dagana	12,956	12,009	24,965	107.9	23.7	5,671	3.8		



01	ne Area	
	Gewog	Dorona
	Gewog code	301
	Gewog area	26434.948
	Zone	Area
	Agriculture	1265.745
	Cultural Heritage	0
	Industrial	0
	NCA	0
	Rangeland	0
	Rural Settlement	73.223
	SFMA	198.346
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	3.886	0	0	0	0	0
Road	0	0	1.225	0	0	0	0.036	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

■ Transmission Line

Road

Flood Hazard Flight Funnel Heritage

# RoW / Buffer Area

# **Map Legend**

Dagana: Dorona







Protected Area



### Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer

Heritage \_\_\_\_

### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Potential Recharge Area

Payment for Ecosystem Services Manufacturing and Production

# Existing mines Airport •

Helipad O Hydro Power Plants A Hydro Power Waterways -

### Basemap

Boundaries International --

Dzongkhag - -

# Perennial

ghway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =
nakhaa 25k ——	Form Ek

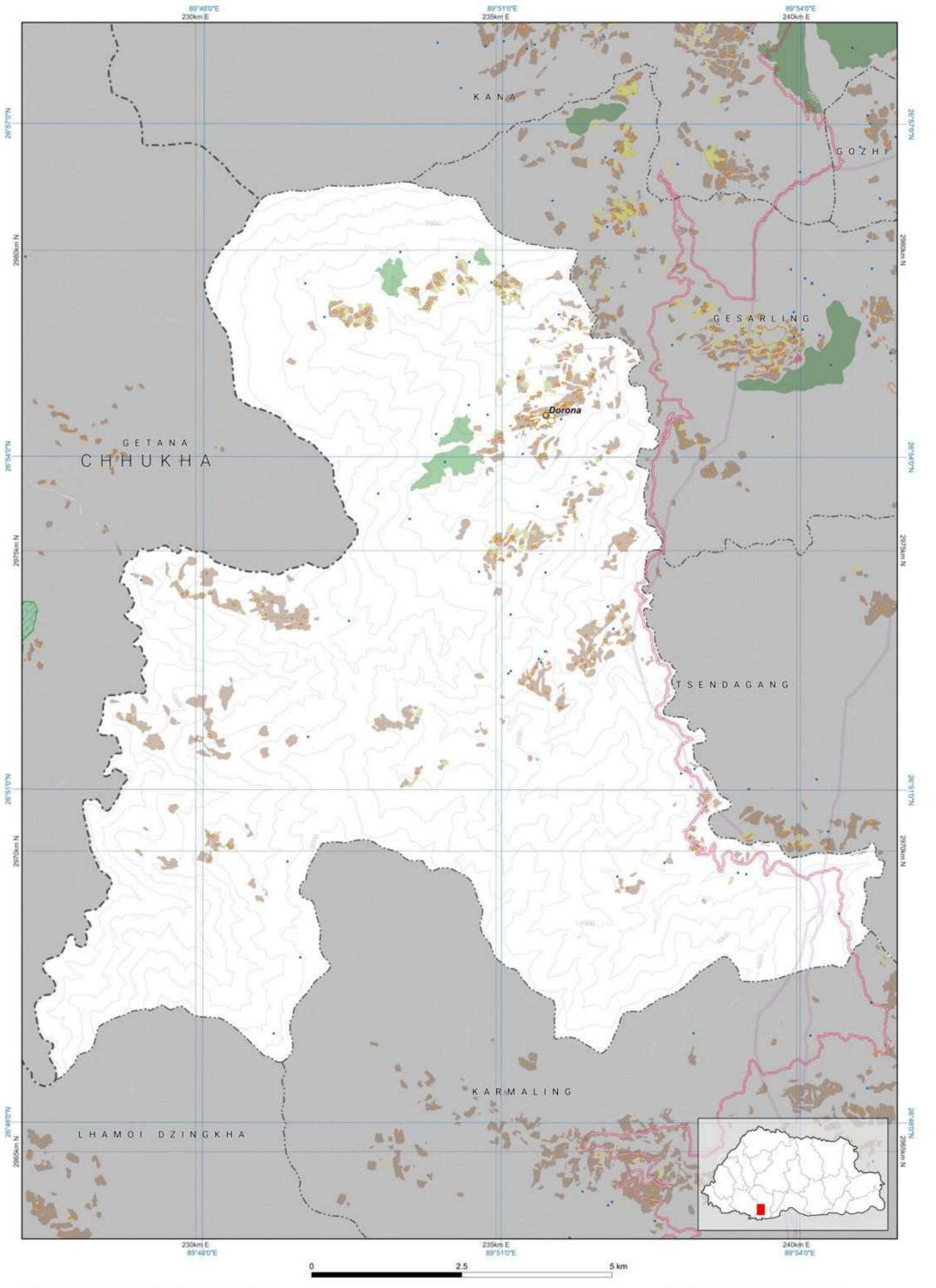
### **Data Ownership**

Data Owner of the Map Content

Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Dorona	415	337	752	123.1	25.0	194	3.8			



Gewog	Drujeygang	
wog code	302	
wog area	14272.369	Agriculture
)	Area	■ Cultural Heritage ■ Industrial
	4307.333	Nature Conservation Area
age	12.429	Rangeland Rural Settlement
	0.1	■ Sustainable Forest Management Are
NCA	309.095	Urban
d	0	
tlement	160.581	
SFMA	1063.898	
Urban	0	

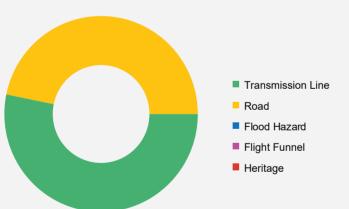
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0.882	0	0	0	0	0	0
NCA	0.882	0	0.55	0	0	0	0	0
Agriculture	0	0.55	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	28.001	1.535	47.559	0	0	0	0.273	0
Road	5.085	5.82	10.629	0	0	0	1.491	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	165.757
Road	145.74
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Dagana: Drujeygang

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest Religious Sites Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone

> Biological Corridor / Botanical Park Hazard and Risk

Multi Use Zone

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Potential Recharge Area Payment for Ecosystem Services Manufacturing and Production

Existing mines Helipad O Hydro Power Plants A

Hydro Power Waterways — Basemap

> Boundaries International --Dzongkhag - -Perennial

Highway 300k ---

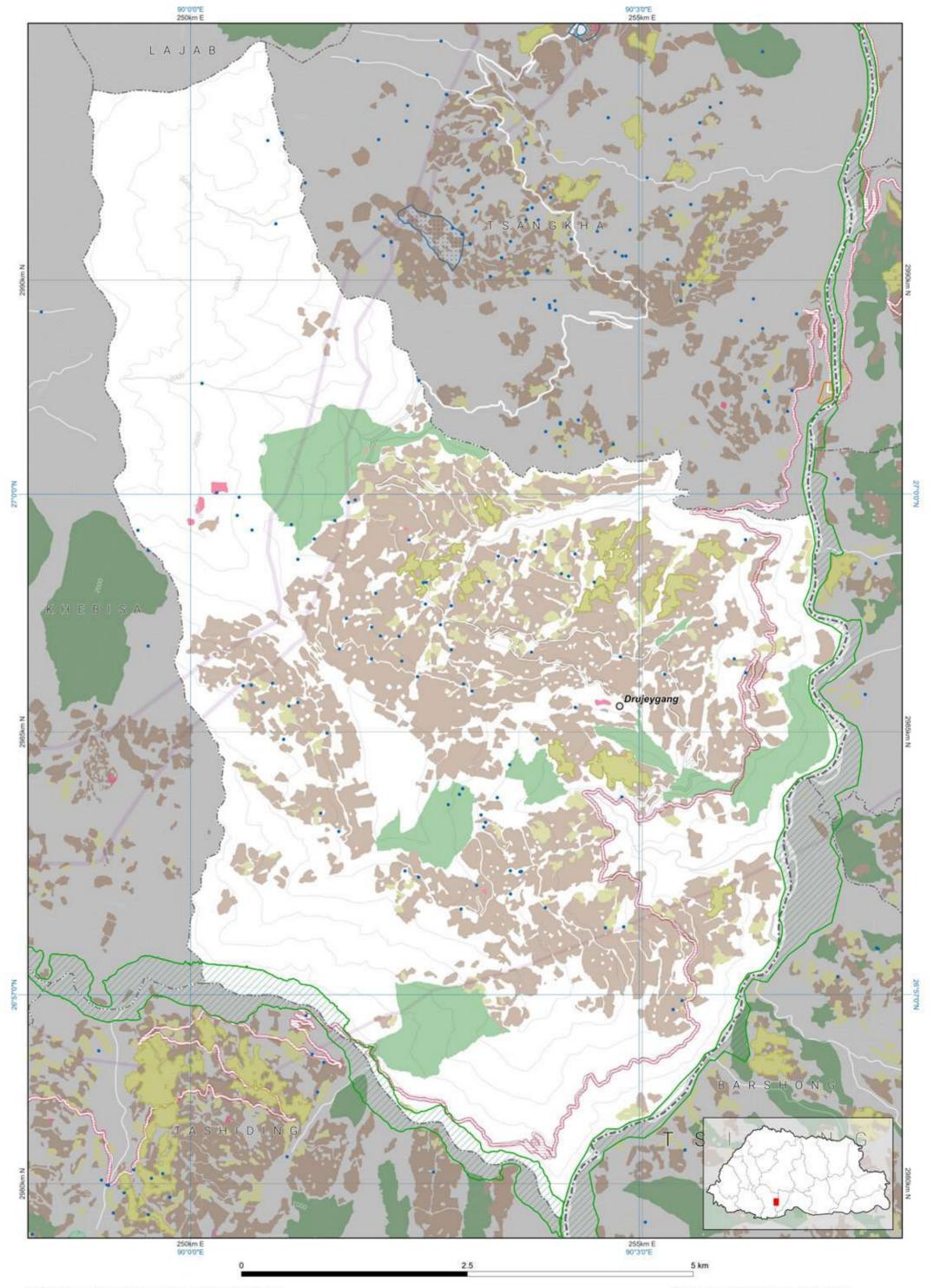
Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Dzongkhag 25k =

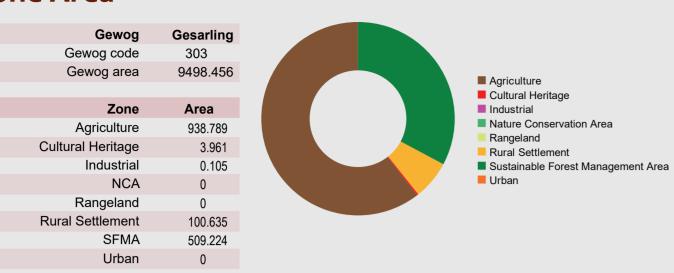
# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Drujeygang	965	977	1,942	98.8	36.3	517	3.5				
Drujeygang Town	250	325	575	76.9	6.6	55	2.9				

## Data Ownership

ata Owner of the Map Content
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epartment of Energy nistry of Energy and Natural Resources
epartment of Forests and Park Services nistry of Energy and Natural Resources
epartment of Water nistry of Energy and Natural Resources
epartment of Surface Transport nistry of Infrastructure and Transport
ational Land Commission Secretariat





# **5** Zone Conflict

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0.003	0	7.663	0	0	0	0	0
Road	0	0	0.814	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	141.237
Road	101.242
Flood Hazard	0
Flight Funnel	0
Heritage	0
· ·	

# **Map Legend**

All areas are in Acres.



# Forest Management Unit Community Forest

Institutional Land







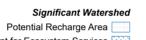
# Ramsar Site Hazard and Risk



# Powerlines Flight Funnel

# Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value Tsamdro





### Airport • Helipad O Hydro Power Plants A

### Hydro Power Waterways — Basemap

### Boundaries International --

Dzongkhag - -Perennial Terrain

Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k
zongkhag 25k ===	Farm 5k
Dzongkhag 5k	

# **Data Ownership**

# Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy

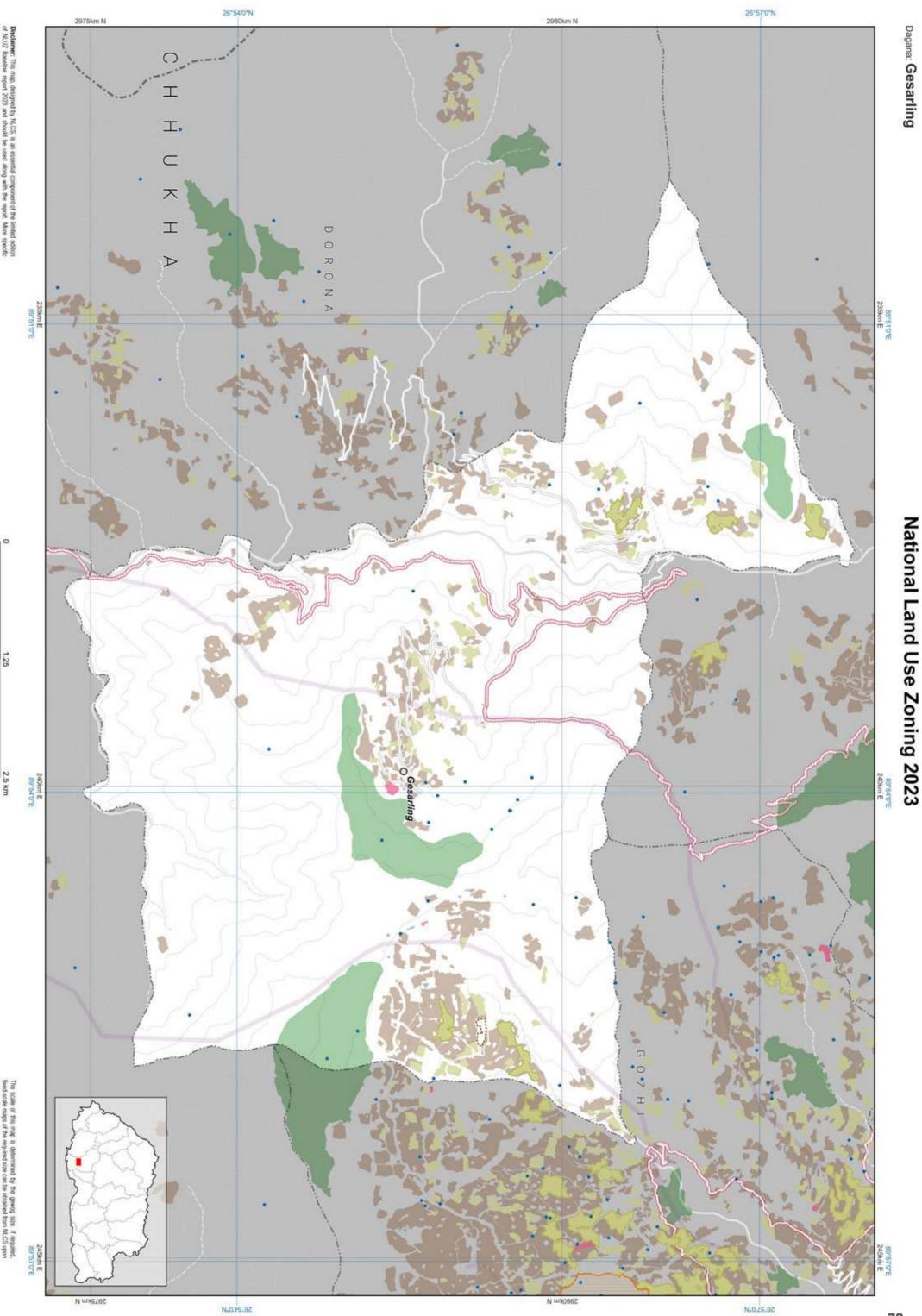
Department of Forests and Park Services Ministry of Energy and Natural Resources	

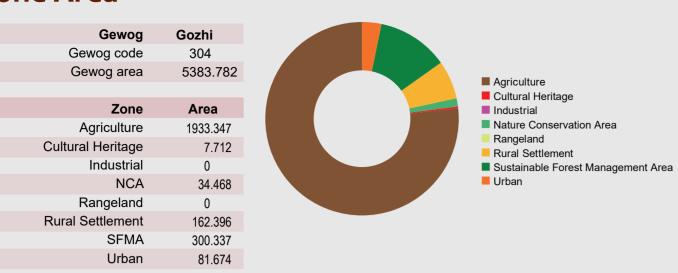
Department of Water Ministry of Energy and Natura
Department of Surface Transr

Ministry of Infrastructure and Transport National Land Commission Secretariat

Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population Sex ratio Aging Index Number of household Mean Household size									
Gewog / Throm	Male	Female	Total						
Gesarling	933	730	1,663	127.8	17.4	276	3.5		





# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0.003	0
Agriculture	0	0	0	1.09	0	0	0	0
Urban	0	0	1.09	0	0	0	0.541	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.003	0	0.541	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	4.771	0.485	49.260	1.824	0	0	1.786	0
Road	0.545	0	12.326	0	0	0	1.297	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	122.765
Road	62.267
Flood Hazard	0
Flight Funnel	0
Heritage	0

All areas are in Acres.



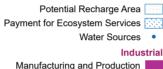
# Biological Corridor / Botanical Park



# Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Significant Watershed





### Helipad O Hydro Power Plants A Hydro Power Waterways —

### Basemap Boundaries International --Dzongkhag - -

Perennial Terrain Contour

# Roads for different map scales

	map scare
lighway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ongkhag 25k ===	Farm 5k ==
zongkhag 5k	

### **Demographic Table**

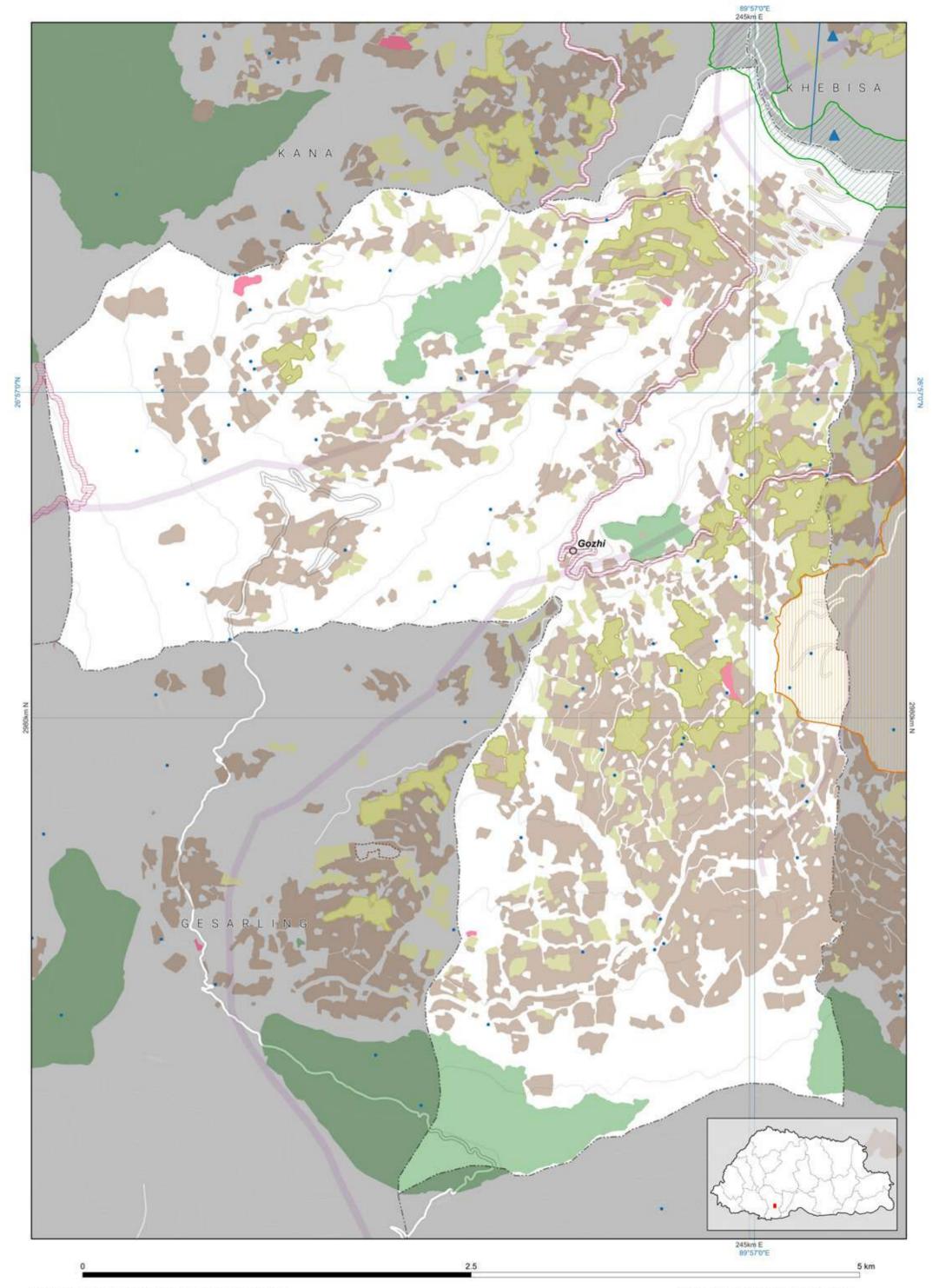
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Gozhi	1,256	1,251	2,507	100.4	23.1	595	4.1	
Dagapela Town	332	246	578	135.0	12.6	132	3.8	
Diaglaiman								

The demographic statistics provided in the table above for Dagapela town encompass not only the area falling under the Gozhi gewog but also include the demographic statistics of the town area falling under the Tsendagang gewog. The same statistics for Dagapela town can be found under the Tsendagang

# **Data Ownership**

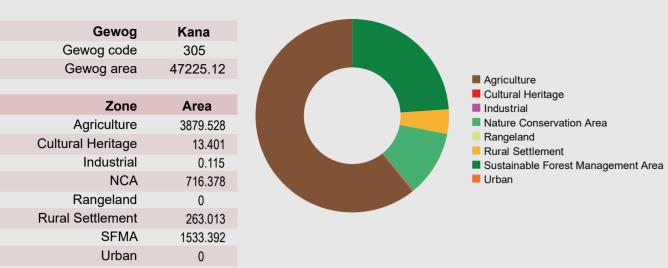
Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

### **National Land Use Zoning 2023** Dagana: Gozhi



Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.





# **Zone Conflict**

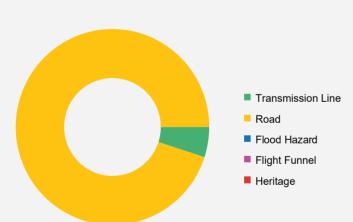
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	3.35	0	0	0	0	0
Agriculture	0	3.35	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	3.298	0	0	0	0	0	0
Road	42.196	0.815	29.205	0	0	0	4.312	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	17.392
Road	331.862
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

### Lease Land Residential Land Institutional Land

# Forest Management Unit

Community Forest

**Cultural Heritage** 

### Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer

Hazard and Risk

## Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

### Key Biodiversity Area High Conservation Value

Tsamdro Significant Watershed

### Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport •

### Hydro Power Plants A Hydro Power Waterways —

Basemap Boundaries

Helipad O

International --Dzongkhag - -Perennial

# Terrain

	map oou
Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k =
zongkhag 50k	Industrial 5k =

# **Data Ownership**

Data Owner of the Map Conte	nt
Bhutan Power Corporation Limi Druk Holding and Investment	ted

Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources

Department of Forests and Park Services Ministry of Energy and Natural Resources

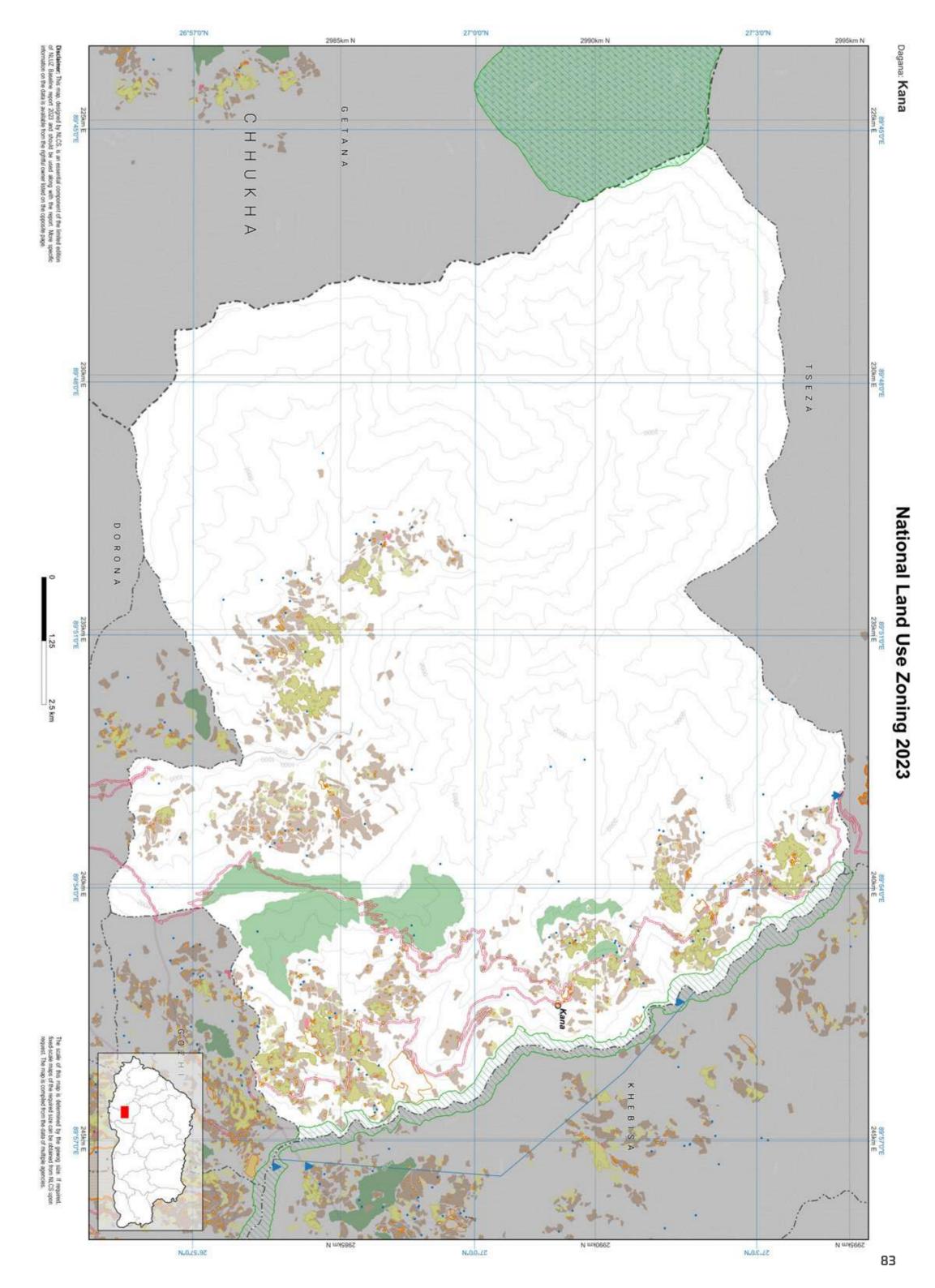
Department of Water

Ministry of Energy and Natural Resources Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

# **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Mean Household size								
Gewog / Throm	Male	Female	Total					
Kana	1,271	1,239	2,510	102.6	27.7	593	4.2	



Gewog	Karmaling
Gewog code	312
Gewog area	22662.101
Zone	Area
Agriculture	1889.879
Cultural Heritage	0
Industrial	48.759
NCA	19.774
Rangeland	0
Rural Settlement	67.179
SFMA	0
Urban	0

# All areas are in Acres.

# Agriculture

- Nature Conservation Area Rangeland Rural Settlement

Cultural Heritage

Industrial

■ Sustainable Forest Management Area

# **Zone Conflict**

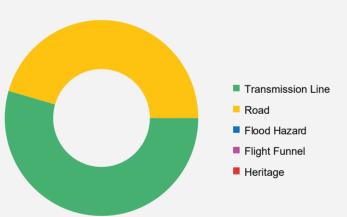
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0.021	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0.021	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	19.951	0	0	2.674	0.028	0
Road	0	0	7.091	0	0	0.425	0.43	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	282.998
Road	236.577
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Dagana: Karmaling

Residential Land Institutional Land

Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** 

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

> Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -

Basemap Boundaries International --

Dzongkhag - -Perennial

Roads for different

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water

Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Karmaling	785	539	1,324	145.6	35.1	309	3.6	

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

TSENDAGANG

**National Land Use Zoning 2023** 

DORONA



on	e Area	
	<b>Gewog</b> Gewog code	Khebisa 306
	Gewog code Gewog area	23859.706
	Zone	Area
	Agriculture	1920.716
	Cultural Heritage	2.813
	Industrial	0.2
	NCA	958.299
	Rangeland	0
	Rural Settlement	75.764
	SFMA	1255.241
	Urban	0

# **Zone Conflict**

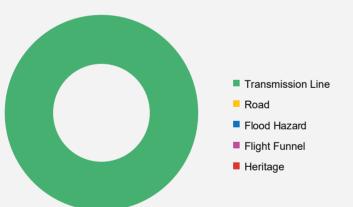
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0		0	0	0	0	0
NCA	0	0	1.92	0	0	0	0	0
Agriculture	0	1.92	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	6.347	6.341	29.143	0	0	0	0.036	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zo	ne Area	
Transmission Li	ne 104.312	2
Ro	ad 0	
Flood Haza	ard 0	
Flight Funr	nel 0	
Herita	ge 0	



# **Map Legend**

# National Land Use Zoning

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land Institutional Land

Forest Management Unit Community Forest

### Religious Sites Heritage Village

Heritage Conservation Zone Urban Zone

### Nature Conservation Area Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

# Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production

Existing mines Airport • Helipad O

### Hydro Power Waterways —

Basemap Boundaries

International --Dzongkhag - -

### Perennial Terrain

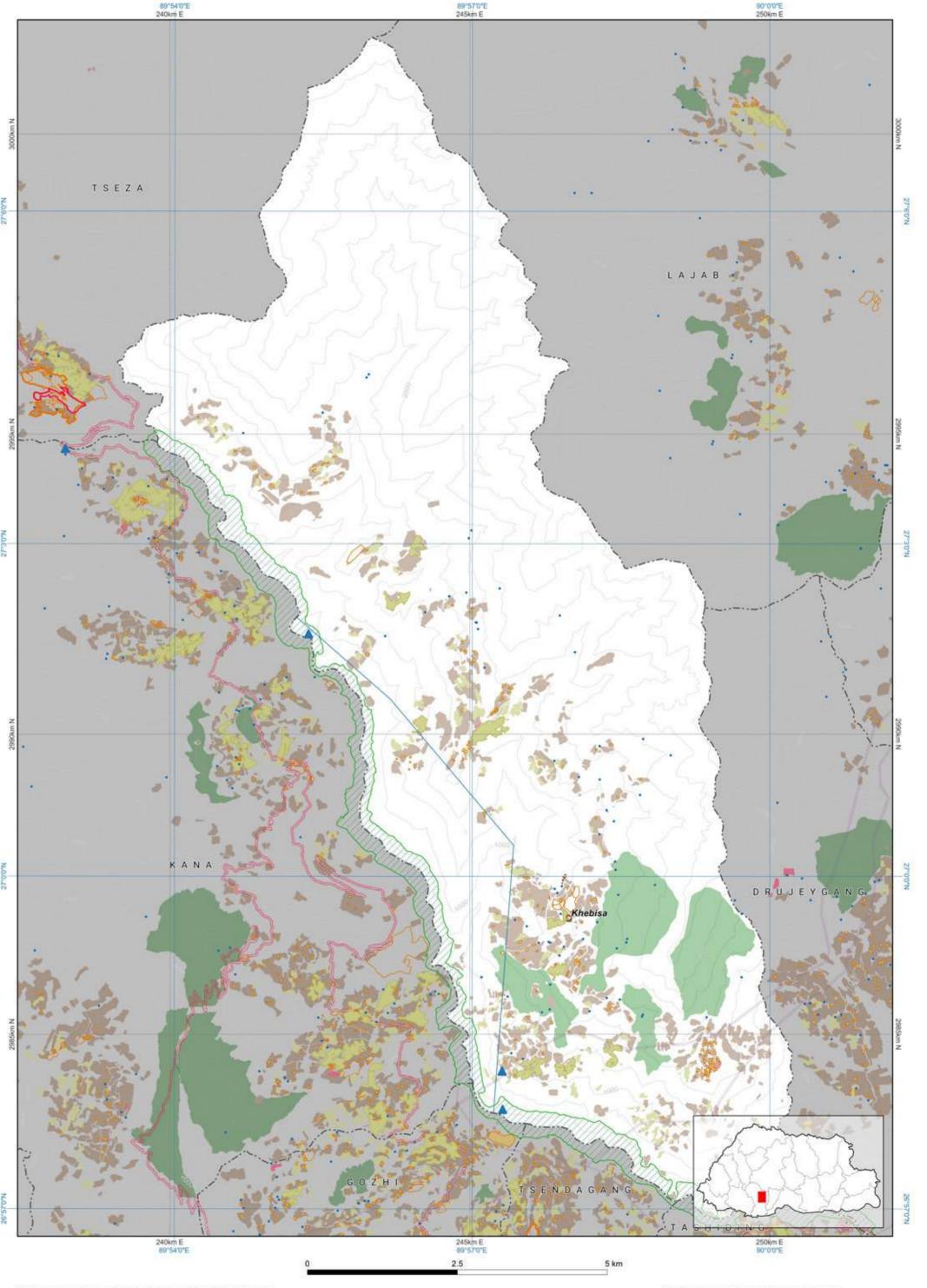
nignway 300k ——	i nromae suk
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k

### **Data Ownership**

# Data Owner of the Map Content

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Department of Water Ministry of Energy and Natural Resources	
National Land Commission Secretariat	

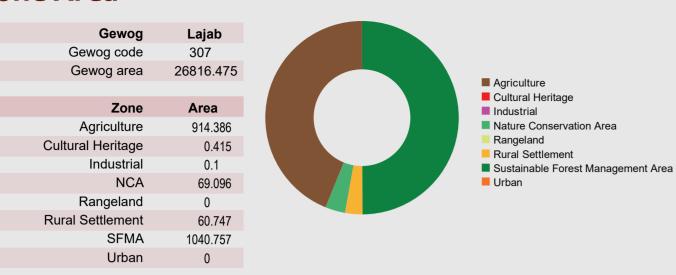
### National Land Use Zoning 2023 Dagana: Khebisa



Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Khebisa	597	618	1,215	96.6	28.1	302	4	

# JAGAN

# **Zone Area**



# **Zone Conflict**

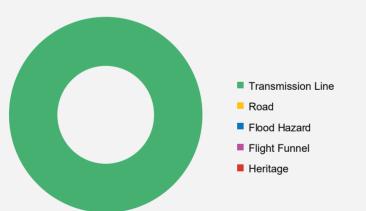
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	11.391	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone Area
Transmission Line 191.598
Road 0
Flood Hazard 0
Flight Funnel 0
Heritage 0



# **Map Legend**

All areas are in Acres.

Dagana: Lajab

TSEZA





Forest Management Unit

Community Forest

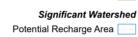




### 

Conservation Measure
Key Biodiversity Area

# High Conservation Value Rangeland



Payment for Ecosystem Services

Water Sources

Industrial

Manufacturing and Production

Manufacturing and Production
Service
Existing mines
Airport

# Helipad O Hydro Power Plants Hydro Power Waterways —

# Basemap Boundaries International - -

Dzongkhag — Gewog — Rivers

Main river
Perennial

Terrain

### Roads for different map scales

Highway 300k Thromde 50k
Highway 50k Thromde 25k
Highway 25k Thromde 5k
Highway 5k Access 5k
Dzongkhag 50k Industrial 5k
Dzongkhag 25k Farm 5k

### **Data Ownership**

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Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

Demograph	ic Tab	le						M
		Gev	vog wise K	Key Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)		D M
	То	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	D
Gewog / Throm	Male	Female	Total					M
Laiah	454	389	843	116.7	26.2	185	3.6	N

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner tated on the opposite page.

National Land Use Zoning 2023

DRUJEYGANG

WANGDUE

PHODRANG

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

	Lhamoi
Gewog	Dzingkha
Gewog code	313
Gewog area	26272.688
Zone	Area
Agriculture	1078.787
Cultural Heritage	5.718
Industrial	113.477
NCA	0
Rangeland	0
Rural Settlement	188.51
SFMA	0
Urban	769.288
Zone Conflict	t

**RoW / Buffer Conflict** 

RoW / Buffer Area

Heritage

Area

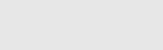
115.026

134.896

0

0

# All areas are in Acres.



Agriculture

Industrial

Rangeland

Cultural Heritage

Rural Settlement

■ Nature Conservation Area

Rural

■ Sustainable Forest Management Area

# **National Land Use Zoning**

Agricultural Land						
Kamzhing						
Protected Chhuzhing						
Regulated Chhuzhing						



**Map Legend** 

### Residential Land Institutional Land

# Forest Management Unit

### Community Forest **Cultural Heritage**





### Protected Area Core Zone Transistion Zone

# Multi Use Zone Biological Corridor / Botanical Park

Buffer Zone

### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood	-
Right Of Way / Buff	fε
Heritage [	

# Powerlines

### Flight Funnel Other Effective Area-based Conservation Measures

### Key Biodiversity Area High Conservation Value

# Tsamdro

### Significant Watershed Potential Recharge Area

Payment for Ecos	system Services	333
	Water Sources	•
	Indus	tria
Manufacturing	and Dradustian	

# Existing mines Airport

### Helipad O Hydro Power Plants A Hydro Power Waterways -

# Basemap

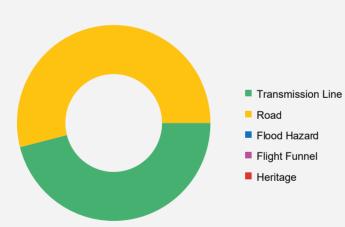
### Boundaries International --Dzongkhag - -Gewog ---

Perennial Terrain Contour

### Roads for different map scales

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k
zongkhag 25k ===	Farm 5k
Ozongkhag 5k	

# **Buffer Zone** Transmission Line Flood Hazard Flight Funnel



5.712

132.89

2.972

13.265

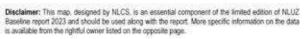
### Data Ownership

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Department of Industry Ministry of Industry, Commerce and Employment
Department of Air Transport Ministry of Infrastructure and Transport
Department of Human Settlement Ministry of Infrastructure and Transport

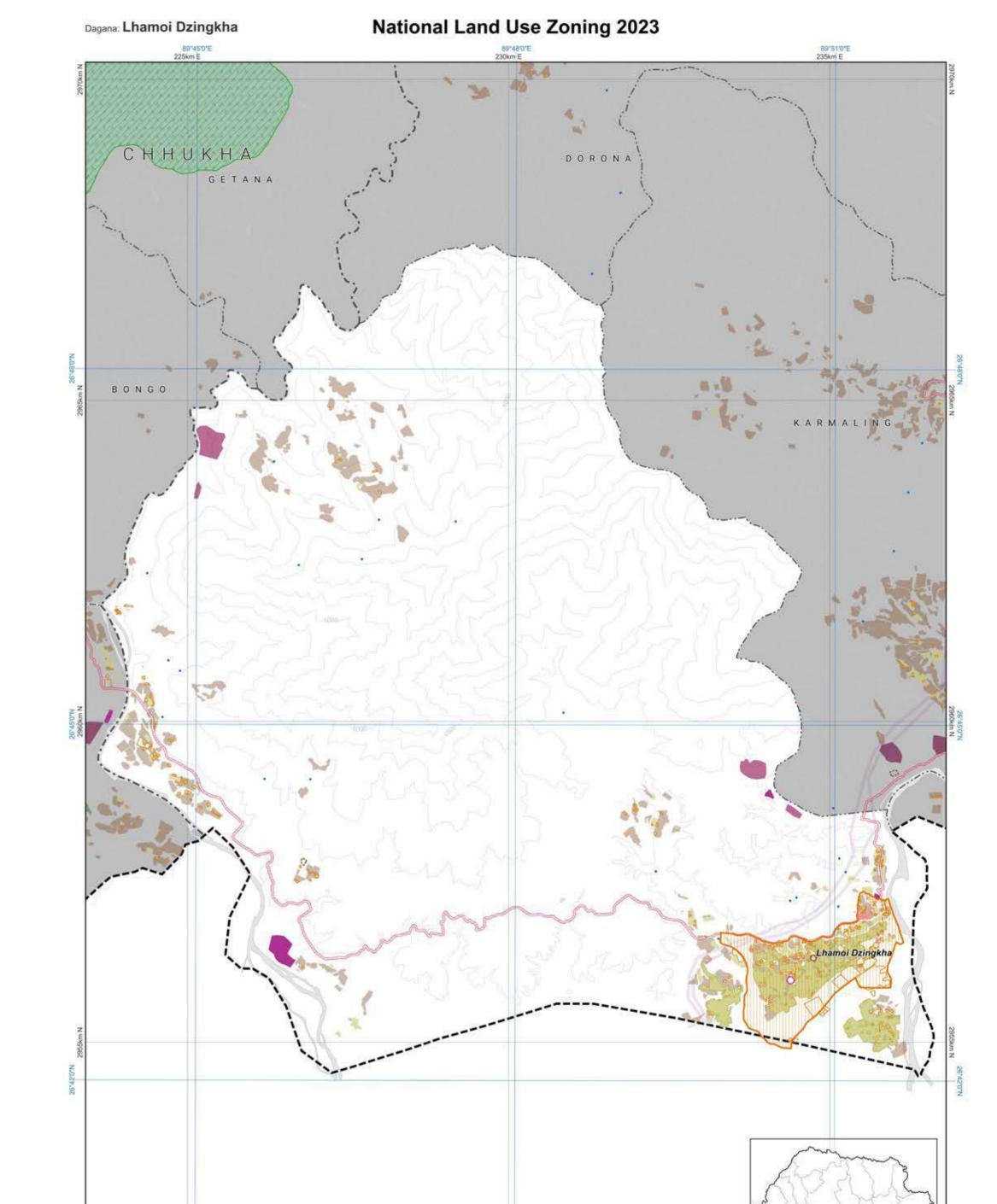
Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

# **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Lhamoi Dzingkha	432	364	796	118.7	33.9	194	4	
Lhamoi Dzingkha Tov	wn 991	970	1,961	102.2	16.6	416	3.8	



# 91



C / II Ca	
Gewog	Nichula
Gewog code	314
Gewog area	34573.771
Zone	Area
Agriculture	448.503
Cultural Heritage	1.296
Industrial	2
NCA	29510.472
Rangeland	0
Rural Settlement	62.316
SFMA	739.004
Urban	0

# **Zone Conflict**

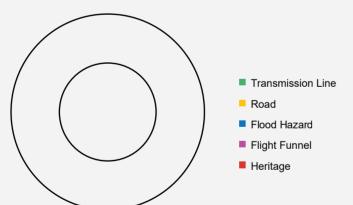
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.583	0	0	0	0	0
NCA	0	0	22.794	0	0	0	0.534	0
Agriculture	0.583	22.794	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.534	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Area
0
0
0
0
0



# **Map Legend**

All areas are in Acres.

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land



### Forest Management Unit Community Forest **Cultural Heritage** Religious Sites Heritage Village



Core Zone Transistion Zone Buffer Zone Multi Use Zone

Protected Area

Biological Corridor / Botanical Park Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

> Airport • Helipad O Hydro Power Plants A Hydro Power Waterways —

Basemap

Existing mines

Boundaries International --

Dzongkhag - -Perennial

Highway 300k ---Highway 50k === Highway 25k Highway 5k \_ Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

# Data Ownership

Data Owner of the Map Content

National Land Commission Secretariat

# Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

# Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Nichula	242	192	434	126.0	50.6	134	3.2

# National Land Use Zoning 2023 S D R R A N Z T Z 0 2965km W 76\*46'0\*N N.0.19.9Z



**Zone Conflict** 

Culture

**RoW / Buffer Conflict** 

RoW / Buffer Area

Area

32.212

91.196

**Buffer Zone** 

Flood Hazard

Flight Funnel

Heritage

Transmission Line

### **Map Legend** All areas are in Acres.

Agriculture

Industrial

Urban

Rangeland

Rural Settlement

Cultural Heritage

■ Nature Conservation Area

Rural

■ Sustainable Forest Management Area



# Lease Land

Dagana: Tashiding

### Residential Land Institutional Land

# Forest Management Unit Community Forest

### **Cultural Heritage** Religious Sites Heritage Village





### Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park Ramsar Site

### Hazard and Risk Rain Induced Flood Glacier Lake

Outburst Flood :
Right Of Way / Buffe
Heritage
Bood

# Powerlines

### Flight Funnel Other Effective Area-based Conservation Measures

# Key Biodiversity Area

High Conservation Value Tsamdro

Potential Recharge Area	
Payment for Ecosystem Services	3
Water Sources	

# Manufacturing and Production

### Existing mines Airport • Helipad O

### Hydro Power Plants A Hydro Power Waterways -

### Basemap Boundaries

### International --Dzongkhag - -Gewog --

# Perennial

### Terrain Contour Roads for different

ighway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ==

### Transmission Line Road Flood Hazard Flight Funnel Heritage

# **Data Ownership**

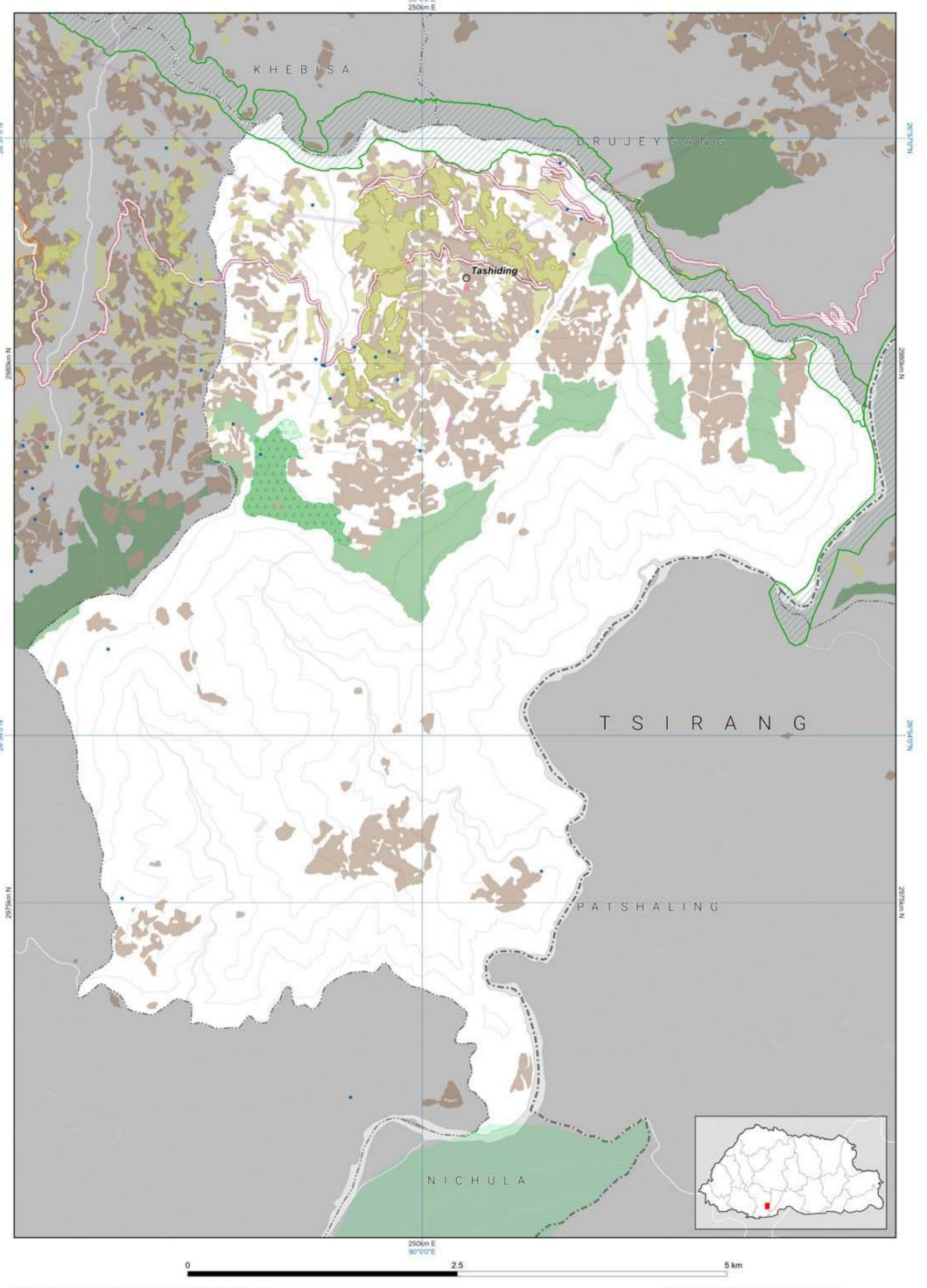
Data Officer of the map Content	
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Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
Department of Surface Transport Ministry of Infrastructure and Transport	

National Land Commission Secretariat

# Demographic Table

		Gev	wog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Tashiding	843	844	1,687	99.9	19.8	412	4





ic / ii ca	
Gewog	Tsangkha
Gewog code	311
Gewog area	9134.833
Zone	Area
Agriculture	1859.157
Cultural Heritage	2.015
Industrial	0.245
NCA	161.312
Rangeland	0
Rural Settlement	161.49
SFMA	363.364
Urban	5.831

# **Zone Conflict**

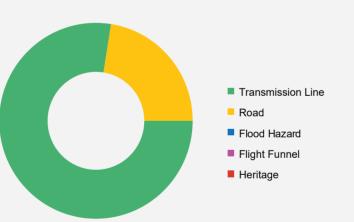
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	35.54	0	0.906	0	8.673	0
Agriculture	0	35.54	0	0	0	0	0	0
Urban	0	0	0	0	0	0	1.508	0
Culture	0	0.906	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	8.673	0	1.508	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0.665	4.776	38.526	0	0	0	0.667	0
Road	0	0.357	0.979	0	0	0	0.231	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	135.004
Road	39.19
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

Dagana: Tsangkha

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

> **Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways -

> > Basemap Boundaries

International --Dzongkhag - -Perennial

Highway 300k = Highway 50k ===

Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

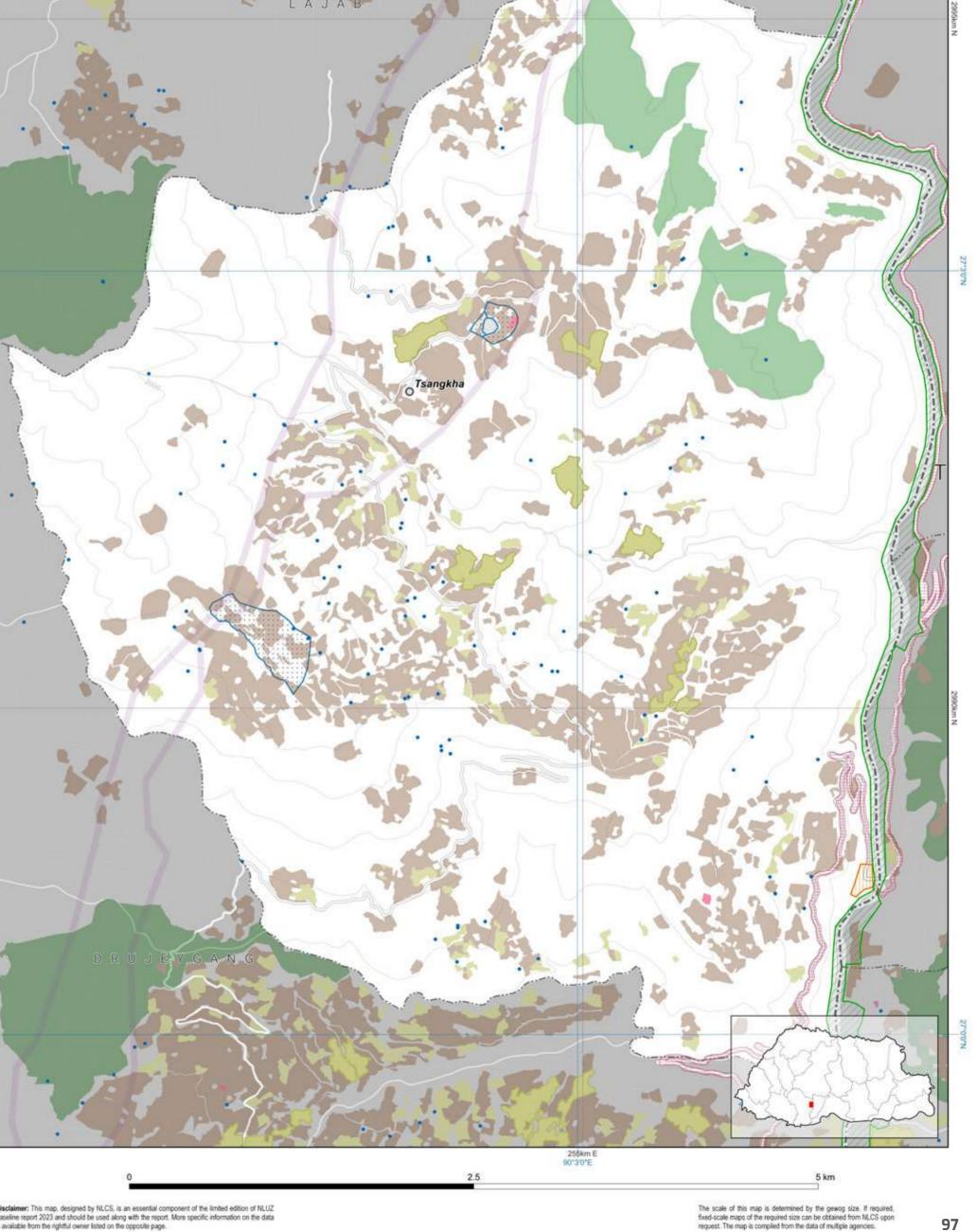
National Land Commission Secretariat

# **Demographic Table**

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( So	ource: NSB, PHCB 2017)	
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Tsangkha	838	817	1,655	102.6	15.2	371	3.9
Sankosh Town	25	27	52	92.6	125.0	19	2.7

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.



one Area	
Gewog	Tsendagang
Gewog code	309
Gewog area	23545.359
Zone	Area
Agriculture	1855.155
Cultural Heritage	0.851
Industrial	0.1
NCA	219.356
Rangeland	0
Rural Settlement	101.231
SFMA	307.217
Urban	259.884

# **Map Legend**

All areas are in Acres.

Agriculture

Industrial

Rangeland

Cultural Heritage

Rural Settlement

Nature Conservation Area

■ Sustainable Forest Management Area





### Residential Land Institutional Land

Dagana: Tsendagang

# Forest Management Unit

Community Forest





### Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

Existing mines Airport •

### Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

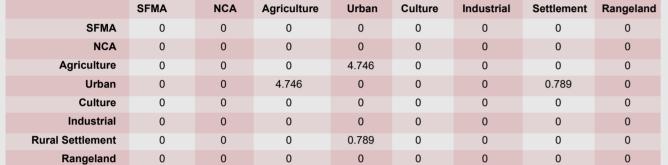
International --Dzongkhag - -

Perennial Terrain

### Roads for different map scales

ngriway 300k ——	i nromae buk —
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k <sup>≡</sup>

**Zone Conflict** 

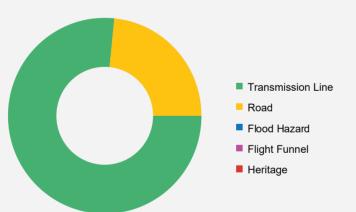


# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	4.017	45.267	10.484	0	0	0.916	0
Road	0	0	10.828	0	0	0	1.057	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	161.023
Road	49.213
Flood Hazard	0
Flight Funnel	0
Heritage	0



# Data Ownership

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

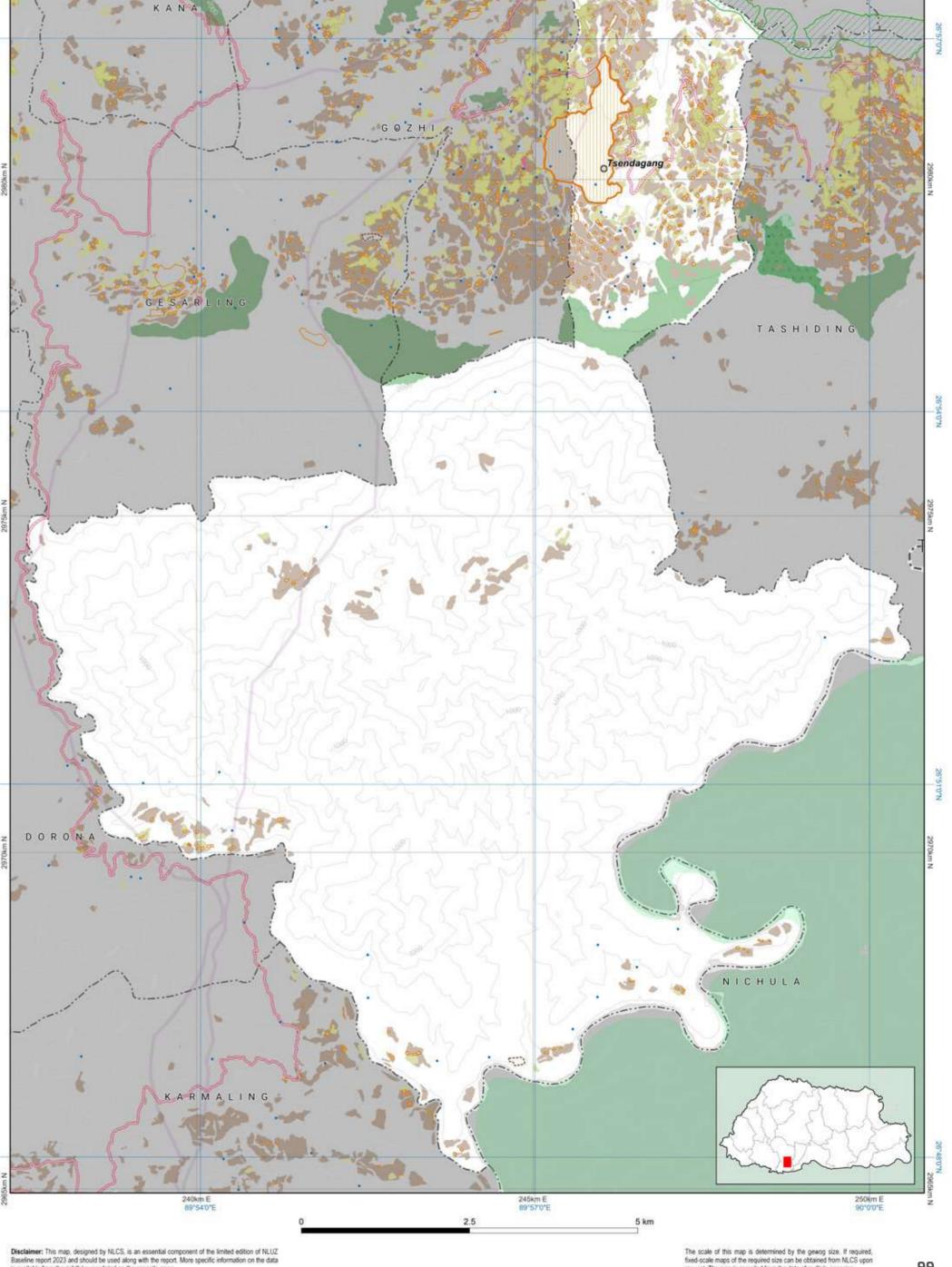
# **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Tsendagang	921	908	1,829	101.4	30.3	466	3.8			
Dagapela Town	332	246	578	135.0	12.6	132	3.8			
Disclaimor:										

The demographic statistics provided in the table above for Dagapela town encompass not only the area falling under the Tsendagang gewog but also include the demographic statistics of the town area falling under the Gozhi gewog. The same statistics for Dagapela town can be found under the Gozhi gewog.

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.



one Area	
Gewog	Tseza
Gewog code	310
Gewog area	146676.259
Zone	Area
Agriculture	1234.348
Cultural Heritage	34.306
Industrial	0.05
NCA	745.378
Rangeland	0
Rural Settlement	134.376
SFMA	417.37
Urban	109.916

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	25.348	0.033	0	0	0
Urban	0	0	25.348	0	27.501	0	64.346	0
Culture	0	0	0.033	27.501	0	0	25.979	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	64.346	25.979	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	7.624	0	0	0	0.877	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	49.366
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**

All areas are in Acres.

Dagana: Tseza

THIMPHU

DAGALA

**National Land Use Zoning** Lease Land

> Forest Management Unit Community Forest

Heritage Village Heritage Conservation Zone

> Core Zone Transistion Zone Buffer Zone Multi Use Zone

Ramsar Site

Right Of Way / Buffer

Key Biodiversity Area High Conservation Value

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

> Hydro Power Plants A Hydro Power Waterways —

> > Basemap Boundaries

Perennial

Roads for different Thromde 50k

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k Farm 5k ==== Dzongkhag 5k

### **Data Ownership**

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Air Transport Ministry of Infrastructure and Transport

### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population Sex ratio Aging Index Number of household Mean Household size											
Gewog / Throm	Male	Female	Total					D			
Tseza	554	541	1,095	102.4	26.7	272	3.8	M			
Dagana Town	852	695	1,547	122.6	10.1	229	3.8	N			

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

BONGO

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

# KANA

WANGDUE

PHODRANG

DAGA

National Land Use Zoning 2023

GASE TSHOWOM

Kamzhing Protected Chhuzhing Regulated Chhuzhing Residential Land Institutional Land

> **Cultural Heritage** Religious Sites Urban Zone

**Nature Conservation Area** Protected Area

Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Significant Watershed Potential Recharge Area

Airport Helipad O

International --Dzongkhag - -

Highway 300k ——

Data Owner of the Map Content

Department of Human Settlement Ministry of Infrastructure and Transport

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

### **Zone Area** All areas are in Acres. Dzongkhag Gasa 04 Dzongkhag code Dzongkhag area 774764.37 Agriculture Culture Industrial Zone Area ■ Nature Conservation Area Agriculture 1235.081 Rangeland Rural Settlement Culture 41.242 ■ Sustainable Forest Management Area 7.561 Industrial Urban NCA 774763.316 Rangeland 0 Rural Settlement 218.552 SFMA 1724.873

# **Zone Conflict**

Urban

212.295

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1724.873	0.00	0	0	0	0	0
NCA	1724.873	0	1,235.08	212.295	41.242	7.561	218.551	0
Agriculture	0.00	1,235.08	0	9.712	0	0	0	0
Urban	0	212.295	9.712	0	26.547	0.24	0.949	0
Culture	0	41.242	0	26.547	0	0	0	0
Industrial	0	7.561	0	0.24	0	0	0	0
Rural Settlement	0	218.551	0	0.949	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	10.454	44.108	0.511	0	0.068	0.717	0.088	0
Road	12.414	158.925	2.987	0	0	0.009	3.149	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	44.108
Road	158.925
Flood Hazard	0
Flight Funnel	0
Heritage	0

Gasa





### Helipad O Hydro Power Plants A Hydro Power Waterways —

### Basemap Boundaries International --Dzongkhag -Gewog ---

Perennial Terrain Contour

# Roads for different

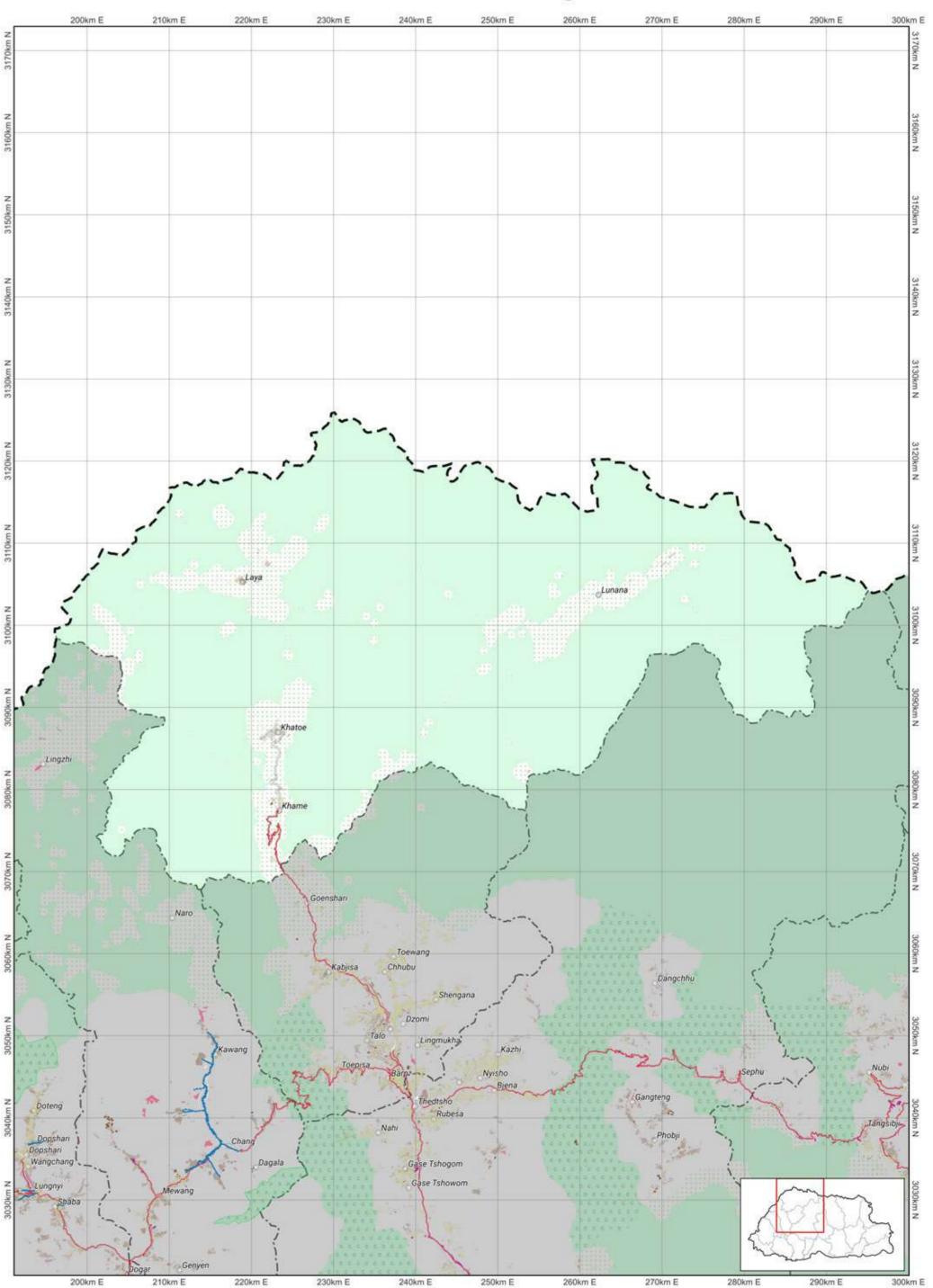
10 km

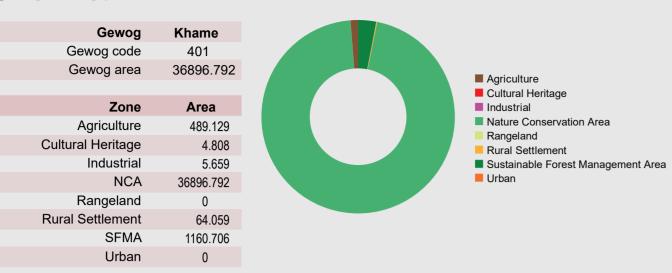
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k <sup>≡</sup>
Ozonakhaa 5k	

Highway 300k ——

# Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Total Population			Total Population Sex ratio Aging Index Number of household				
Dzongkhag	Male	Female	Total					
Gasa	2,104	1,848	3,952	113.9	21.2	909	3.6	





# **Zone Conflict**

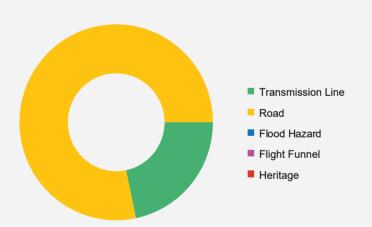
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1160.706	0.00	0	0	0	0	0
NCA	1160.706	0	489.13	0	4.808	5.659	64.059	0
Agriculture	0.00	489.13	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	4.808	0	0	0	0	0	0
Industrial	0	5.659	0	0	0	0	0	0
Rural Settlement	0	64.059	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	10.454	44.108	0.511	0	0.068	0.717	0.088	0
Road	12.414	158.925	2.987	0	0	0.009	3.149	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	44.108
Road	158.925
Flood Hazard	0
Flight Funnel	0
Heritage	0



**National Land Use Zoning** 

Residential Land Institutional Land

Forest Management Unit Community Forest

Heritage Village Heritage Conservation Zone

> Protected Area Core Zone Transistion Zone

Biological Corridor / Botanical Park

Rain Induced Flood Glacier Lake Outburst Flood

Powerlines

Key Biodiversity Area High Conservation Value

Rangeland

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Existing mines Airport •

Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Gewog ---Perennial Terrain

Roads for different

Highway 300k ---Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Dzongkhag 25k Farm 5k ==== Dzongkhag 5k

Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources

# Map Legend

All areas are in Acres.



Gasa: Khame

**Cultural Heritage** Religious Sites

Urban Zone **Nature Conservation Area** 

Buffer Zone Multi Use Zone

> Wetland Ramsar Site Hazard and Risk

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Significant Watershed

Manufacturing and Production

Helipad O Hydro Power Plants A

Contour

Thromde 50k Industrial 5k

# **Data Ownership**

Data Owner of the Map Content

Department of Air Transport Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport National Centre for Hydrology and Meteorology National Land Commission Secretariat

# **Demographic Table**



NARO

THIMPHU

KABJISA PUNAKHA

GOENSHARI

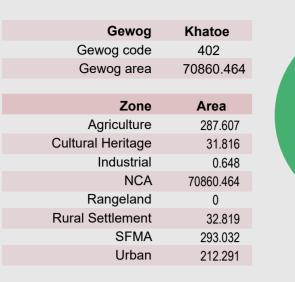
**National Land Use Zoning 2023** 

KHATOE

**Zone Conflict** 

SFMA

**RoW / Buffer Conflict** 



293.032

212.291

31.816

32.819

Area

0

0.00

9.712

212.291

9.712

26.546

0.949

31.816

0.648

0.24

# Map Legend

All areas are in Acres.

Agriculture Cultural Heritage

Industrial

Urban

Rangeland

Rural Settlement

32.819

0.949

Nature Conservation Area

Sustainable Forest Management Area







## Institutional Land Sustainable Forest

### Forest Management Unit Community Forest **Cultural Heritage**







### Core Zone Transistion Zone Buffer Zone Multi Use Zone

### Biological Corridor / Botanical Park Wetland Ramsar Site

### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Road [

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

### Key Biodiversity Area High Conservation Value

### Rangeland Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

### Industrial Manufacturing and Production Existing mines

Airport • Helipad O

### Hydro Power Plants A Hydro Power Waterways -

### Basemap Boundaries International --

Dzongkhag - -Gewog --Perennial

### Terrain Contour Roads for different

map scales
Thromde 50k
Thromde 25k
Thromde 5k ====

	Till Office Lon
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k
zongkhag 25k ===	Farm 5k
Dzonakhaa 5k	

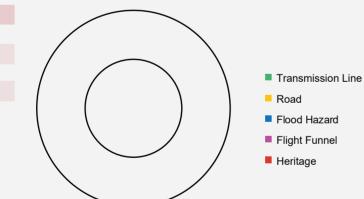
# **RoW / Buffer Area Buffer Zone** Transmission Line Road

Flood Hazard

Flight Funnel

Heritage

Transmission Line



# **Data Ownership**

Highway 300k Highway 50k

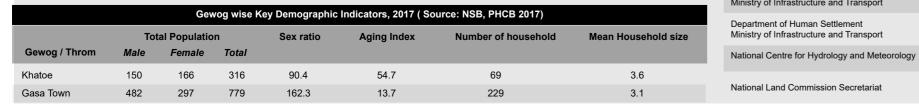
### Data Owner of the Map Content Department of Forests and Park Services Ministry of Energy and Natural Resources

Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs Department of Air Transport

Ministry of Infrastructure and Transport Department of Human Settlement Ministry of Infrastructure and Transport

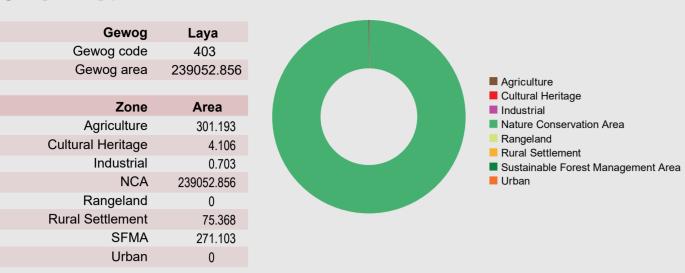
National Land Commission Secretariat

## **Demographic Table**



# National Land Use Zoning 2023 Gasa: Khatoe 89130'0"E LAYA LINGZHI KHAME THIMPHU NARO KABJISA 220km E 89"42"0"E





# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	271.103	0.00	0	0	0	0	0
NCA	271.103	0	307.89	0	4.106	0.703	75.368	0
Agriculture	0.00	307.89	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	4.106	0	0	0	0	0	0
Industrial	0	0.703	0	0	0	0	0	0
Rural Settlement	0	75.368	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 



# **Map Legend**

All areas are in Acres.

# National Land Use Zoning Agricultural Land Kamzhing

Kamzhing
Protected Chhuzhing
Regulated Chhuzhing
Lease Land

# Rural Settlement Residential Land Institutional Land

Sustainable Forest Management Area
Forest Management Unit Community Forest

# Cultural Heritage Religious Sites Heritage Village

Heritage Village Heritage Conservation Zone Urban Urban Zone

# Urban Zone Nature Conservation Area Protected Area

Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone

### Biological Corridor / Botanical Park *Wetland* Ramsar Site

Hazard and Risk
Rain Induced Flood
Glacier Lake
Outburst Flood

Right Of Way / Buffer
Heritage

# Powerlines Flight Funnel

Other Effective Area-based Conservation Measures
Key Biodiversity Area

# High Conservation Value Rangeland

# Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources

Industrial

Manufacturing and Production

Service

Existing mines

# Airport • Helipad •

Hydro Power Plants A
Hydro Power Waterways —

### Basemap Boundaries

International - Dzongkhag - -

Dzongkhag — • Gewog — • Rivers
Main river
Perennial — • Terrain

### Roads for different map scales

Contour

lignway 300k ===	Thromde 50k =
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =

# Data Ownership

Data Owner of the Map Content

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Ministry of Energy and Natural Resources

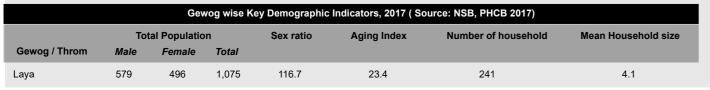
Department of Water
Ministry of Energy and Natural Resources

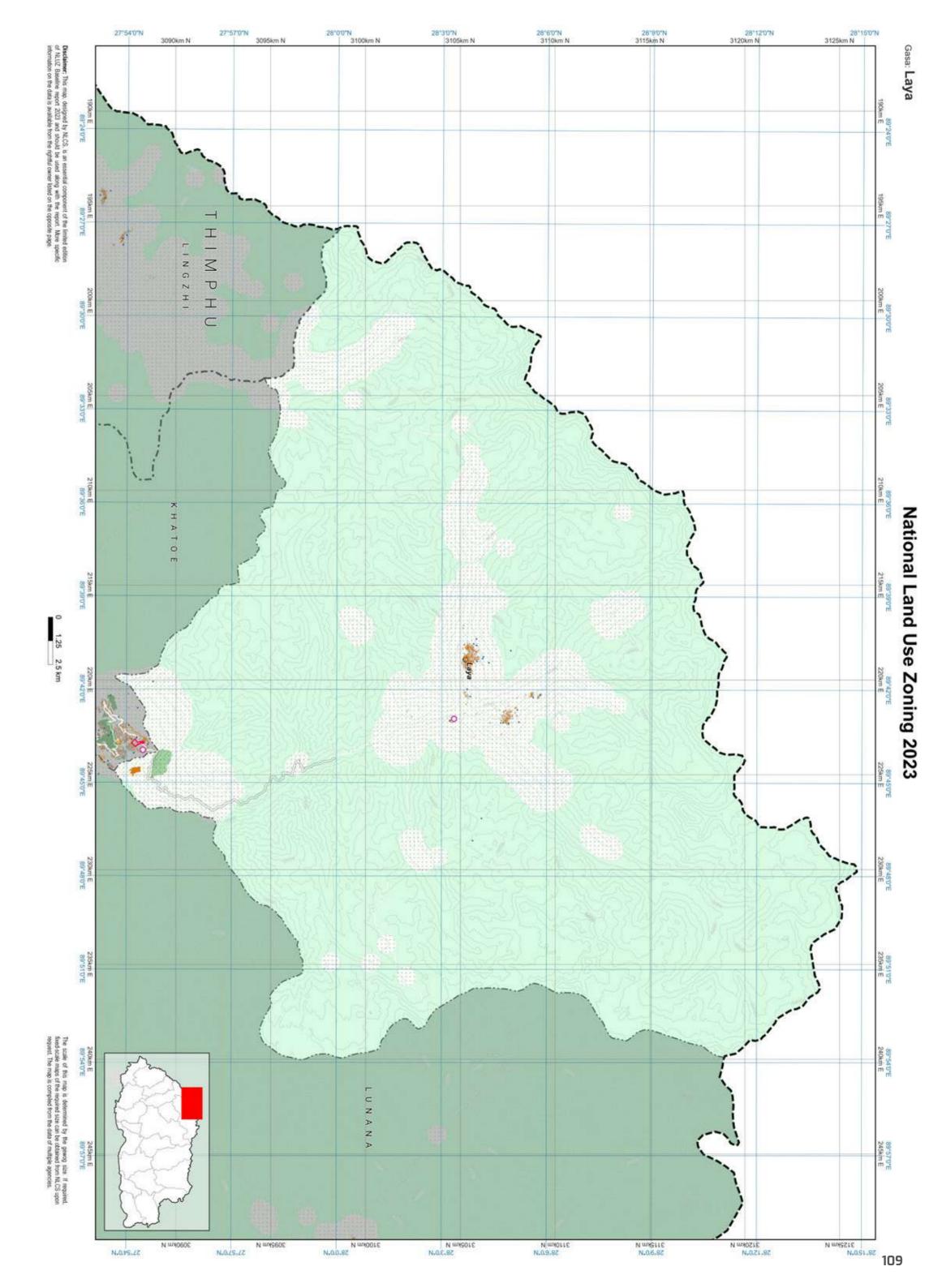
Department of Air Transport Ministry of Infrastructure and Transport

National Centre for Hydrology and Meteorology

National Land Commission Secretariat

# GASA





on	e Area	
	Gewog	Lunana
	Gewog code	404
	Gewog area	427941.659
	Zone	Area
	Agriculture	157.13
	Cultural Heritage	0.511
	Industrial	0.55
	NCA	427940.605
	Rangeland	0
	Rural Settlement	46.302
	SFMA	0
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	157.13	0	0.511	0.55	46.302	0
Agriculture	0.00	157.13	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.511	0	0	0	0	0	0
Industrial	0	0.55	0	0	0	0	0	0
Rural Settlement	0	46.302	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land Institutional Land

Forest Management Unit

### Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

### Biological Corridor / Botanical Park Wetland Ramsar Site

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

# Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production

Existing mines Airport Helipad O

### Hydro Power Plants A Hydro Power Waterways ----

### Basemap Boundaries International --

Dzongkhag - -Gewog ---

Perennial Terrain

# Roads for different

Highway 300k ==== Thromde 50k Highway 50k === Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k === Industrial 5k Dzongkhag 25k ==== Farm 5k ====

# **Data Ownership**

Data Owner of the Map Content Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Air Transport Ministry of Infrastructure and Transport

National Centre for Hydrology and Meteorology

National Land Commission Secretariat

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)													
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size						
Gewog / Throm	ewog / Throm Male Female Total												
Lunana	348	351	699	99.1	20.3	177	3.8						

National Land Use Zoning 2023 DO N.0.99.4Z

1302.623

293.846

58182.836

### **Zone Area** All areas are in Acres. **Dzongkhag** Haa 05 Dzongkhag code Dzongkhag area 470526.744 Agriculture Culture Zone Area Industrial Nature Conservation Area Agriculture 6426.185 Rangeland Culture 116.804 Rural Settlement ■ Sustainable Forest Management Area 48.277 Industrial Urban NCA 215179.838 Rangeland

# **Zone Conflict**

SFMA

Urban

Rural Settlement

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	11.929	340.38	0	2.296	1.052	44.726	0
NCA	11.929	0	0	0	0	0	0.051	0
Agriculture	340.38	0	0	13.86	0.461	0.001	0	0
Urban	0	0	13.86		0.922	0	44.992	0
Culture	2.296	0	0.461	0.922	0	0	68.399	0
Industrial	1.052	0	0.001	0	0	0	0.06	0
Rural Settlement	44.726	0.051	0	44.992	68.399	0.06	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	5.974	0	5.136	0	0	0	0.425	0
Road	349.936	138.974	61.733	0	1.532	0.47	18.926	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

•	
Buffer Zone	Area
Transmission Line	27.949
Road	952.115
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**



# Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

# Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

# Potential Recharge Area

Payment for Ecosystem Services Water Sources •

# Manufacturing and Production

Airport Helipad O

### Hydro Power Plants A Hydro Power Waterways —

Existing mines

### Basemap Boundaries International --

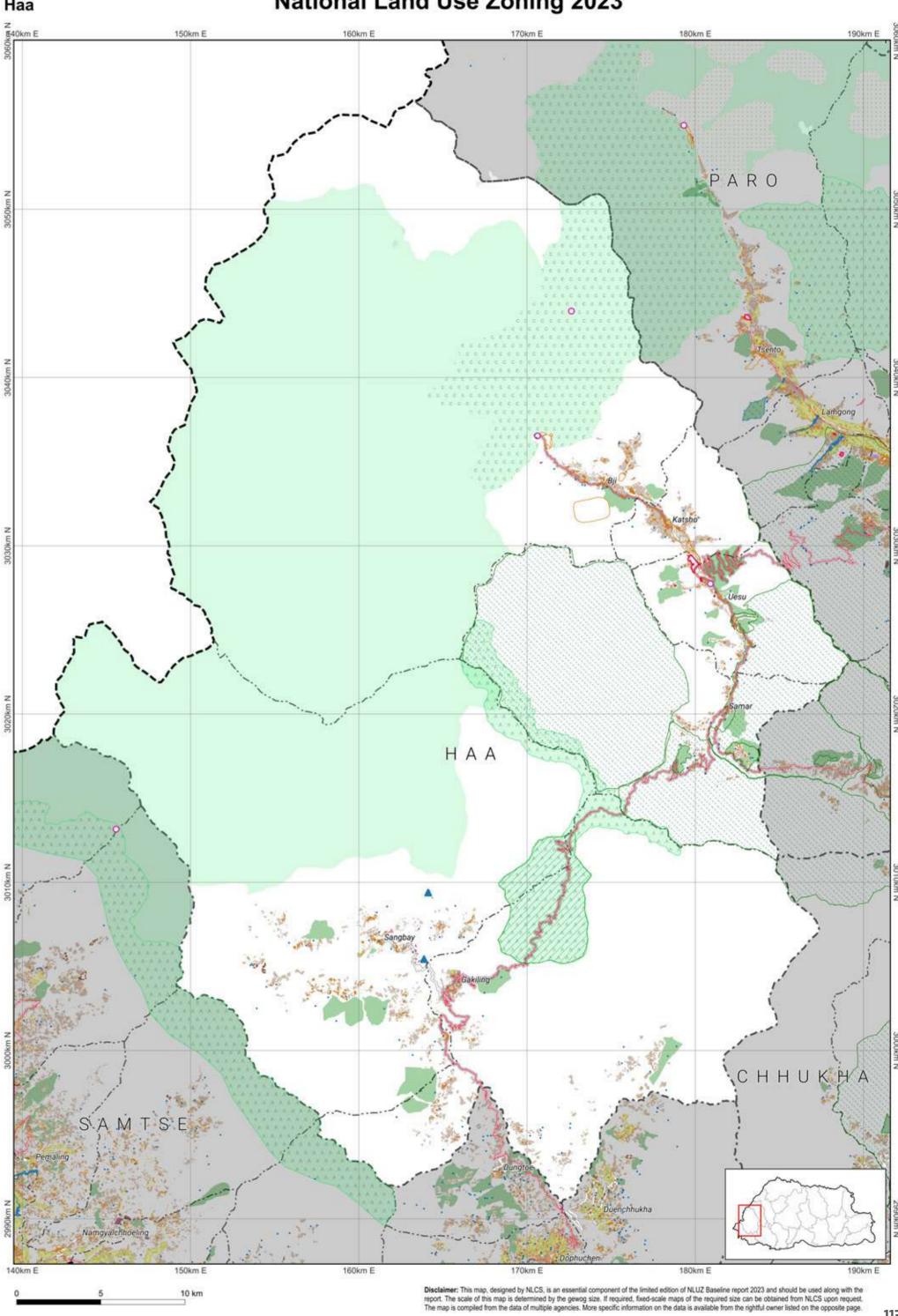
Dzongkhag - -

# Perennial

Highway 25 Highway : Dzongkhag 50k Dzongkhag 25k

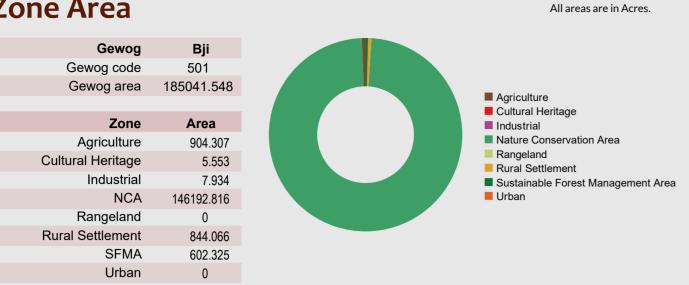
### Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017) **Total Population** Number of household Mean Household size Aging Index Dzongkhag Female Total 6,220 13,655 119.5 21.6 2,952 3.7

# **National Land Use Zoning 2023**



10 km





	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	5.955	0	0	0	0	0	0
NCA	5.955	0	0	0	0	0	0.051	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.051	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	6.221	0	5.291	0	0	0.396	7.032	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

_	
Buffer Zone	Area
Transmission Line	0
Road	68.146
Flood Hazard	0
Flight Funnel	0
Heritage	0
	Transmission Line Road Flood Hazard Flight Funnel

# **Map Legend**

Наа: Вјі





### Community Forest **Cultural Heritage** Religious Sites



### Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

### Biological Corridor / Botanical Park Wetland Ramsar Site

### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

# Flight Funnel

Other Effective Area-based Conservation Measures

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

### Industrial Manufacturing and Production Existing mines

Airport Helipad O

### Hydro Power Waterways -

### Basemap Boundaries

International --Dzongkhag -Gewog ---

Perennial

### Terrain Contour Roads for different

ighway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ==

# Dzongkhag 25k

### Data Ownership

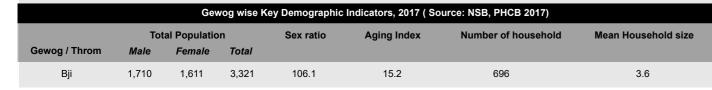
Data Owner of the Map Content
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Air Transport Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

National Centre for Hydrology and Meteorology

National Land Commission Secretariat

### **Demographic Table**





# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

SAMTSE

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

SAMAR

# Protected Chhuzhing Regulated Chhuzhing Lease Land Forest Management Unit Heritage Village **Zone Conflict Nature Conservation Area** Powerlines **RoW / Buffer Conflict** Key Biodiversity Area High Conservation Value **RoW / Buffer Area** Hydro Power Plants A

# **National Land Use Zoning 2023** PARO TSENTO

SANGBAY

165km E 89\*9\*0\*E

**Zone Conflict** 

SFMA

**RoW / Buffer Conflict** 

RoW / Buffer Area

Road

Area

0

339.133

**Buffer Zone** 

Flood Hazard

Flight Funnel

Heritage

**Transmission Line** 

Gewog	Gakiling
Gewog code	506
Gewog area	83845.976
Zone	Area
Agriculture	1735.386
Cultural Heritage	1.118
Industrial	0.61
NCA	5855.902
Rangeland	0
Rural Settlement	38.622
SFMA	1354.026
Urban	0

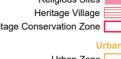
# **Map Legend**



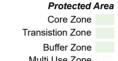




# Community Forest







# Biological Corridor / Botanical Park

# Hazard and Risk Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

# Powerlines

Other Effective Area-based Conservation Measures Key Biodiversity Area

# Rangeland

# Significant Watershed

Water Sources • Manufacturing and Production

Airport •

### Basemap Boundaries

Dzongkhag - -Gewog --Perennial Terrain

ngriway oook	THIOHIGE SUK
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =
ongkhag 25k ===	Farm 5k =

All areas are in Acres.

Agriculture

Industrial

Rangeland

■ Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area



# Institutional Land

# Forest Management Unit

### **Cultural Heritage** Religious Sites





Multi Use Zone

# Ramsar Site

# Rain Induced Flood

# Flight Funnel

High Conservation Value

# Tsamdro

### Potential Recharge Area Payment for Ecosystem Services

Industrial Existing mines

### Helipad O Hydro Power Plants A

Hydro Power Waterways -

# International --

### Contour Roads for different

	map scal
ghway 300k ====	Thromde 50k
lighway 50k ===	Thromde 25k
lighway 25k ===	Thromde 5k
Highway 5k	Access 5k =

### Flight Funnel Heritage

Transmission Line

Flood Hazard

Road

Rural

# Dzongkhag 5k

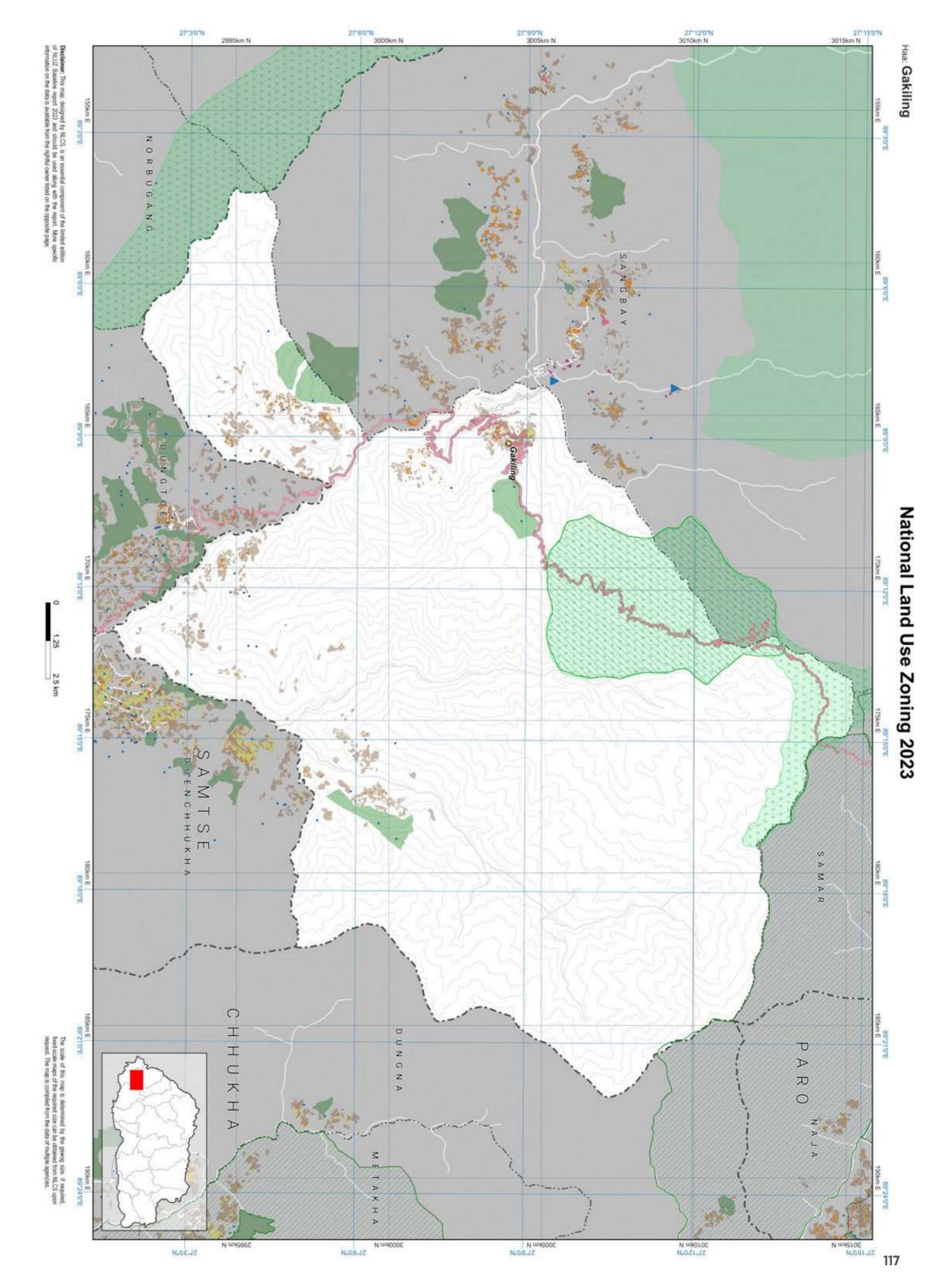
# Demographic Table

		Gev	vog wise K	Key Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Gakiling	743	549	1,292	135.3	26.1	288	3.8

# Data Ownership

Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat



Gewog	Katsho
Gewog code	503
Gewog area	10043.81
Zone	Area
Agriculture	701.636
Cultural Heritage	1.952
Industrial	7.978
NCA	0
Rangeland	0
Rural Settlement	97.208
SFMA	187.345
Urban	289.517

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0.109	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	13.86	0	0	0	0
Urban	0	0	13.86	0	0.922	0	42.249	0
Culture	0	0	0	0.922	0	0	0.001	0
Industrial	0.109	0	0	0	0	0	0	0
Rural Settlement	0	0	0	42.249	0.001	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	4.753	0	5.136	0	0	0	0.425	0
Road	13.906	0	9.531	0	0	0.049	1.664	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

•	
Buffer Zone	Area
Transmission Line	15.831
Road	46.792
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**

All areas are in Acres.





Forest Management Unit Community Forest

Lease Land

### Religious Sites Heritage Village Heritage Conservation Zone



Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

# Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

> Airport Helipad O Hydro Power Plants A

## Hydro Power Waterways —

Basemap Boundaries International --

Dzongkhag - -Perennial

ighway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k ==
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ==
ongkhag 25k ===	Farm 5k

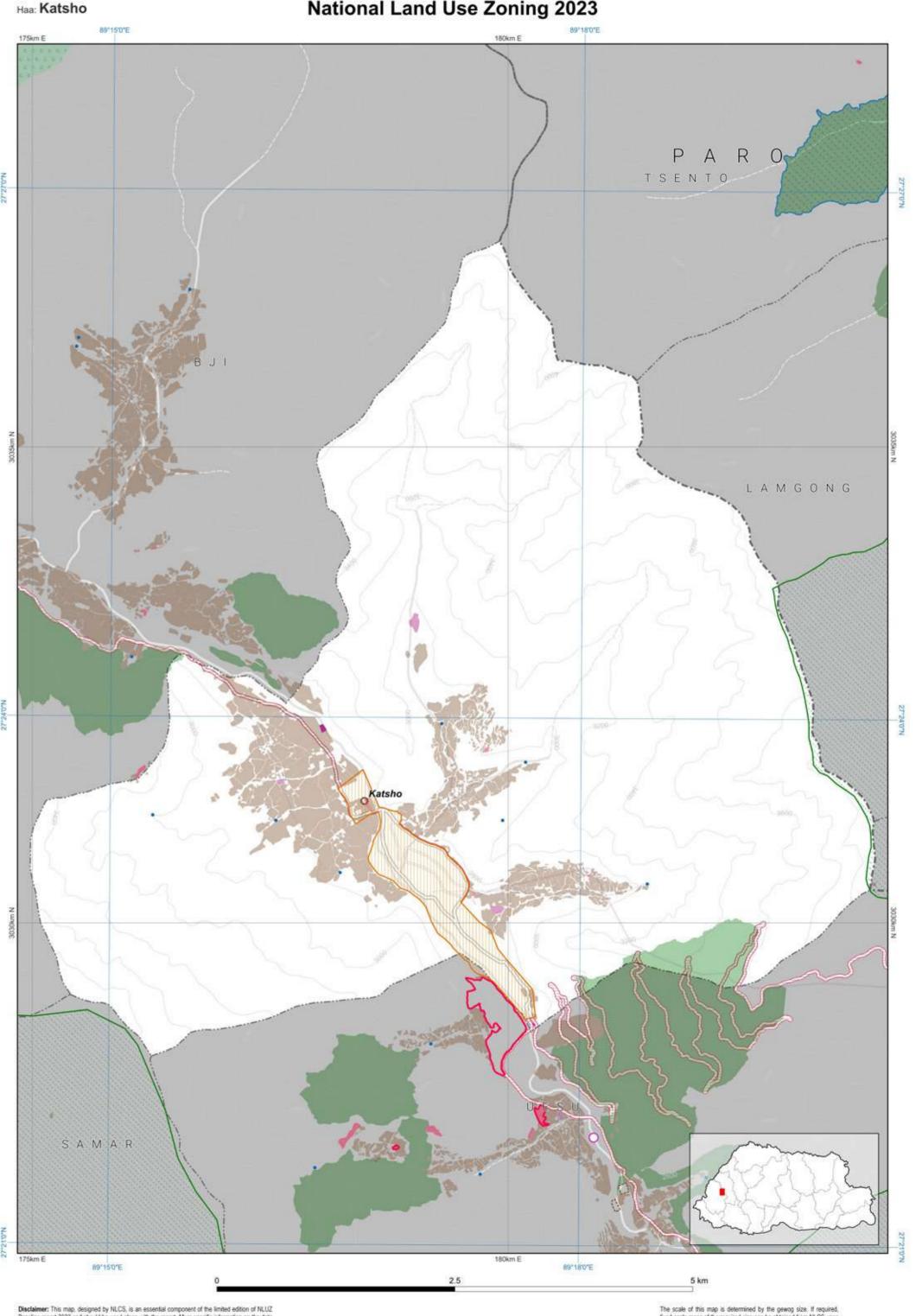
### **Data Ownership**

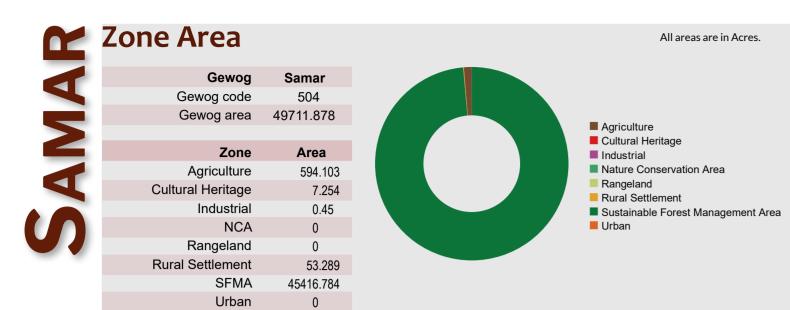
Data Owner of the Map Content

Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

# **Demographic Table**







# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	227.604	0	1.984	0.202	22.733	0
NCA	0	0	0	0	0	0	0	0
Agriculture	227.604	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	1.984	0	0	0	0	0	0	0
Industrial	0.202	0	0	0	0	0	0	0
Rural Settlement	22.733	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	32.398	0.26	0	0	0	1.307	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

	<i>-</i> • • •
Buffer Zone	Area
Transmission Line	0
Road	60.26
Flood Hazard	0
Flight Funnel	0
Heritage	0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

217

# **Map Legend**

# **National Land Use Zoning**



# Residential Land

# Institutional Land

### Forest Management Unit Community Forest



### Urban Zone Nature Conservation Area

### Protected Area Core Zone Transistion Zone Buffer Zone

### Multi Use Zone Biological Corridor / Botanical Park Wetland

### Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage [\_\_\_]

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

### Key Biodiversity Area High Conservation Value Rangeland

### Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

### Water Sources • Industrial

Manufacturing and Production Existing mines Airport

### Helipad O

Hydro Power Plants A Hydro Power Waterways -

### Basemap Boundaries

International --Dzongkhag - -

# Gewog ---Perennial

### Terrain Contour

### Roads for different map scales

ighway 50k ===	Thromde 25k
ighway 25k ====	Thromde 5k
Highway 5k	Access 5k
ngkhag 50k ===	Industrial 5k

# Dzongkhag 25k

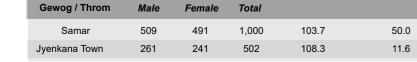
# **Data Ownership**

Mean Household size

4.3

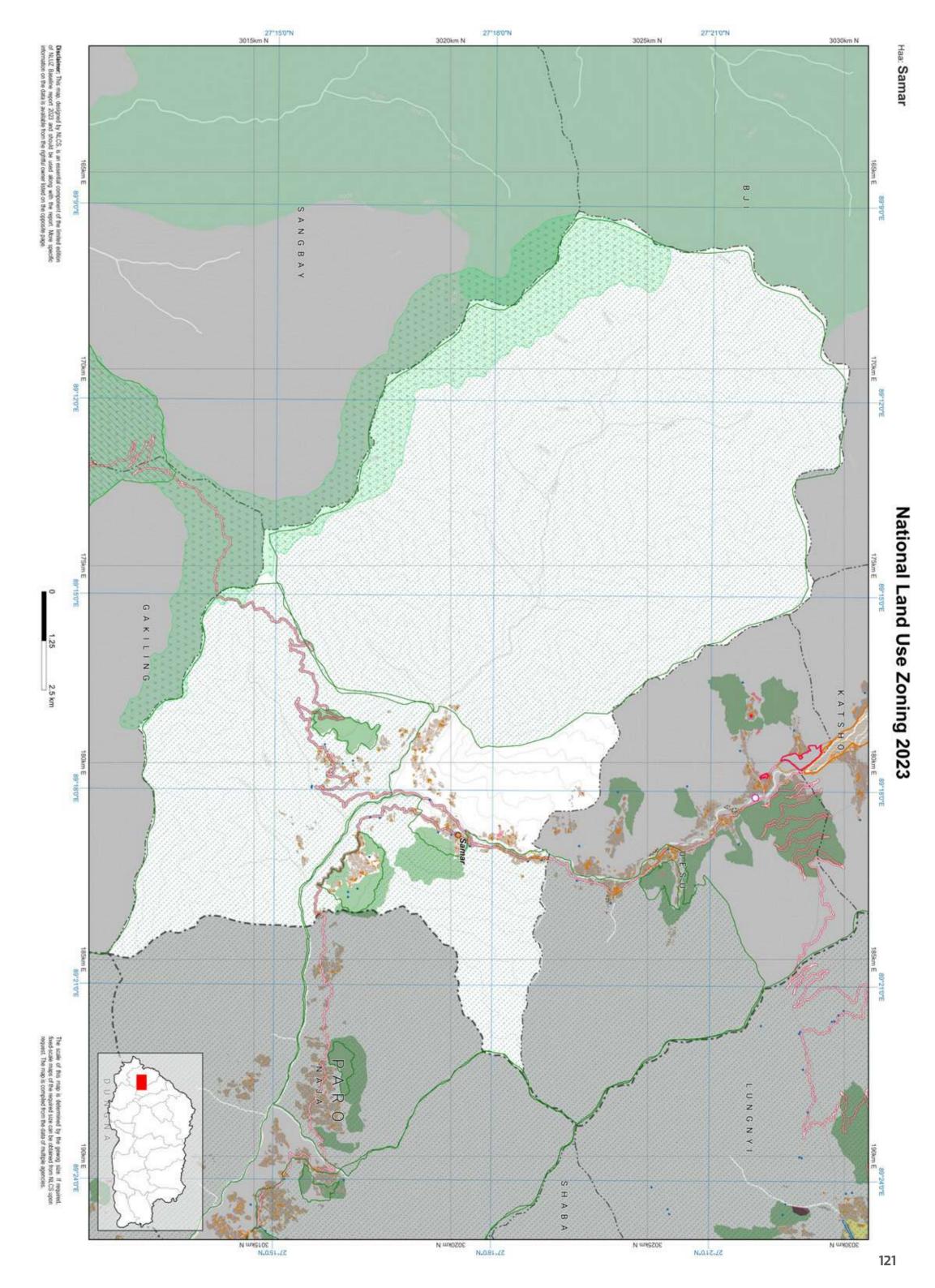
3.6

William y or Energy and Hatara Hoo
Department of Water Ministry of Energy and Natural Res



**Demographic Table** 

# Data Owner of the Map Content Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



Gewog	Sangbay
Gewog code	505
Gewog area	125501.637
Zone	Area
Agriculture	1854.601
Cultural Heritage	18.063
Industrial	27.19
NCA	63131.12
Rangeland	0
Rural Settlement	116.682
SFMA	2133.89
Lirban	0

### **Map Legend** All areas are in Acres.

Agriculture

Industrial

Rangeland

■ Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Residential Land Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** 

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Tsamdro Significant Watershed Potential Recharge Area

Water Sources • Industrial Manufacturing and Production

Payment for Ecosystem Services

Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Perennial Terrain

Roads for different

Highway 300k —— Thromde 50k Highway 50k === Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k

**Zone Conflict** 

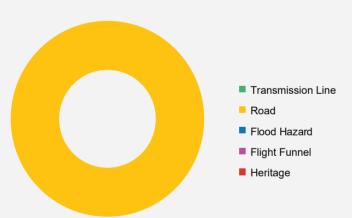
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	5.974	0	0	0	0	0	0
NCA	5.974	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0.001	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0.001	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	189.14	0	12.785	0	0	0	2.416	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	223.776
Flood Hazard	0
Flight Funnel	0
Heritage	0



## **Data Ownership** Data Owner of the Map Content

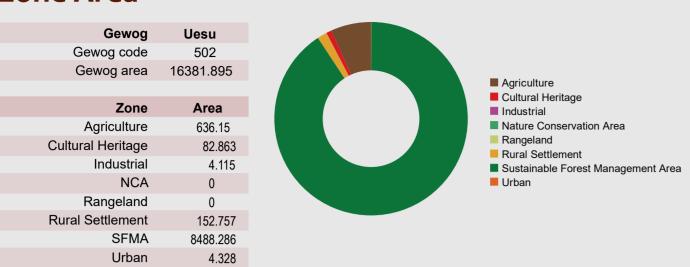
# Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size		
	Gewog / Throm	Male	Female	Total					
	Sangbay	472	439	911	107.5	38.8	255	3.3	

# Sangbay S National Land Use Zoning 2023 3000km N 27'6'0'N 123



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	113.48	0	0.313	0.741	21.993	0
NCA	0	0	0	0	0	0	0	0
Agriculture	113.48	0	0	0	0.461	0	0	0
Urban	0	0	0	0	0	0	2.742	0
Culture	0.313	0	0.461	0	0	0	68.398	0
Industrial	0.741	0	0	0	0	0	0	0
Rural Settlement	21.993	0	0	2.742	68.398	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	1.221	0	0	0	0	0	0	0
Road	137.204	0	13.094	0	1.532	0.021	6.266	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

# **Map Legend**

All areas are in Acres.

Transmission Line

Road

Flood Hazard

Flight Funnel

Heritage



### Residential Land Institutional Land

# Forest Management Unit Community Forest





**Cultural Heritage** 





Core Zone

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

# Tsamdro

### Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Industrial

### Manufacturing and Production Existing mines Airport •

Helipad O Hydro Power Plants A Hydro Power Waterways —

# Basemap

Boundaries International --Dzongkhag - -

Perennial Terrain

### Contour Roads for different

Thromde 50k	nigriway 300k ===
Thromde 25k	Highway 50k ====
Thromde 5k	Highway 25k ====
Access 5k	Highway 5k
= Industrial 5k   ■	Ozongkhag 50k ===
Farm 5k	Ozongkhag 25k ===

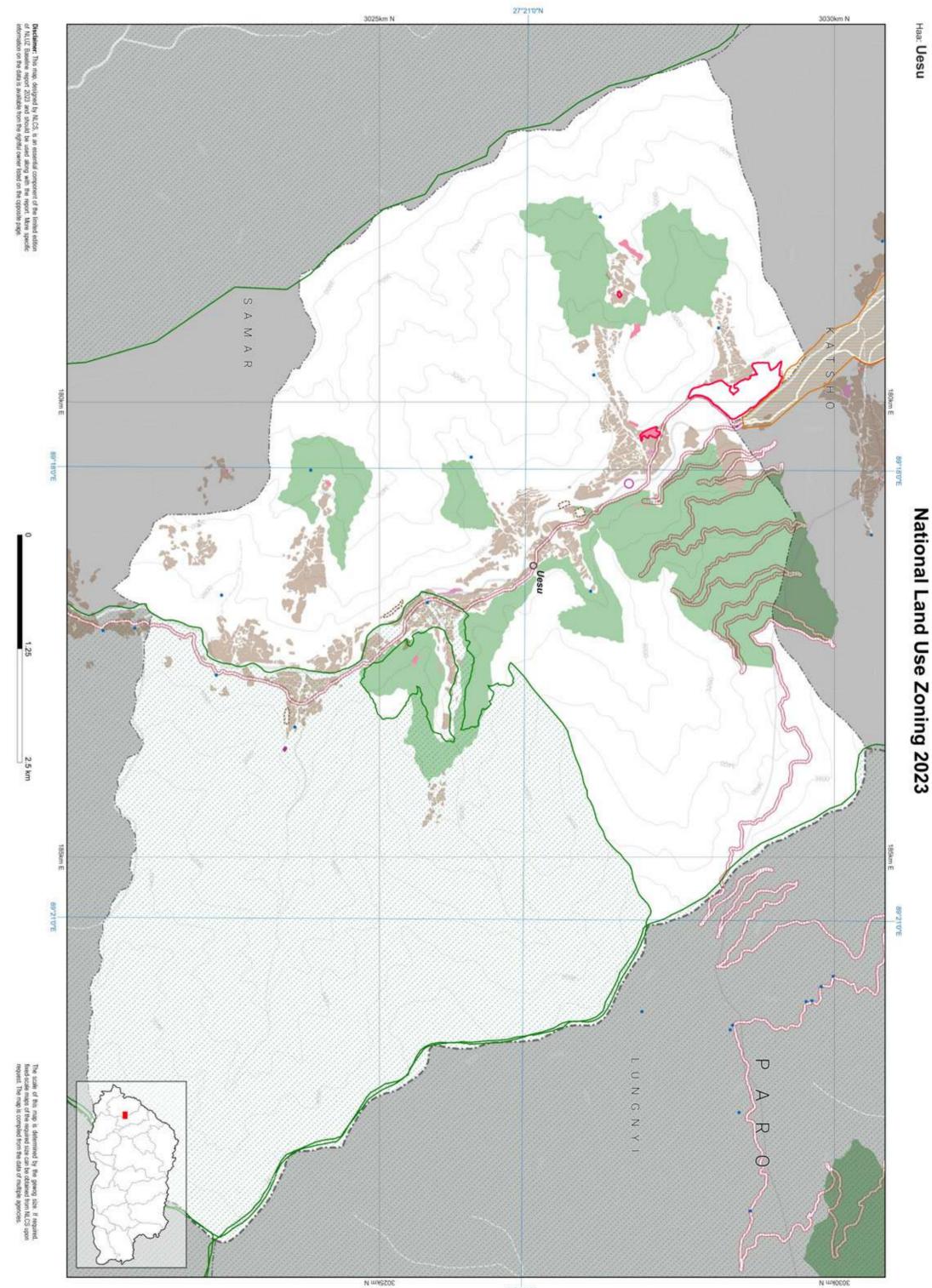
# **Data Ownership**

Dzongkhag 5k 🗌

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)												
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size					
Gewog / Throm	Male	Female	Total									
Uesu	1,527	1,024	2,551	149.1	20.4	520	3.7					



### **Zone Area** All areas are in Acres. Lhuentse Dzongkhag Dzongkhag code 06 707294.769 Dzongkhag area Agriculture Culture Zone Area Nature Conservation Area Agriculture 15047.575 Rangeland Culture 180.177 Rural Settlement ■ Sustainable Forest Management Area Industrial 31.362

# **Zone Conflict**

Rangeland

Rural Settlement

NCA

SFMA

Urban

477899.685

0

786.294

408.143

26130.459

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	6176.956	1,252.98	0.322	26.721	0.431	42.789	0
NCA	6176.956	0	2,868.06	2.995	45.412	2.476	136.318	0
Agriculture	1,252.98	2,868.06	0	18.871	1.314	0	0	0
Urban	0.322	2.995	18.871	0	8.884	0.069	45.815	0
Culture	26.721	45.412	1.314	8.884	0	0	0	0
Industrial	0.431	2.476	0	0.069	0	0	0	0
Rural Settlement	42.789	136.318	0	45.815	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0.000	0	0	0	0	0
Road	66.017	180.937	28.344	0	0	0.452	3.214	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

•	
Buffer Zone	Area
Transmission Line	0
Road	591.395
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**



Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Waterways -

> > Basemap

Boundaries International --Dzongkhag - -Perennial

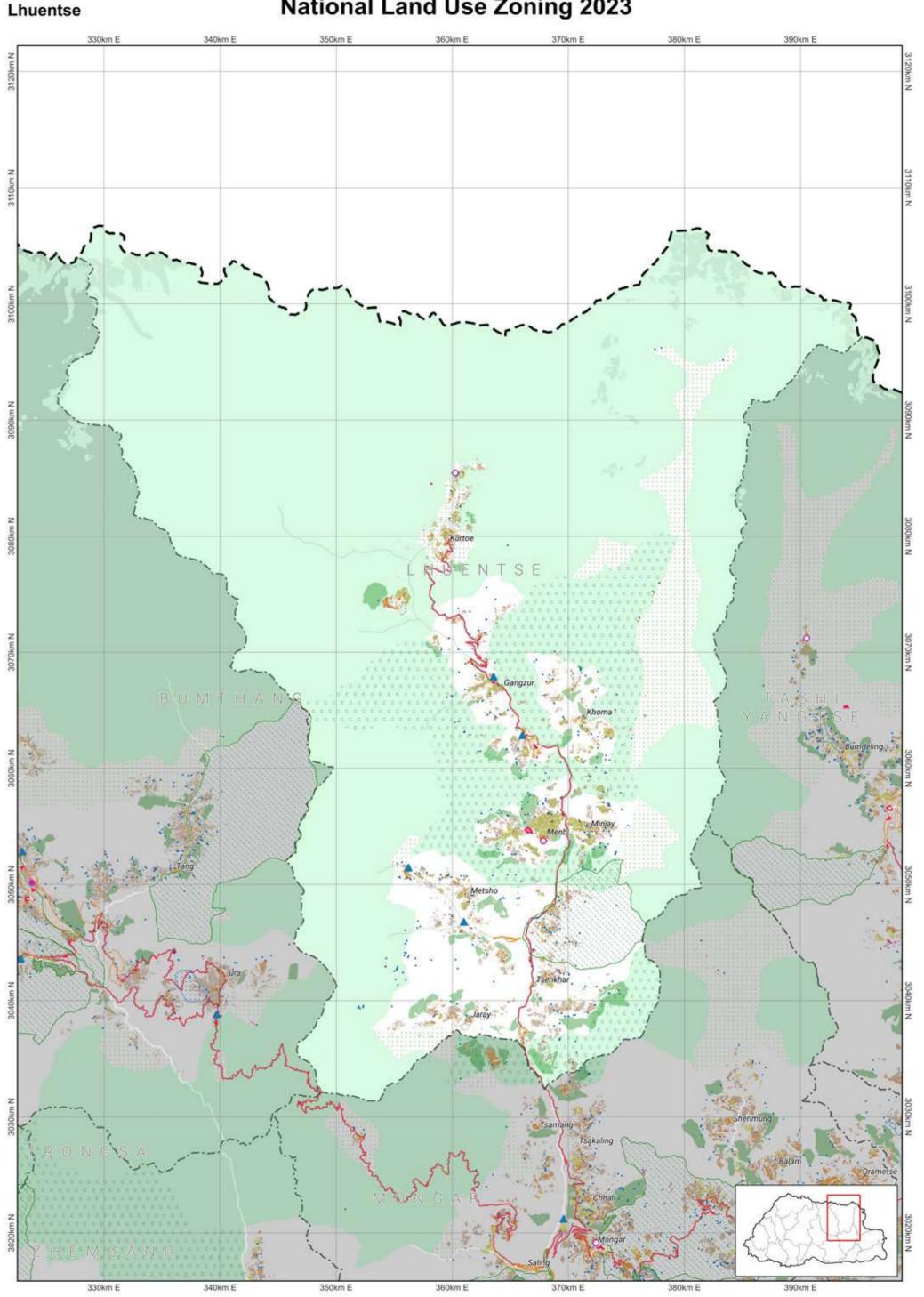
Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

Highway 300k ---

# Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
	Tot	tal Populatio	on	Sex ratio	Aging Index	Number of household	Mean Household size				
Dzongkhag	Male	Female	Total								
Lhuentse	7,407	7,030	14,437	105.4	27.4	3,111	3.8				

# **National Land Use Zoning 2023**



Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies. More specific information on the data is available from the rightful owner listed on the opposite page.

O	ne Area	
	Gewog	Gangzur
	Gewog code	601
	Gewog area	132519.002
	Zone	Area
	Agriculture	2383.496
	Cultural Heritage	30.427
	Industrial	2.896
	NCA	115206.657
	Rangeland	0
	Rural Settlement	152.611
	SFMA	1907.022
	Urban	306.291

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1196.819	1.341	0	0	0	0	0
NCA	1196.819		501.05	0	0.605	0.098	40.006	0
Agriculture	1.341	501.05	0	4.195	0	0	0	0
Urban	0	0	4.195		8.881	0.069	44.8	0
Culture	0	0.605	0	8.881	0	0	0	0
Industrial	0	0.098	0	0.069	0	0	0	0
Rural Settlement	0	40.006	0	44.8	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	6.221	11.476	0	0	0	0.607	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

31.8

8.5

500

248

# **RoW / Buffer Area**

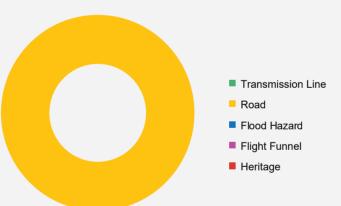
**Demographic Table** 

1,121 2,262

1,500

148.8

Buffer Zone	Area
Transmission Line	0
Road	229.301
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land Institutional Land

Forest Management Unit

### Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

# Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

# Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production

> Existing mines Airport Helipad O

### Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -

Perennial

lighway 300k ——	Thromde 50k =
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =
rongkhag 25k —	Form 5k =

Data Owner of the Map Content Bhutan Power Corporation Limited

Dzongkhag 5k

Ministry of Energy and Natural Resources

Ministry of Energy and Natural Resources

Mean Household size

4.2

3.6

# **Data Ownership**

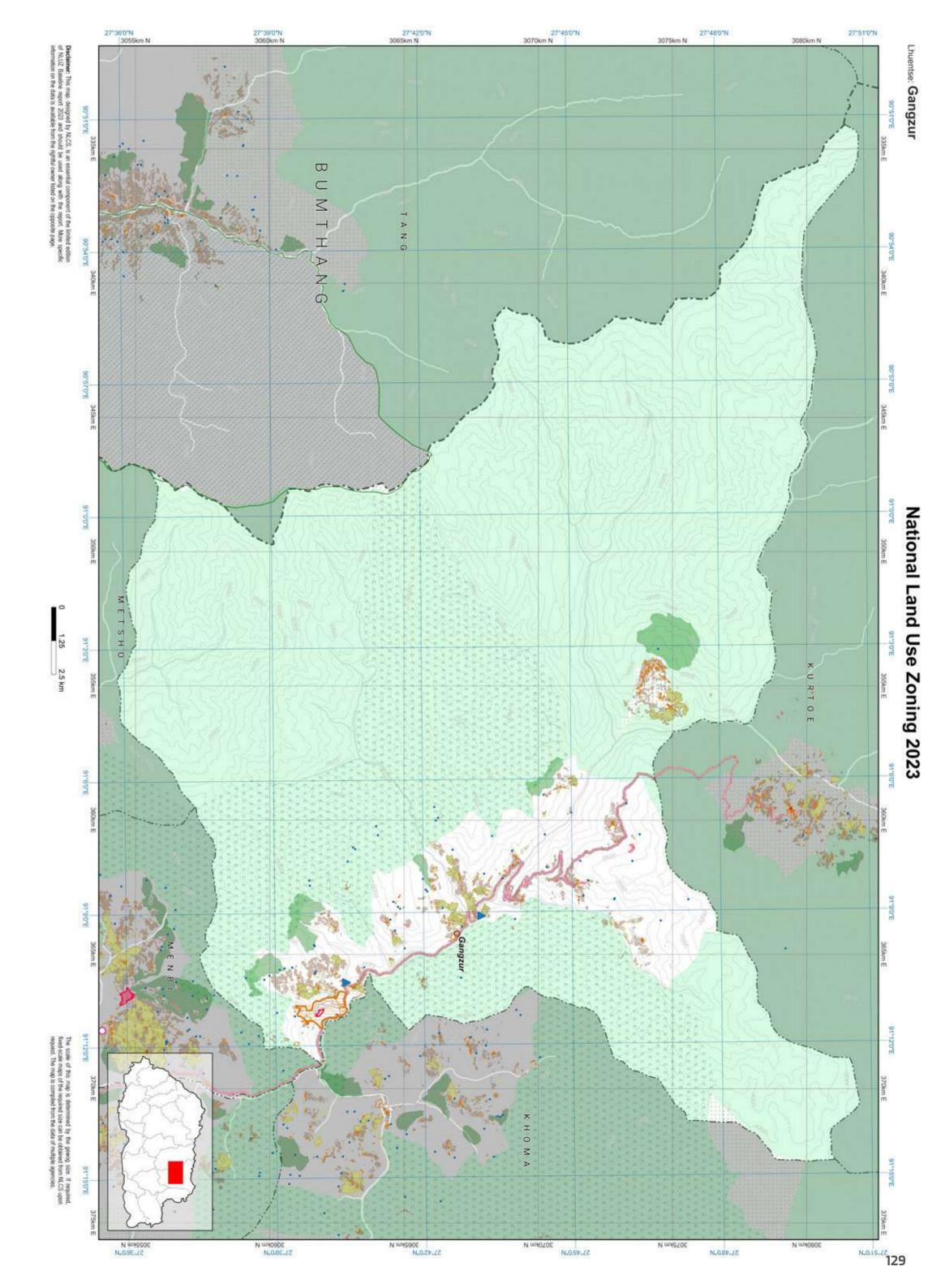


Department of Geology and Mines Ministry of Energy and Natural Resources

Department of Culture and Dzongkha Development Ministry of Home Affairs

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat







0	ne Area	
	Gewog	Jaray
	Gewog code	602
	Gewog area	34220.761
	Zone	Area
	Agriculture	1211.707
	Cultural Heritage	2.849
	Industrial	0.192
	NCA	17810.851
	Rangeland	0
	Rural Settlement	161.033
	SFMA	1275.757
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	12.936	0	0	0	0	0
Agriculture	0	12.936	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	4.608	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Demographic Table

•	
Buffer Zone	Area
Transmission Line	0
Road	4.875
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**

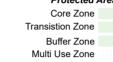
### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

# Residential Land Institutional Land

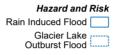
# Forest Management Unit Community Forest











Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value Tsamdro

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial

### Manufacturing and Production Existing mines Airport

Helipad O Hydro Power Waterways -

# Basemap

Boundaries International --Dzongkhag - -

Perennial Terrain

Highway 300k ——	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ====	Industrial 5k
Dzongkhag 25k ====	Farm 5k
Dzongkhag 5k	

# **Data Ownership**

ı	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Surface Transport Ministry of Infrastructure and Transport
	National Land Commission Secretariat

### Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017) 514 1,008 21.2 228 3.7

27°24'0'N 27°27'0"N 27°30'0"N  $\varpi$ D Z National Land Use Zoning 2023 0 0 Z7-Z70'N 27.24'U'N

ea		All areas are in Acres.
Gewog	Khoma	
Gewog code	603	
Gewog area	161492.047	
_		■ Agriculture
Zone	Area	■ Cultural Heritage ■ Industrial
Agriculture	1174.413	■ Nature Conservation Area
Cultural Heritage	12.696	Rangeland
Industrial	0.592	Rural Settlement  Sustainable Forest Management Area
NCA	0	Urban
Rangeland	0	
Rural Settlement	0	
SFMA	0	
Urban	0	

# **Map Legend**

# **National Land Use Zoning**



## Residential Land Institutional Land

### Forest Management Unit Community Forest **Cultural Heritage** Religious Sites

### Heritage Conservation Zone Urban Zone **Nature Conservation Area**

### Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Ramsar Site

### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

# High Conservation Value

# Rangeland

### Significant Watershed Potential Recharge Area

Water Sources • Industria Manufacturing and Production

### Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

# Basemap

Boundaries International --Dzongkhag - -Gewog ---Perennial Terrain

	map scare
ighway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ongkhag 25k ===	Farm 5k ==

### **Data Ownership**

# Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources National Centre for Hydrology and Meteorology

National Land Commission Secretariat

### Mean Household size Female Total 770 1,501 362 3.5

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

133

10NGAR

91°24'0°E

9112110°E

5 km

91°18'0"E

**Demographic Table** 

# National Land Use Zoning 2023 Lhuentse: Khoma KURTOE BUMDELING TASHI YANGTSE

# Contour Roads for different

# KURTOE

# **Zone Area**

Gewog	Kurtoe
Gewog code	604
Gewog area	238064.158
Zone	Area
Agriculture	1434.203
Cultural Heritage	11.91
Industrial	0.333
NCA	238121.181
Rangeland	0
Rural Settlement	77.238
SFMA	310.282
Urban	0

# **Zone Conflict**

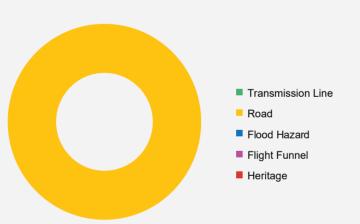
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	310.188	0	0	0	0	0	0
NCA	310.188	0	1433.776	0	11.907	0.333	77.215	0
Agriculture	0	1433.776	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	11.907	0	0	0	0	0	0
Industrial	0	0.333	0	0	0	0	0	0
Rural Settlement	0	77.215	0	0	0	0	0	0
Rangeland	0		0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	84.955	4.775	0	0	0	0.556	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

	<b>Buffer Zone</b>	Area
Tra	nsmission Line	0
	Road	84.955
	Flood Hazard	0
	Flight Funnel	0
	Heritage	0



# **Map Legend**

All areas are in Acres.

# National Land Use Zoning

Agricultural Land
Kamzhing
Protected Chhuzhing
Regulated Chhuzhing
Lease Land

# Rural Settlement Residential Land

Sustainable Forest Management Area Forest Management Unit

# Community Forest

Institutional Land

Cultural Heritage
Religious Sites
Heritage Village

Heritage Conservation Zone

# Urban Zone Nature Conservation Area

Protected Area
Core Zone
Transistion Zone
Buffer Zone

### Biological Corridor / Botanical Park Wetland

Multi Use Zone

Ramsar Site \_\_\_\_\_ *Hazard and Risk*Rain Induced Flood \_\_\_\_

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage

Road Powerlines

### 

Key Biodiversity Area
High Conservation Value

# Rangeland Tsamdro

Significant Watershed
Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production
Service
Existing mines

Airport • Helipad •

Hydro Power Plants A
Hydro Power Waterways —

### Basemap Boundaries

International — — Dzongkhag — •

Gewog — · · · Rivers

Main river

Perennial — · · · Terrain

### Roads for different map scales

Farm 5k ====

Highway 300k Thromde 50k
Highway 50k Thromde 25k
Highway 25k Thromde 5k
Highway 5k Access 5k
Dzongkhag 50k Industrial 5k

Dzongkhag 25k ====

**Data Ownership** 

Data Owner of the Map Content

Department of Agriculture
Ministry of Agriculture and Livestock

Department of Forests and Park Services
Ministry of Energy and Natural Resources

Department of Water
Ministry of Energy and Natural Resources

Department of Culture and Dzongkha Development
Ministry of Home Affairs

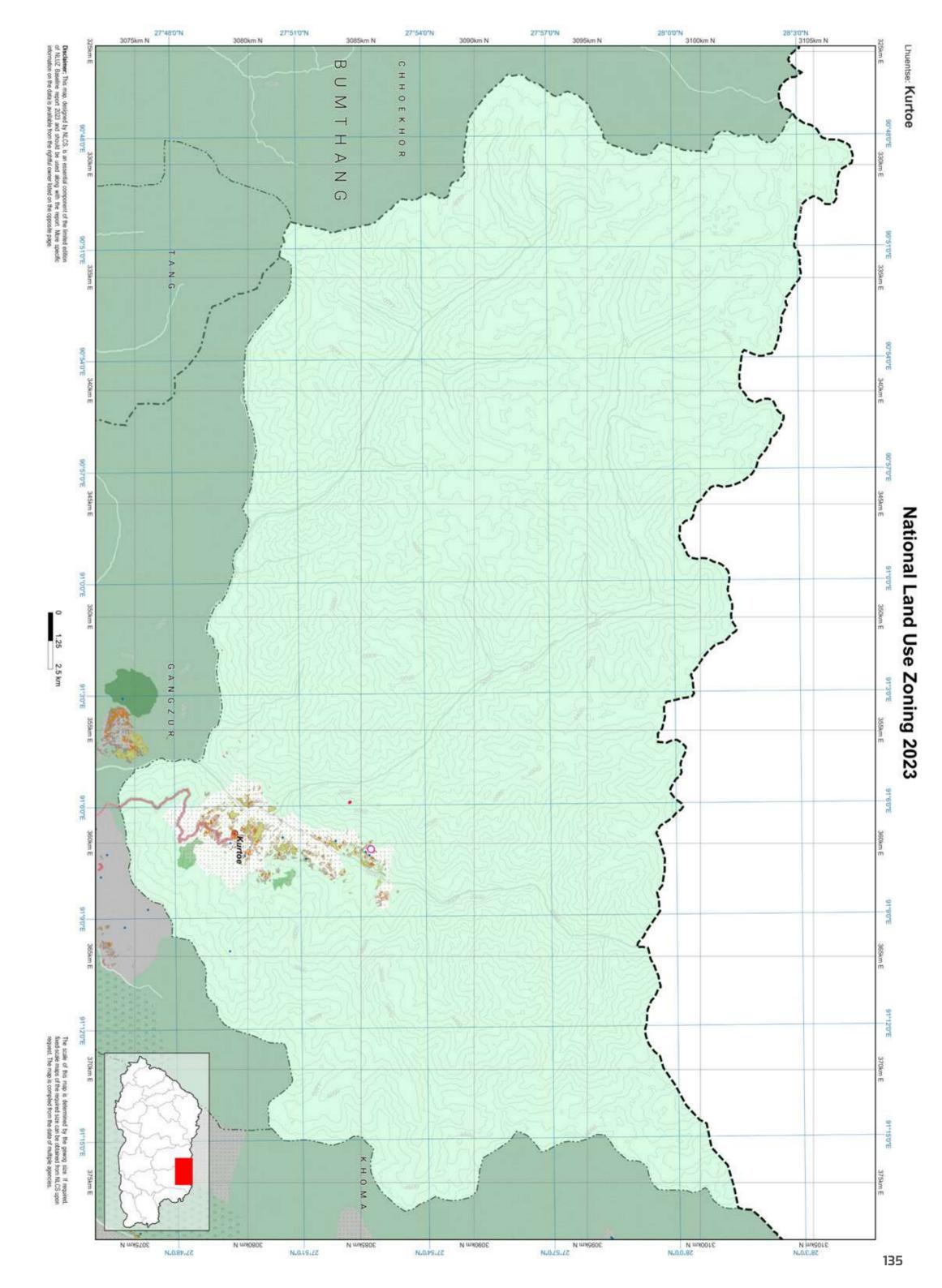
Department of Air Transport
Ministry of Infrastructure and Transport
Ministry of Infrastructure and Transport

National Centre for Hydrology and Meteorology

National Land Commission Secretariat

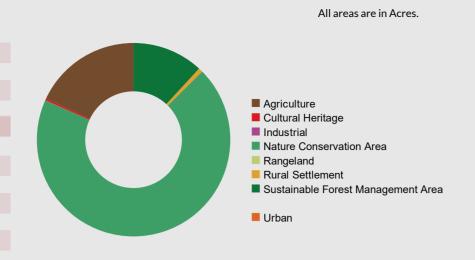
# Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Kurtoe	379	361	740	105.0	30.7	175	3.6



# Gewog Menbi 605 Gewog code

Gewog area	21905.185
Zone	Area
Agriculture	2637.915
Cultural Heritage	48.939
Industrial	4.063
NCA	10139.326
Rangeland	0
Rural Settlement	102.392
SFMA	1737.66
Urban	0



# **Zone Conflict**

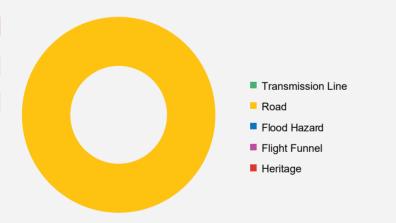
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	98.018	0	2.805	1.636	1.195	0
Agriculture	0	98.018	0	0	1.313	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	2.805	1.313	0	0		0	0
Industrial	0	1.636	0	0	0	0	0	0
Rural Settlement	0	1.195	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	22.131	1.151	0	0	0.092	0.592	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	58.275
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

## **National Land Use Zoning**

Regulated Chhuzhing

# Community Forest

Heritage Conservation Zone

# Hazard and Risk

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# Significant Watershed

Potential Recharge Area

Existing mines

### Hydro Power Waterways -

Boundaries

# International --Dzongkhag - -

Perennial

ighway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
onakhaa 25k ——	Farm 5k

### Data Ownership

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Air Transport Ministry of Infrastructure and Transport

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

# **Demographic Table**

		Gev	vog wise K	ey Demographic	indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	Tot	al Population	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Menbi	1,191	1,150	2,341	103.6	28.5	466	3.7



Lhuentse: Menbi

Lease Land

### Residential Land Institutional Land

Forest Management Unit

### Religious Sites Heritage Village

Urban Zone **Nature Conservation Area** 

### Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

High Conservation Value

Payment for Ecosystem Services Water Sources •

# Manufacturing and Production

Airport • Helipad O Hydro Power Plants A

# Basemap

Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k ==
Dzongkhag 5k	

# Department of Water Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

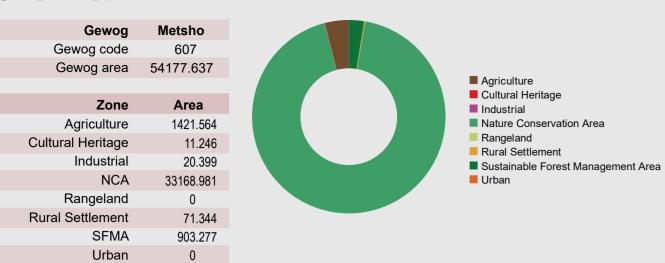
TSENKHA

National Land Use Zoning 2023

GANGZUR

91°12'0"E

MINJAY



# **Zone Conflict**

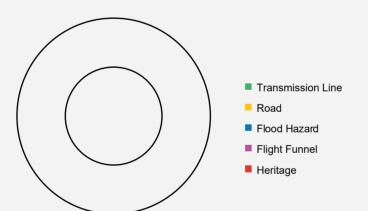
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	25.476	0	0	0	0	0	0
NCA	25.476		28.161	0	0.859	0	0.055	0
Agriculture	0	28.161	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.859	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.055	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Residential Land Institutional Land

Forest Management Unit

Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park Wetland Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer

Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value Rangeland Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A

Hydro Power Waterways -

Basemap Boundaries International --Dzongkhag - -

Airport

Gewog ---Perennial Terrain

Roads for different

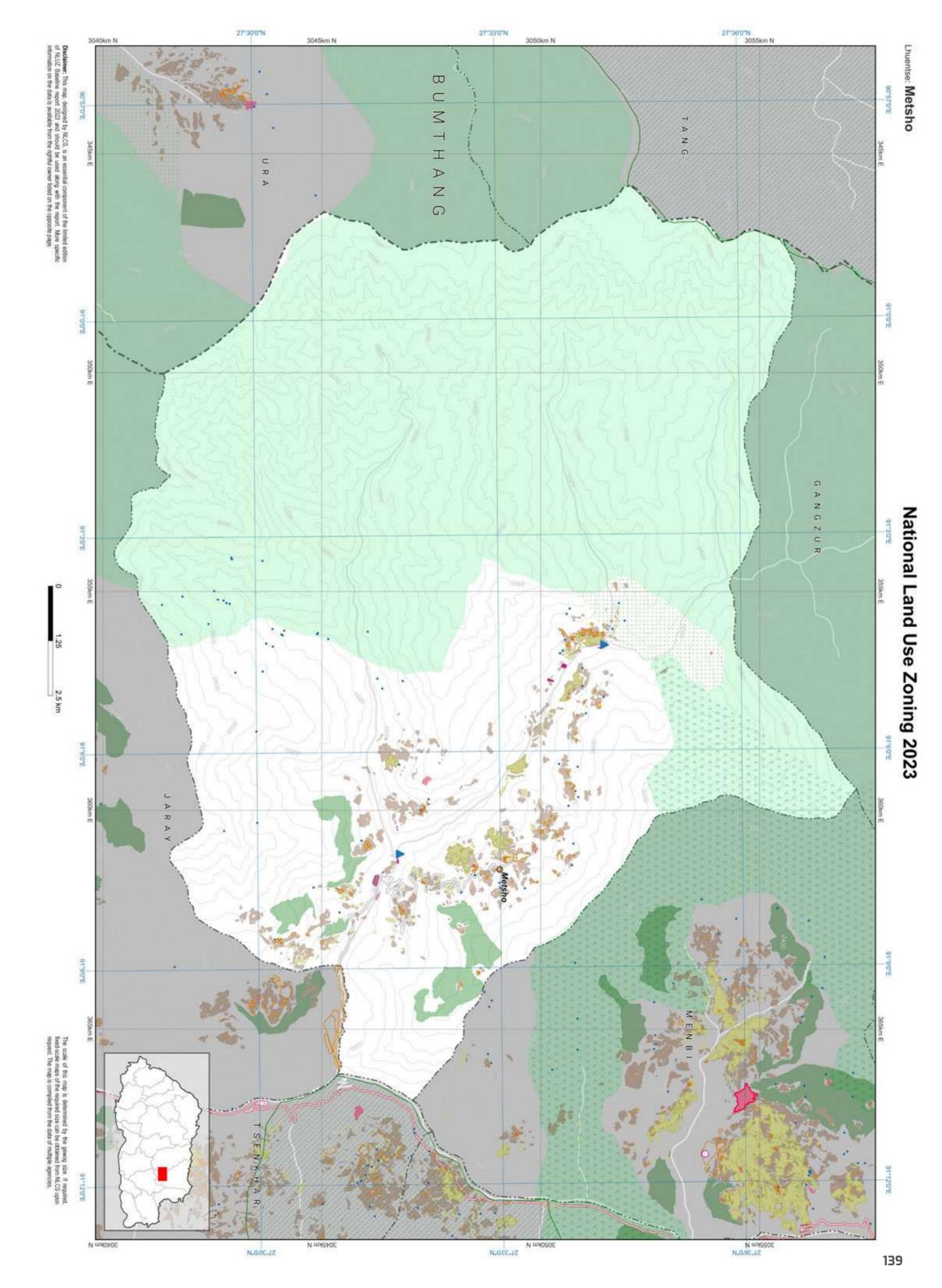
Highway 300k ==== Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k === Industrial 5k Dzongkhag 25k Farm 5k ====

### **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

Demographic Table									
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						

								Department of Agriculture Ministry of Agriculture and Livestock
mographi	Department of Energy Ministry of Energy and Natural Reso							
	Department of Forests and Park Ser Ministry of Energy and Natural Reso							
	Total Population Sex ratio Aging Index Number of household Mean Household size							Department of Water
wog / Throm	Male	Female	Total					Ministry of Energy and Natural Reso
etsho	470	475	945	98.9	25.9	237	3.9	National Land Commission Secretar



Gewog	Minjay
Gewog code	606
Gewog area	34104.426
Zone	Area
Agriculture	2060.949
Cultural Heritage	14.948
Industrial	0.155
NCA	20973.083
Rangeland	0
Rural Settlement	64.21
SFMA	9711.837
Urban	0

# **Map Legend**

All areas are in Acres.

Agriculture

Industrial

Rangeland

Urban

Cultural Heritage

Rural Settlement

Nature Conservation Area

■ Sustainable Forest Management Area

#### National Land Use Zoning



Lhuentse: Minjay

#### Rural Settlement Residential Land

Residential Land
Institutional Land

#### Sustainable Forest Management Area

Forest Management Unit	000
Community Forest	
Cultural Heri	tane

# Heritage Village Heritage Conservation Zone

Religious Sites

# Urban Zone \_\_\_\_\_\_ Nature Conservation Area

# Protected Area Core Zone Transistion Zone

#### Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Wetland Ramsar Site

### Hazard and Risk Rain Induced Flood

Glacier Lake --Outburst Flood

Right Of Way / Buffer
Heritage Road

Powerlines
Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area
High Conservation Value

Rangeland

# Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources

Manufacturing and Production
Service
Existing mines

Airport 
Helipad

Hydro Power Plants A
Hydro Power Waterways —

#### Basemap Boundaries

International = =

Dzongkhag — • Gewog — • Rivers
Main river
Perennial — • Terrain

# Contour Roads for different map scales

	THI OTHER DOK
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k =
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k ≡
zongkhag 25k ===	Farm 5k ≡

# **Zone Conflict**

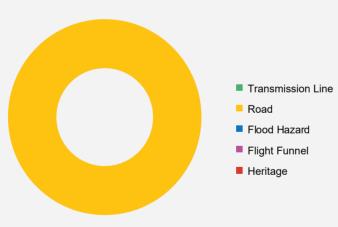
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	2479.839	602.892	0	14.44	0	10.051	0
NCA	2479.839	0	313.445	0	0	0.105	4.192	0
Agriculture	602.892	313.445	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	14.44	0	0	0	0	0	0	0
Industrial	0	0.105	0	0	0	0	0	0
Rural Settlement	10.051	4.192	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	28.843	30.158	8.795	0	0	0	0.558	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	78.595
Flood Hazard	0
Flight Funnel	0
Heritage	0



#### Data Ownership

Data Owner of the Map Content

Highway 300k =

·
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population Sex ratio Aging Index Number of household Mean Household size										
Gewog / Throm	Male	Female	Total							
Minjay	714	716	1,430	99.7	30.8	304	3.9			

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

National Land Use Zoning 2023

91"18"0"E

KHOMA

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

91°18'0°E

SHERIMUNG

MONGAR



	Zone Area	
	Gewog	Tsenkhar
	Gewog code	608
	Gewog area	30591.8
_		
	Zone	Area
	Agriculture	2723.328
	Cultural Heritage	47.163
	Industrial	2.732
	NCA	12479.607
-	Rangeland	0
	Rural Settlement	84.241
	SFMA	9405.28
	Urban	101.852

# **Map Legend**

All areas are in Acres.

Agriculture

Industrial

Rangeland

■ Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area

**National Land Use Zoning** 

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Lhuentse: Tsenkhar

Residential Land

Institutional Land

Forest Management Unit

Community Forest **Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** 

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Manufacturing and Production

Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Perennial

Highway 300k = Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

# **Zone Conflict**

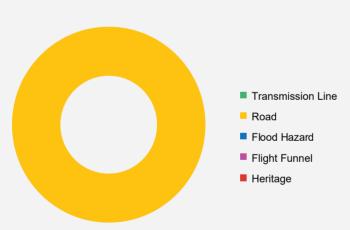
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1524.183	648.312	0.321	12.271	0.43	32.723	0
NCA	1524.183	0	391.195	2.994	21.361	0	4.726	0
Agriculture	648.312	391.195	0	14.671	0	0	0	0
Urban	0.321	2.994	14.671	0	0	0	0.999	0
Culture	12.271	21.361	0	0	0	0	0	0
Industrial	0.43	0	0	0	0	0	0	0
Rural Settlement	32.723	4.726	0	0.999	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	37.174	32.865	2.147	0	0	0.36	0.9	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	135.394
Flood Hazard	0
Flight Funnel	0
Heritage	0



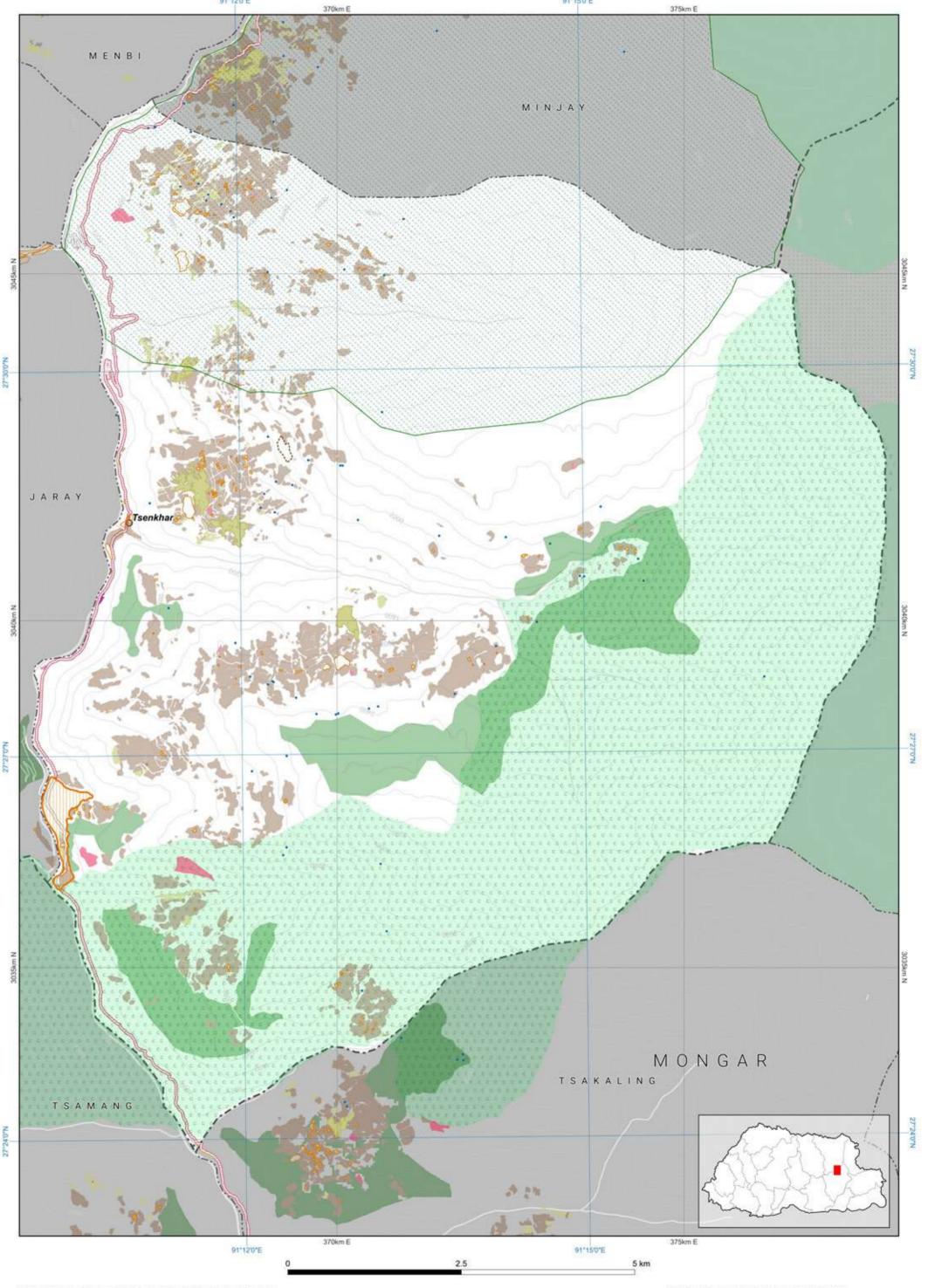
Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock

#### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population Sex ratio Aging Index Number of household Mean Household size										
Gewog / Throm	Male	Female	Total							
Tsenkhar	1004	931	1,935	107.8	41.9	479	3.6			
Autsho Town	386	389	775	99.2	8.0	112	3.8			



epartment of Agriculture finistry of Agriculture and Livestock
lepartment of Forests and Park Services linistry of Energy and Natural Resources
lepartment of Water linistry of Energy and Natural Resources
epartment of Human Settlement linistry of Infrastructure and Transport
lepartment of Surface Transport linistry of Infrastructure and Transport
lational Land Commission Secretariat



#### **Zone Area** All areas are in Acres. Dzongkhag Mongar Dzongkhag code 07 Dzongkhag area 481264.783 Agriculture Culture Industrial Zone Area ■ Nature Conservation Area Agriculture 31679.46 Rangeland Rural Settlement Culture 197.564 ■ Sustainable Forest Management Area Industrial 111.145 NCA 119956.43 Rangeland Rural Settlement 2343.403

# **Zone Conflict**

SFMA

Urban

84622.405

1021.82

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	2249.319	5,508.97	78.891	70.794	29.661	433.596	0
NCA	2249.319	0	672.99	84.654	17.005	6.453	74.698	0
Agriculture	5,508.97	672.99	0	54.725	0	0	0.113	0
Urban	78.891	84.654	54.725	0	17.77	0.05	369.195	0
Culture	70.794	17.005	0	17.77	0	0	0.001	0
Industrial	29.661	6.453	0	0.05	0	0	0	0
Rural Settlement	433.596	74.698	0.113	369.195	0.001	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	216.583	5.79	59.438	3.185	0.288	2.188	10.986	0
Road	448.168	398.762	60.829	0	2.101	0.717	18.72	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	379.794
Road	1695.269
Flood Hazard	0
Flight Funnel	0
Heritage	0



#### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines

#### Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways —

#### Basemap Boundaries

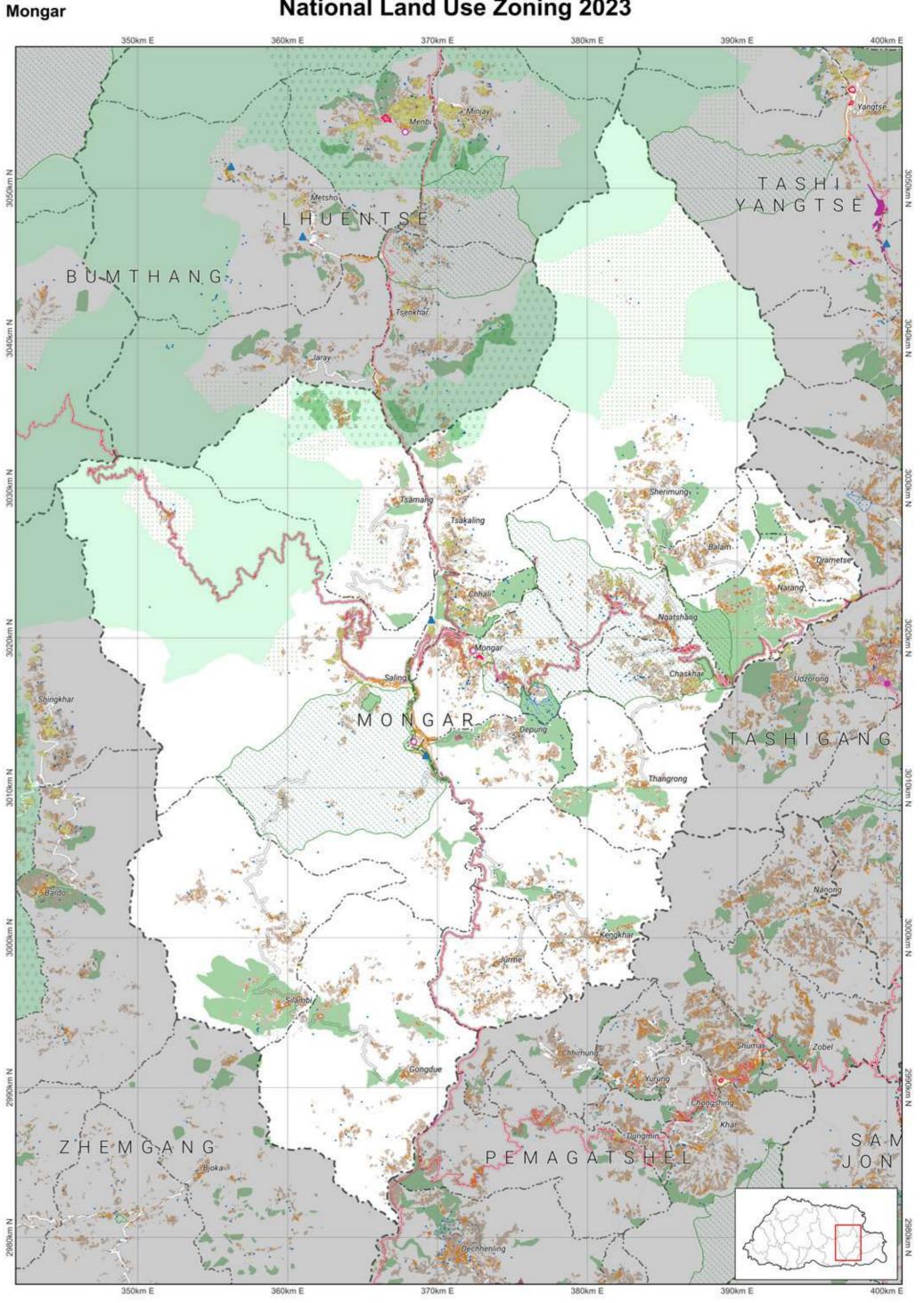
International --Dzongkhag - -

# Perennial

ignway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ==
ongkhag 25k ===	Farm 5k =

#### Demographic Table

	Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Total Population Sex ratio Aging Index Number of household					Mean Household size					
Dzongkhag	Male	Female	Total								
Mongar	18,247	18,903	37,150	96.5	23.2	8,640	3.6				



Zone Area	
Gewog	Balam
Gewog code	701
Gewog area	6876.357
Zone	Area
Agriculture	1162.665
Cultural Heritage	0.323
Industrial	0
NCA	0
Rangeland	0
Rural Settlement	69.203
SFMA	635.627
Urban	0

# **Zone Conflict**

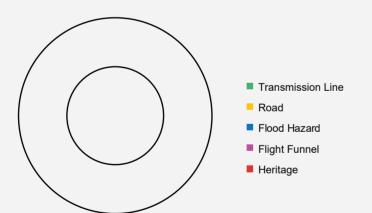
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	6.29	0	0	0	0	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	6.29	0.00	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Mongar: Balam

National Land Use Zoning Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest **Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone Nature Conservation Area

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A Hydro Power Waterways -

> Basemap Boundaries International --Dzongkhag - -Perennial

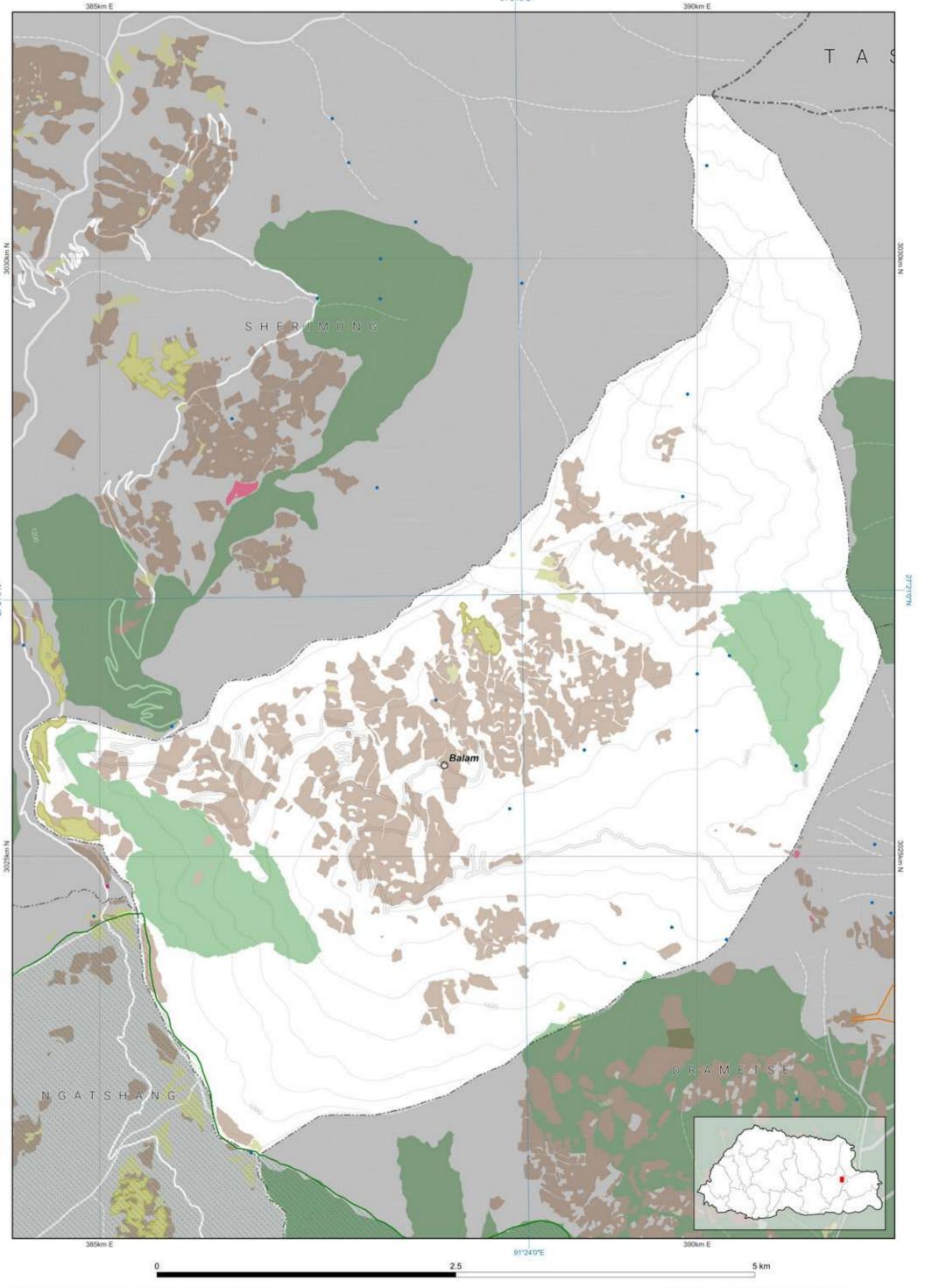
Highway 300k = Highway 50k = Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

#### **Data Ownership**

#### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources

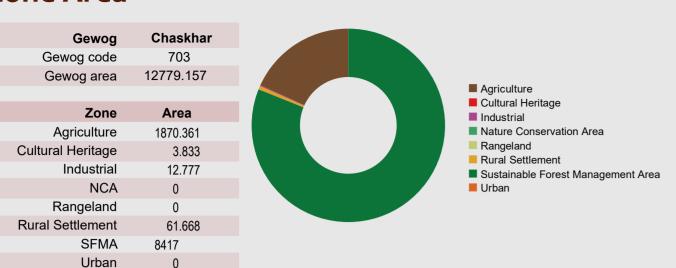
National Land Commission Secretariat

#### National Land Use Zoning 2023



**Demographic Table** 

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
							Mean Household size		
Gewog / Throm	Male	Female	Total						
Balam	418	494	912	84.6	26.4	254	3.3		



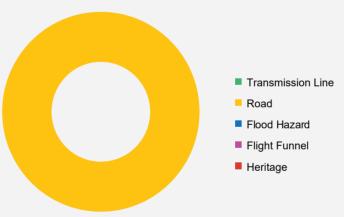
# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	1,747.66	0	3.833	0.771	60.015	0
NCA	0	0	0	0	0	0	0	0
Agriculture	1,747.66	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	3.833	0	0	0	0	0	0	0
Industrial	0.771	0	0	0	0	0	0	0
Rural Settlement	60.015	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	26.348	4.027	12.394		0.002	0.223	1.207	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**



# **Map Legend**

All areas are in Acres.

Mongar: Chaskhar

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Lease Land

Rural Settlement

Residential Land

Institutional Land

Sustainable Forest
Management Area

Forest Management Unit

Community Forest

Cultural Heritage
Religious Sites
Heritage Village
Heritage Conservation Zone
Urban
Urban Zone

Nature Conservation Area
Protected Area
Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone

Biological Corridor / Botanical Park Wetland Ramsar Site

Rain Induced Flood
Glacier Lake
Outburst Flood
Right Of Way / Buffer
Heritage
Road
Powerlines

Flight Funnel

Other Effective Area-based
Conservation Measures
Key Biodiversity Area

High Conservation Value

Rangeland
Tsamdro

Potential Recharge Area
Payment for Ecosystem Services
Water Sources

Industrial
Manufacturing and Production
Service
Existing mines
Airport

Helipad O
Hydro Power Plants A
Hydro Power Waterways —

Basemap

Boundaries
International — —
Dzongkhag — —
Gewog — —
Rivers
Main river
Perennial
Terrain
Contour

Roads for different map scales
Highway 300k Thromde 50k
Highway 50k
Thromde 25k

Highway 50k Thromde 25k
Highway 25k Thromde 5k
Highway 5k Access 5k
Dzongkhag 50k Industrial 5k
Dzongkhag 25k Farm 5k
Dzongkhag 5k

#### Data Ownership

Department of Industry

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

Data Owner of the Map Content

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Ministry of Agriculture and Livestock

Department of Energy
Ministry of Energy and Natural Resources

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Ministry of Energy and Natural Resources

Department of Water
Ministry of Energy and Natural Resources

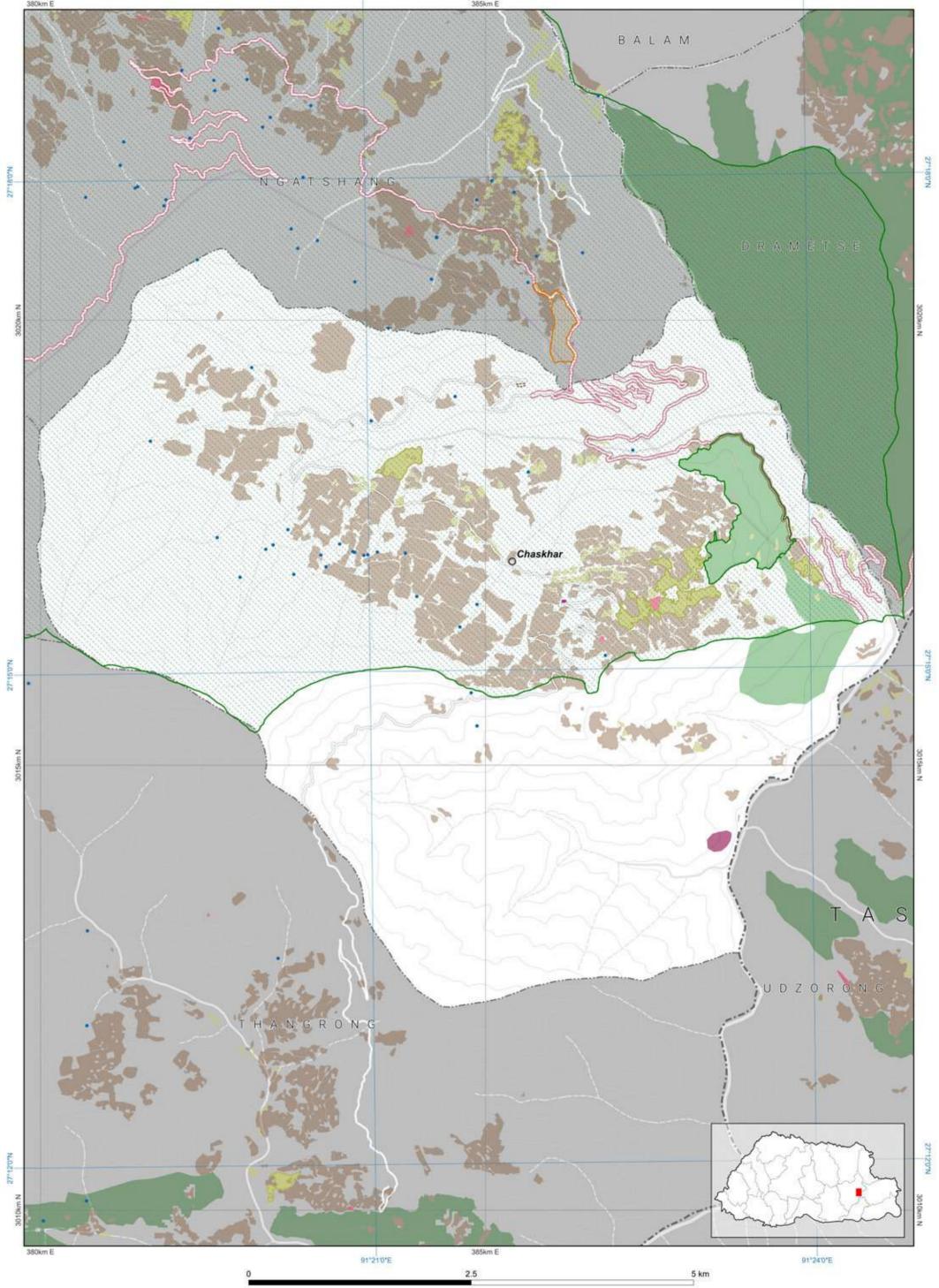
Ministry of Industry, Commerce and Employment

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Chaskhar	1,206	1,288	2,494	93.6	21.6	581	3.8		

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ. Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner lated on the opposite page.

# National Land Use Zoning 2023 91'210'E 385km E



Zone Area	
<b>Gewog</b> Gewog code Gewog area	<b>Chhali</b> 702 6155.714
<b>Zone</b> Agriculture	<b>Area</b> 1678.141
Cultural Heritage Industrial	4.205 2.783
NCA Rangeland Rural Settlement	25.416 0 77.174
SFMA Urban	2206.222

# **Zone Conflict**

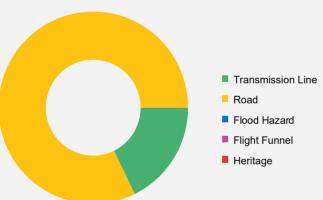
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	49.22	0	0.139	0	1.147	0
NCA	0	0	1.05	0	0	0	0.002	0
Agriculture	49.22	1.05	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0.139	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	1.147	0.002	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	27.375	0	4.591	0	0	0	0	0
Road	127.834	0	1.174	0	0	0.318	0.034	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	28.023
Road	129.503
Flood Hazard	0
Flight Funnel	0
Heritage	0
	Transmission Line Road Flood Hazard Flight Funnel



# **Map Legend**

#### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

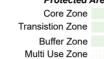
#### Lease Land Residential Land Institutional Land

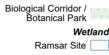
# Forest Management Unit

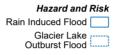
#### **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

Community Forest









Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

#### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

#### Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

#### Hydro Power Waterways -Basemap

#### Boundaries International --

Dzongkhag - -Perennial

#### Terrain Roads for different

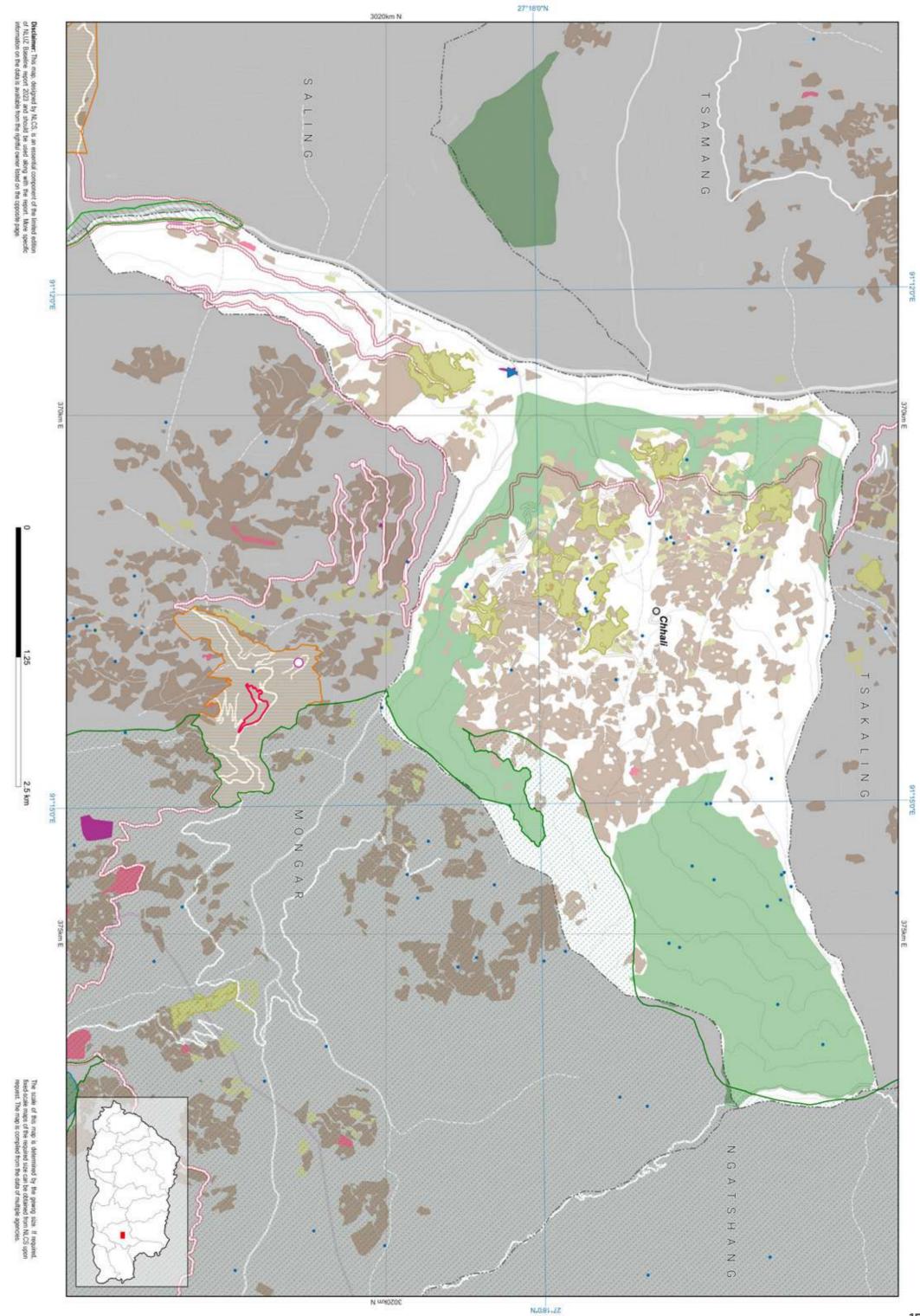
Thromde 50k	Highway 300k ===
Thromde 25k	Highway 50k ===
Thromde 5k	Highway 25k ====
Access 5k	Highway 5k
Industrial 5k	zongkhag 50k ===
Farm 5k	zongkhag 25k ===

#### Data Ownership

#### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Water Ministry of Energy and Natural Resources

# Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Geology and Mines Ministry of Energy and Natural Resources Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	To	tal Populatio	pulation Sex ratio Agin	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total						
Chhali	720	721	1,441	99.9	26.9	374	3.5		

5	Zone Area		All areas are in Acres
Z	Gewog	Depung	
	Gewog code	704	
	Gewog area	12503.507	■ Agriculture
			■ Cultural Heritage
	Zone	Area	Industrial
	Agriculture	1227.322	■ Nature Conservation Area ■ Rangeland
	Cultural Heritage	3.962	Rural Settlement
•••	Industrial	46.893	■ Sustainable Forest Management Ar
	NCA	127.479	Urban
	Rangeland	0	
	Rural Settlement	152.964	
	SFMA	2348.283	
	Urban	79.306	

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	30.662	0.00	0	0	0	0	0
NCA	30.662	0	0.00	12.534	0	4.001	1.462	0
Agriculture	0.00	0.00	0	1.516	0	0	0.113	0
Urban	0	12.534	1.516	0	2.256	0	42.836	0
Culture	0	0	0	2.256	0	0	0.001	0
Industrial	0	4.001	0	0	0	0	0	0
Rural Settlement	0	1.462	0.113	42.836	0.001	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0.635	0	0	0	1.214	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

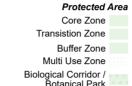
# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	9.449
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**









Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

#### Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways —

#### Basemap

Boundaries International --Dzongkhag - -

Perennial

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
Dzongkhag 50k ===	Industrial 5k =
Dzongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

#### **Data Ownership**

Data Owner of the Map Content

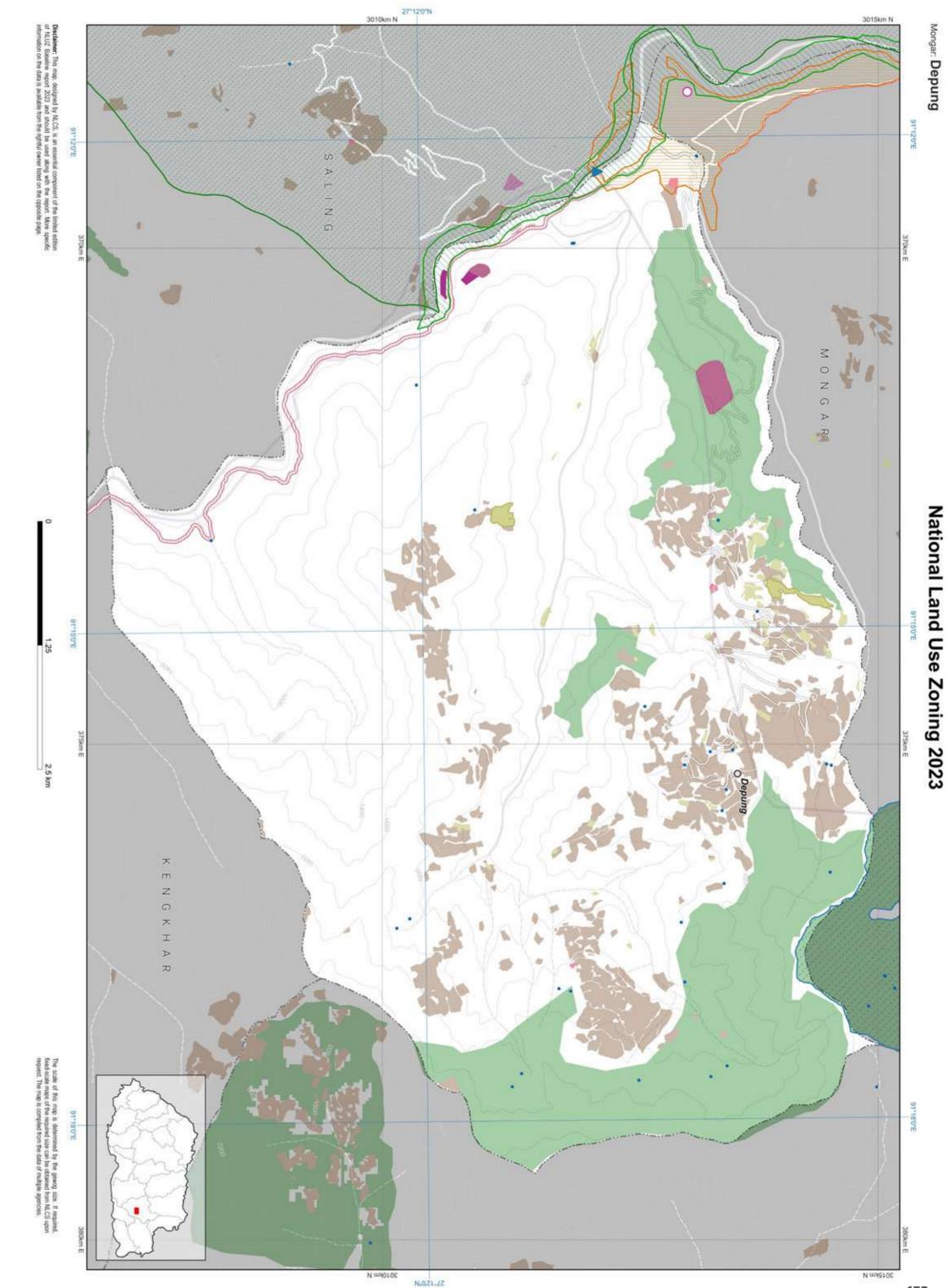
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Depung	427	477	904	89.5	27.2	265	3.3
Gyalposhing Town	1,374	1,255	2,629	109.5	5.8	477	3.8
Disclaimer:							

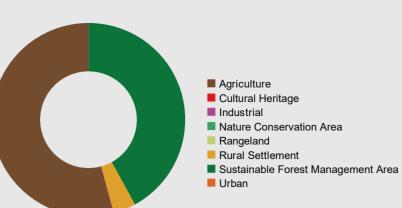
The demographic statistics provided in the table above for Gyalposhing town encompass not only the area falling under the Depung gewog but also include the demographic statistics of the town area falling under the Mongar gewog. The same statistics for Gyalposhing town can be found under the Mongar gewog.

National Land Commission Secretariat



	Gewog	Drametse
	Gewog code	705
	Gewog area	7170.877
	Zone	Area
	Agriculture	1059.354
Cult	ural Heritage	1.39
	Industrial	0.148
	NCA	0
	Rangeland	0
Rura	al Settlement	73.041
	SFMA	821.426
	Urban	0





# **Zone Conflict**

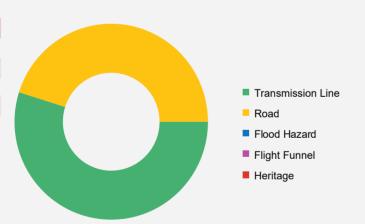
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	17.441	0.979	10.247	1.406	0.213	0.731	1.94	0
Road	0	3.452	0	0	0	0.001	1.527	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	73.999
Road	60.864
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

#### National Land Use Zoning

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Residential Land Institutional Land

Forest Management Unit Community Forest

#### **Cultural Heritage** Religious Sites

Urban Zone

Heritage Village Heritage Conservation Zone

#### **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer

Heritage \_\_\_\_

#### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

#### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O

#### Hydro Power Plants A Hydro Power Waterways —

Basemap Boundaries

International --Dzongkhag - -

Perennial

Thromde 50k
Thromde 25k
Thromde 5k
Access 5k

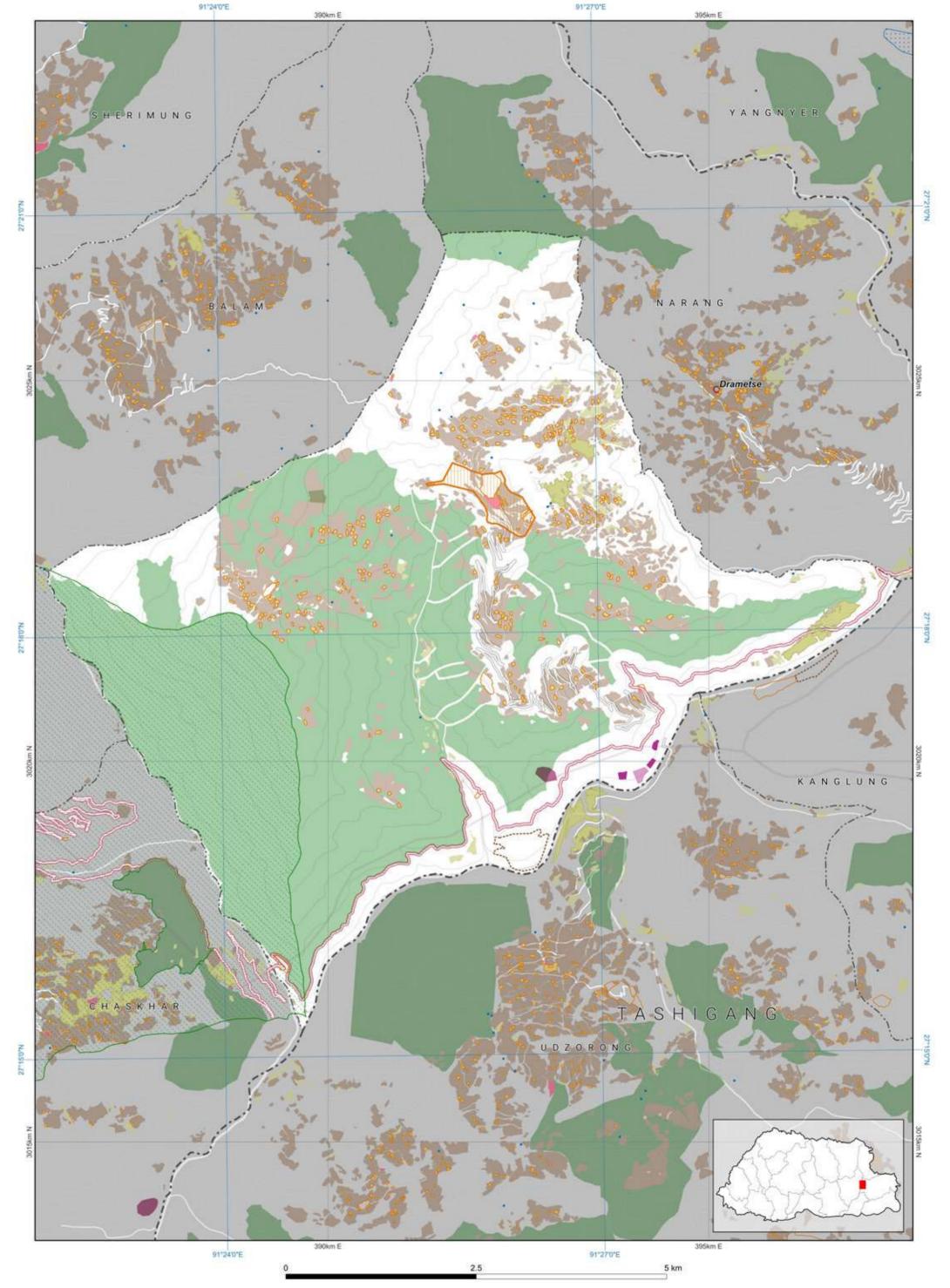
Dzongkhag 50k ==== Dzongkhag 25k =

#### **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

#### Mongar: Drametse

#### National Land Use Zoning 2023



# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Drametse	815	1,033	1,848	78.9	25	436	4.1				
Drametse Town	580	389	969	149.1	6.4	89	3.4				

# Gongdu

# Zone Area

,		
	Gewog	Gongdue
	Gewog code	706
	Gewog area	45975.615
	Zone	Area
	Agriculture	2931.776
	Cultural Heritage	6.803
	Industrial	0.216
	NCA	0
	Rangeland	0
	Rural Settlement	117.867
	SFMA	2229.726
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.01	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0.01	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

•	
Buffer Zone	Area
Transmission Line	0
Road	0.032
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**



#### Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park

Flight Funnel

Key Biodiversity Area High Conservation Value

Potential Recharge Area

Airport • Helipad O

Basemap

Boundaries International --Dzongkhag - -

Highway 300k = Highway 50k = Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

#### **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# **National Land Use Zoning**

All areas are in Acres.





Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Other Effective Area-based Conservation Measures

Payment for Ecosystem Services

Manufacturing and Production Existing mines

> Hydro Power Plants A Hydro Power Waterways -

Perennial

**Demographic Table** 

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm Male Female Total											
Gonadue	616	618	1 234	99.7	40.1	316	3.7				

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# National Land Use Zoning 2023 Mongar: Gongdue 91"12'0"E SALING BJOKA ZHEMGANG 91'6'0'E

# MONGAF

# Zone Area

Gewog	Jurme
Gewog code	707
Gewog area	13927.596
Zone	Area
Agriculture	1844.974
Cultural Heritage	1.652
Industrial	0
NCA	0
Rangeland	0
Rural Settlement	78.325
SFMA	72.046
Urban	0

# **Zone Conflict**

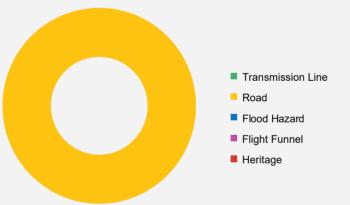
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	1.039	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area	
Transmission Line	0	
Road	130.572	
Flood Hazard	0	
Flight Funnel	0	
Heritage	0	



# **Map Legend**

All areas are in Acres.

Mongar: Jurme

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Lease Land

Institutional Land

Sustainable Forest
Management Area

Forest Management Unit

Community Forest

Residential Land

Religious Sites Heritage Village Heritage Conservation Zone Urban Urban Zone

Nature Conservation Area
Protected Area
Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone

Biological Corridor /
Botanical Park

Wetland
Ramsar Site

Hazard and Risk
Rain Induced Flood

Right Of Way / Buffer
Heritage Road Powerlines

Flight Funnel ....

Other Effective Area-based Conservation Measures

Key Biodiversity Area
High Conservation Value
Rangeland

Significant Watershed
Potential Recharge Area

Payment for Ecosystem Services

Water Sources

Industrial

Manufacturing and Production

anufacturing and Production
Service
Existing mines
Airport
Helipad
Hydro Power Plants

Hydro Power Waterways — Basemap

Boundaries
International — Dzongkhag — Gewog — Rivers

Main river
Perennial

Terrain
Contour

Highway 300k Thromde 50k Highway 50k Thromde 25k Highway 25k Access 5k Dzongkhag 50k Industrial 5k Dzongkhag 25k Farm 5k

#### Data Ownership

Data Owner of the Map Content

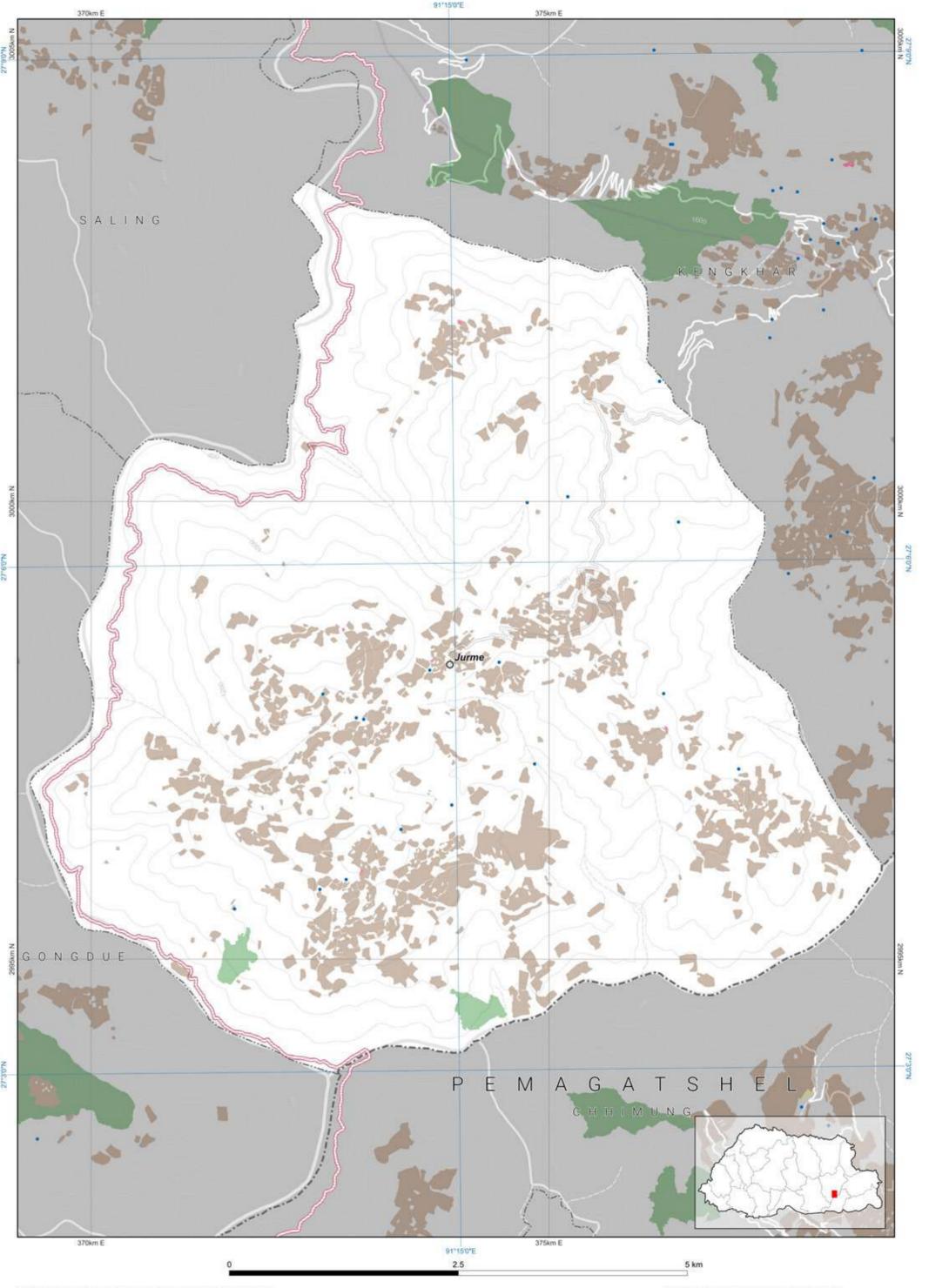
National Land Commission Secretariat

	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
old size	Department of Surface Transport Ministry of Infrastructure and Transport

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population		n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total						
Jurme	589	658	1,247	89.5	23.4	307	3.6		

#### National Land Use Zoning 2023



Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

ne Area				Allare	as are in Acr
Gewog	Kengkhar				
wog code	708				
g area	24352.909		Agricu		
Zone	Area		Indust		
Agriculture	2363.919			e Conservation	Area
Cultural Heritage	2.862		■ Range ■ Rural	Settlement	
Industrial	0.15			inable Forest M	anagement
NCA	0		Urban		
Rangeland	0				
Rural Settlement	100.729				
SFMA	1066.768				
Urban	0				
one Conf	lict				
				Domeil	

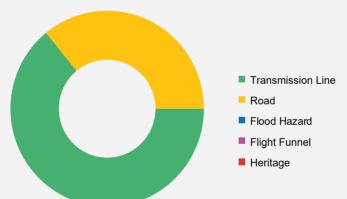
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	15.822	0	24.620	0	0	0	1	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	98.455
Road	55.151
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# National Land Use Zoning

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Mongar: Kengkhar

Residential Land Institutional Land

Forest Management Unit Community Forest

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Hazard and Risk

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Rain Induced Flood

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -

Basemap Boundaries International --

Dzongkhag - -

Highway 300k = Highway 50k === Highway 25k

Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

#### **Data Ownership**

#### Data Owner of the Map Content partment of Forests and Park Services istry of Energy and Natural Resources

artment of Water istry of Energy and Natural Resources

partment of Surface Transport istry of Infrastructure and Transport onal Land Commission Secretariat

Demograph	ic Tab	le						Depa Minis
		Gev	vog wise K	(ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)		Depa Minis
Gewog / Throm	To: Male	tal Populatio Female	n <i>Total</i>	Sex ratio	Aging Index	Number of household	Mean Household size	Depa
·				01.5	20.2	462	2.6	Natio
Kengkhar	881	963	1,844	91.5	28.3	462	3.6	Nati

# CHHIMUNG 91°15'0"E 91"180"E 91°210°E

Gewog	Mongar
Gewog code	709
Gewog area	18054.376
Zone	Area
Agriculture	2374.016
Cultural Heritage	60.818

1011.386

486.21

9477.806

589.86



■ Agriculture
■ Cultural Heritage Industrial Nature Conservation Area

Rangeland

Rural Settlement ■ Sustainable Forest Management Area

# **Zone Conflict**

Rangeland

**SFMA** 

Rural Settlement

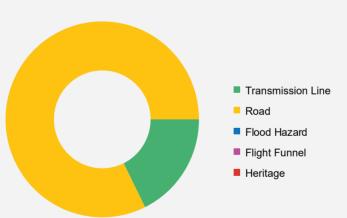
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	843.441	1,141.95	0.008	37.106	16.501	151.353	0
NCA	843.441	0	0.20	46.42	0	2	10.964	0
Agriculture	1,141.95	0.20	0	2	0	0	0	0
Urban	0.008	46.42	2	0	9.532	0	174.814	0
Culture	37.106	0	0	9.532	0	0	0	0
Industrial	16.501	2	0	0	0	0	0	0
Rural Settlement	151.353	10.964	0	174.814	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	51.982	3.11	12.113	0	0.074	0	5.351	0
Road	112.656	7.211	10.658	0	0.827	0.001	5.453	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Area
53.646
249.411
0
0
0



#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population			Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total				
Mongar	1,681	1,803	3,484	93.2	27.8	823	3.7
Gyalposhing Town	1,374	1,255	2,629	109.5	5.8	477	3.8
Mongar Town	2,301	2,151	4,452	107	11.5	934	3.9
Kilikhar Town	290	275	565	105.5	8.6	90	4.1

The demographic statistics provided in the table above for Gyalposhing town encompass not only the area falling under the Mongar gewog but also include the demographic statistics of the town area falling under the Depung gewog. The same statistics for Gyalposhing town can be found under the Depung

# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Residential Land

Institutional Land

Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** 

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer

Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Rangeland Tsamdro

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport

> Hydro Power Plants A Hydro Power Waterways -

Basemap

Helipad O

Boundaries International --Dzongkhag - -Gewog —

Perennial Terrain

Roads for different

Highway 300k —— Thromde 50k Highway 50k === Thromde 5k

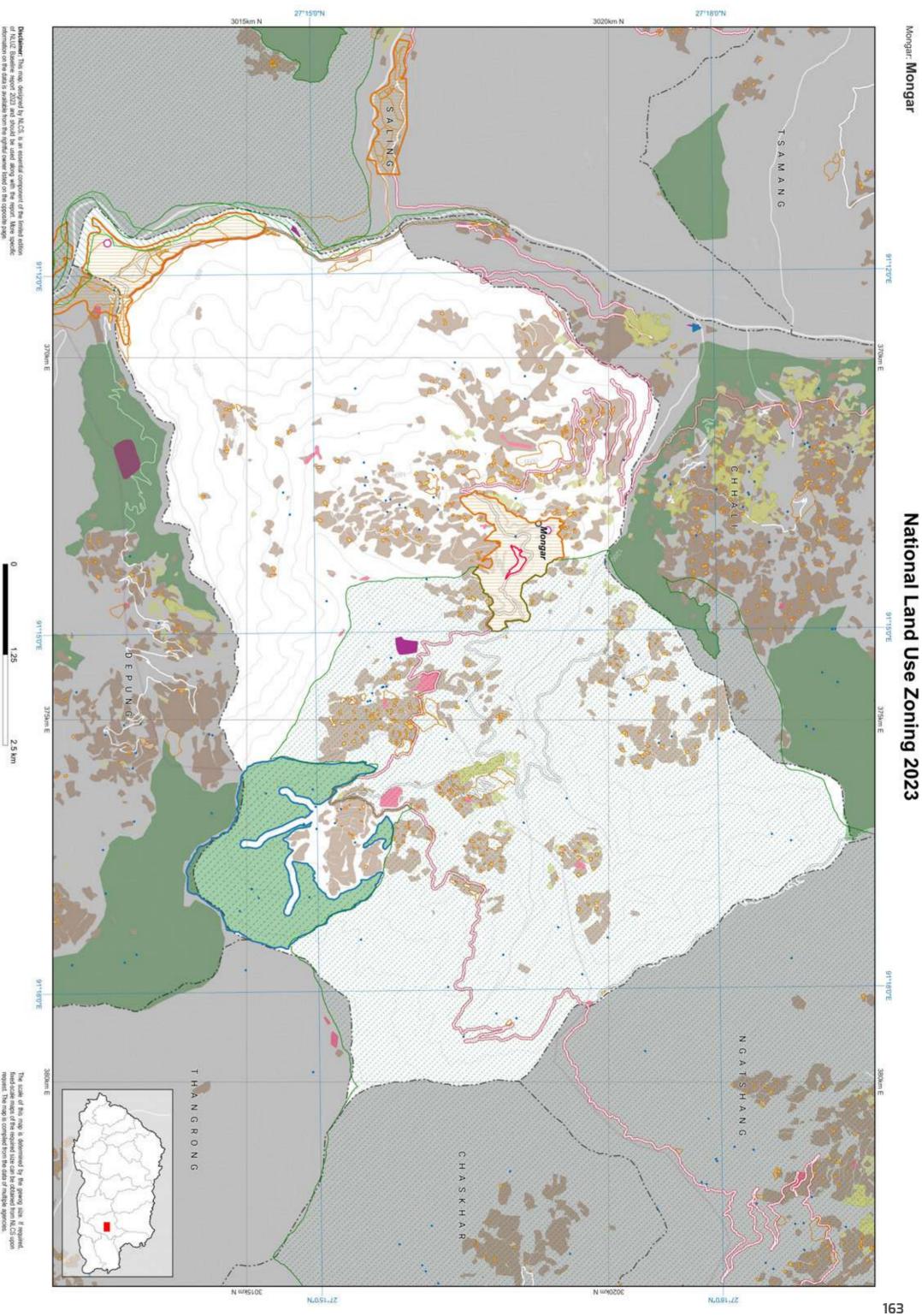
Industrial 5k

#### Dzongkhag 25k = Data Ownership

Highway 25k

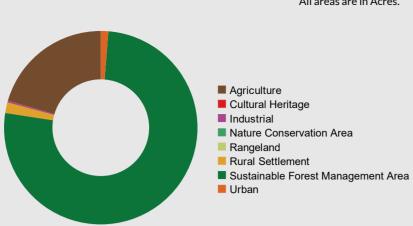
Highway 5k Dzongkhag 50k =

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development, Ministry of Home Affairs Department of Air Transport Ministry of Infrastructure and Transport Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



 one Area	
Gewog	Narang
Gewog code	717
Gewog area	12421.468
Zone	Area
Agriculture	1901.493
Cultural Heritage	8.154
Industrial	23.243
NCA	0
Rangeland	0
Rural Settlement	171.893
SFMA	6178.338
Urban	122.469

#### All areas are in Acres.



# **Zone Conflict**

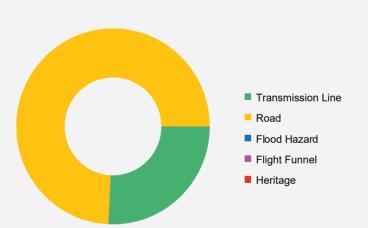
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	8.84	0	0	6.701	4.585	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	8.84	0.00	0	46.555	0	0	0	0
Urban	0	0	46.555	0	5.974	0	22.063	0
Culture	0	0	0	5.974	0	0	0	0
Industrial	6.701	0	0	0	0	0	0	0
Rural Settlement	4.585	0	0	22.063	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	26.049	0	0	0	0	1.457	0.479	0
Road	27.774	0	1.058	0	0	0	1.723	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	41.54
Road	119.508
Flood Hazard	0
Flight Funnel	0
Heritage	0



Mongar: Narang

BALAM

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Heritage Conservation Zone

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

Other Effective Area-based Conservation Measures

Significant Watershed Potential Recharge Area Water Sources •

Existing mines Airport • Helipad O

Hydro Power Plants A

Boundaries International --Dzongkhag - -Perennial

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k ==== Dzongkhag 25k

#### **Data Ownership**

Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Narang	593	670	1,263	88.5	17.2	323	3.5	

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

National Land Use Zoning 2023

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.





Heritage Village Urban Zone

**Nature Conservation Area** Protected Area

Hazard and Risk

Powerlines Flight Funnel

Key Biodiversity Area High Conservation Value

Payment for Ecosystem Services

Manufacturing and Production

Hydro Power Waterways -Basemap

Industrial 5k

Data Owner of the Map Content

Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

Gewog	Ngatshang
Gewog code	710
Gewog area	17765.925
Zone	Area
Agriculture	1676.502
Cultural Heritage	27.881
Industrial	0.62
NCA	0
Rangeland	0
Rural Settlement	119.784
SFMA	13344.746
Urban	40.404

# All areas are in Acres. Map Legend

Agriculture

Industrial

Rangeland

Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area

National Land Use Zoning
Agricultural Land

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Mongar: Ngatshang

Rural Settlement
Residential Land

Institutional Land
Sustainable Forest
Management Area

**Cultural Heritage** 

Forest Management Unit Community Forest

Religious Sites
Heritage Village
Heritage Conservation Zone
Urban

Urban Zone \_\_\_\_\_

Nature Conservation Area

Protected Area

Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone

Biological Corridor / Botanical Park Wetland Ramsar Site

Hazard and Risk
Rain Induced Flood Glacier Lake
Outburst Flood

Right Of Way / Buffer
Heritage Road

Powerlines
Flight Funnel

Other Effective Area-based Conservation Measures
Key Biodiversity Area

High Conservation Value Rangeland

Significant Watershed
Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Industrial

Manufacturing and Production

Manufacturing and Production
Service
Existing mines
Airport
Helipad

Hydro Power Plants ▲
Hydro Power Waterways —

Basemap

Boundaries
International — —

Roads for differen map scale

ignway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ongkhag 25k ===	Farm 5k

# **Zone Conflict**

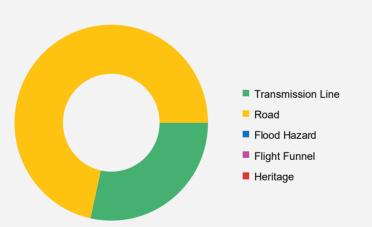
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	1,667.73	40.386	27.87	0.619	119.589	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	1,667.73	0.00	0	2.035	0	0	0	0
Urban	40.386	0	2.035	0	0	0	35.747	0
Culture	27.87	0	0	0	0	0	0	0
Industrial	0.619	0	0	0	0	0	0	0
Rural Settlement	119.589	0	0	35.747	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	60.938	0	5.343	1.562	0	0	1.911	0
Road	153.21	0	12.371	0	1.272	0.016	2.659	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	60.938
Road	153.21
Flood Hazard	0
Flight Funnel	0
Heritage	0



#### Data Ownership

Department of Water

Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	
Department of Energy Ministry of Energy and Natural Resources	
Department of Forests and Park Services Ministry of Energy and Natural Resources	

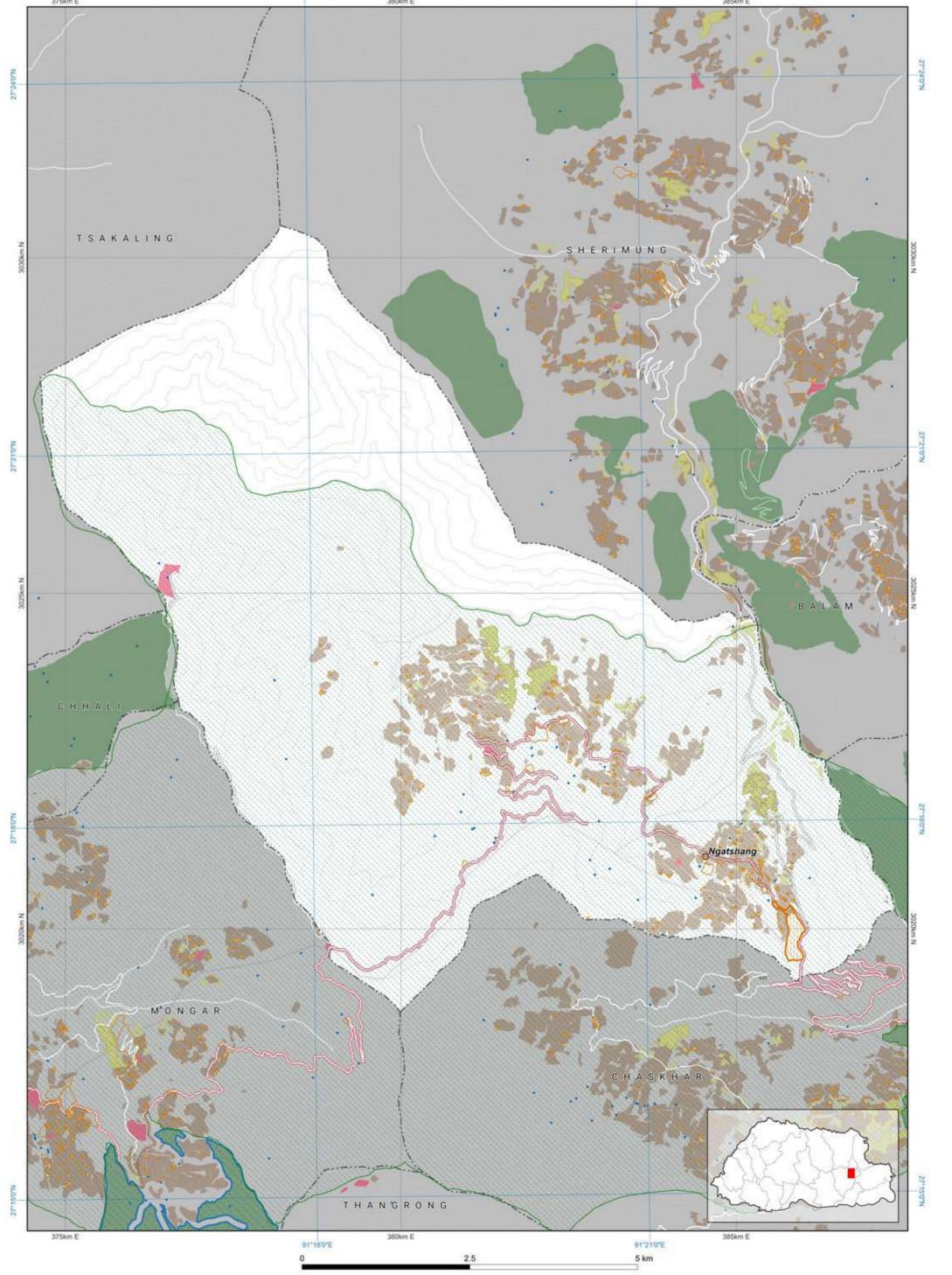
Ministry of Energy and Natural Resources

Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

# Demographic Table

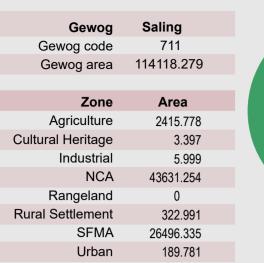
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Total Population Sex ratio Aging Index Number of household Mean Househ						Mean Household size
Gewog / Throm	Male	Female	Total				
Ngatshang	775	870	1,645	89.1	22.5	420	3.8
Yadi Town	360	370	730	97.3	6.1	70	3.4

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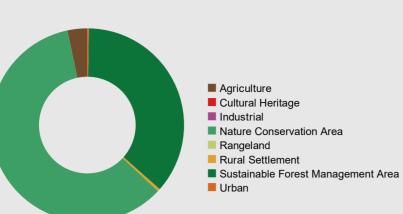


# Demographic Table

# Zone Area



#### All areas are in Acres.



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	161.383	911.57	38.466	1.821	5.058	96.751	0
NCA	161.383	0	120.39	25.671	0.142	0.3	28.386	0
Agriculture	911.57	120.39	0	2.593	0	0	0	0
Urban	38.466	25.671	2.593	0	0	0.05	93.601	0
Culture	1.821	0.142	0	0	0	0	0	0
Industrial	5.058	0.3	0	0.05	0	0	0	0
Rural Settlement	96.751	28.386	0	93.601	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	16.975	1.702	2.524	0.217	0	0	0.306	0
Road	0	384.072	18.738	0	0	0.158	4.619	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

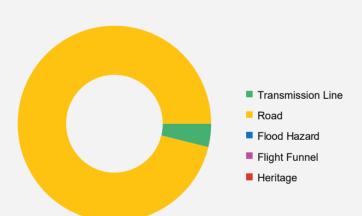
# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	23.193
Road	578.528
Flood Hazard	0
Flight Funnel	0
Heritage	0

440

952

116.4



233

# **Map Legend**

Mongar: Saling





#### Forest Management Unit Community Forest **Cultural Heritage** Religious Sites





#### Biological Corridor / Botanical Park Ramsar Site

#### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

#### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

#### Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A

#### Hydro Power Waterways -Basemap

#### Boundaries International --

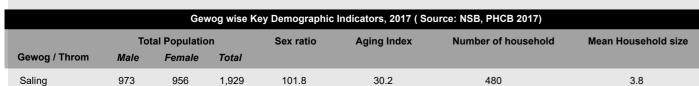
Dzongkhag -Perennial

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
Dzongkhag 50k ===	Industrial 5k =
Dzongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

#### Data Ownership

#### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

Ministry of Energy and Natural Resources



#### Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport 3.8 National Land Commission Secretariat 3.5

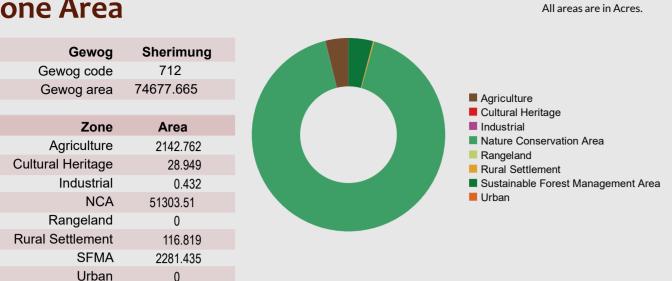
# BUMTHANG TSAMANG SHINGKHAR ZHEMGANG 350km E 91°0′0°E 370km E 91\*12'0"E 355km E 91\*3'0"E Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page. The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

National Land Use Zoning 2023

JARAY

LHUENTSE

91"12"0"E



# **Zone Conflict**

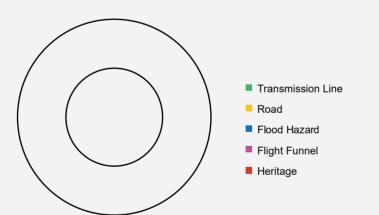
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	50.711	0.00	0	0	0	0	0
NCA	50.711	0	19.78	0	13.976	0.1	1.963	0
Agriculture	0	19.78	0	0	0	0	0	0
Urban	0		0	0	0	0	0	0
Culture	0	13.976	0	0	0	0	0	0
Industrial	0	0.1	0	0	0	0	0	0
Rural Settlement	0	1.963	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

#### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Mongar: Sherimung

91°18'0°E

MINJAY

LHUENTSE

SENKHAR

TSAKALING

#### Residential Land Institutional Land

Forest Management Unit Community Forest

#### **Cultural Heritage** Religious Sites Heritage Village

Heritage Conservation Zone Urban Zone

#### **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

#### Wetland Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

Significant Watershed Potential Recharge Area

#### Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines

#### Airport Helipad O

Hydro Power Plants A Hydro Power Waterways -

#### Basemap

Boundaries International --Dzongkhag - -

#### Gewog ---Perennial Terrain

#### Contour Roads for different map scales

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ≡

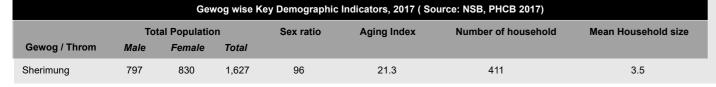
#### Dzongkhag 25k Farm 5k ====

#### **Data Ownership**

Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	

Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources

National Land Commission Secretariat



# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

NGATSHANG

91°18'0'E

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

91°27'0°E

YANGTSE

TASHI

YANGTSE

BUMDELING

TONGZHANG

JAMKHAR

TASHIGANG

National Land Use Zoning 2023

**Demographic Table** 

Z	one Area	
	Gewog code	<b>Silambi</b> 713
	Gewog area Zone	40089.179 <b>Area</b>
	Agriculture Cultural Heritage	2132.184 16.463
	Industrial NCA	0.05 0
	Rangeland Rural Settlement	0 135.738
	SFMA Urban	4810.727 0

# **Zone Conflict**

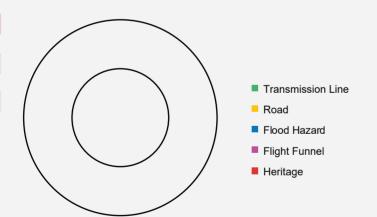
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0.01	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0.01	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	05144	NOA	A	Hab an	0.14	la desentatat	Rural	B
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**



#### Residential Land Institutional Land

Management Are	98
Forest Management Unit	
Community Forest	
0141.11	

#### Religious Sites Heritage Village Heritage Conservation Zone



Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Hazard and Risk

Rain Induced Flood Right Of Way / Buffer

Heritage \_\_\_\_

#### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

#### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production

Existing mines Airport • Helipad O

#### Hydro Power Plants A

Hydro Power Waterways -

#### Basemap Boundaries

International --Dzongkhag - -

Perennial

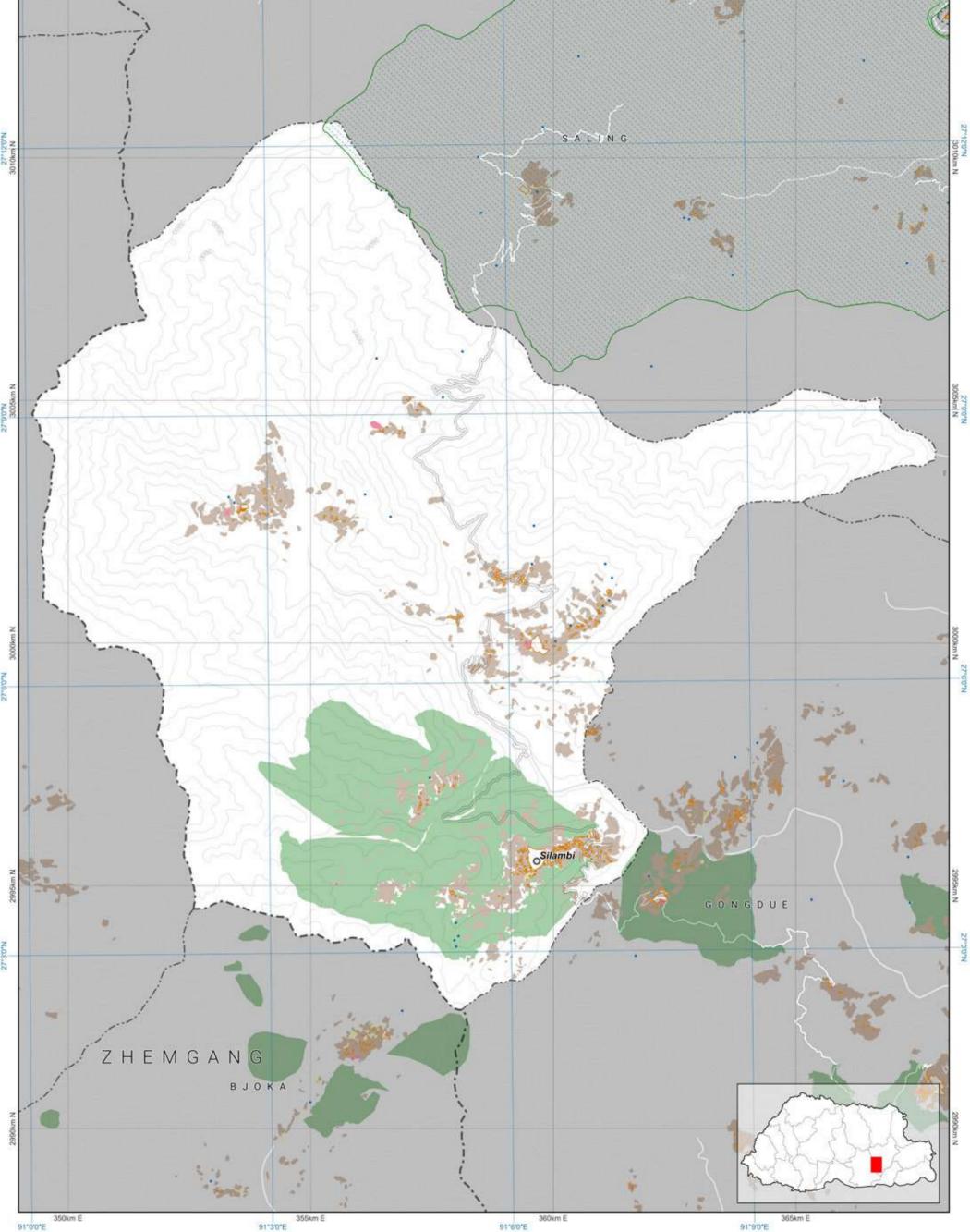
	map scare
ighway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k ==

#### Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017) 723 1,357 317 3.5

#### Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources National Land Commission Secretariat

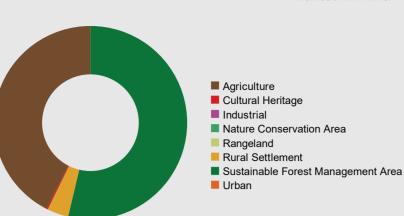
Data Owner of the Map Content

# National Land Use Zoning 2023 Mongar: Silambi



5	Zone Area	
	Gewog	Thangrong
	Gewog code	714
	Gewog area	16886.792
	Zone	Area
	Agriculture	1293.459
48	Cultural Heritage	7.204
	Industrial	0.3
	NCA	0.015
	Rangeland	0
	Rural Settlement	108.814
	SFMA	1635.311
	Urban	0
I	Zone Conf	lict

#### All areas are in Acres.



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0.015	0.00	0	0	0	0	0
NCA	0.015	0	0.00	0	0	0	0	0
Agriculture	0.00	0.00	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

#### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

#### Lease Land Residential Land Institutional Land

#### Forest Management Unit Community Forest

#### **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone



Core Zone Transistion Zone Buffer Zone Multi Use Zone

#### Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

# Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

#### Key Biodiversity Area High Conservation Value

#### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

#### Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

#### Basemap Boundaries

International --Dzongkhag - -

#### Perennial Terrain Contour

	map sca
Highway 300k	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k

#### Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k =

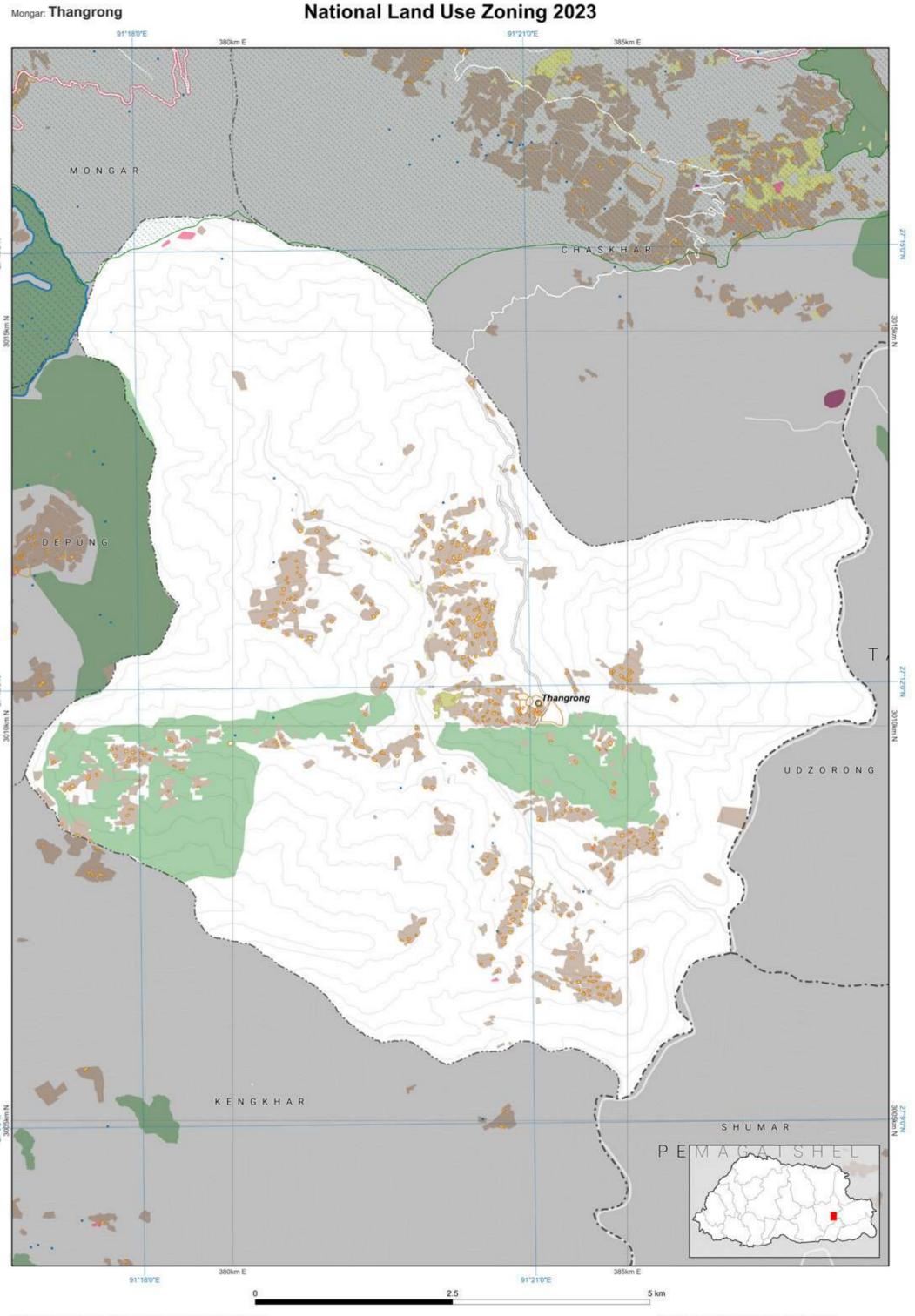
#### Data Ownership

Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	

National Land Commission Secretariat

#### **Demographic Table**

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Thangrong	717	889	1,606	80.7	28.9	402	3.6		



	<b>Tsakaling</b> 716 21583.177	■ Agriculture  Cultural Uniteres
Area		■ Cultural Heritage ■ Industrial
2087.992		■ Nature Conservation Area ■ Rangeland
13.201		Rural Settlement
0.05		Sustainable Forest Management Area
1180.828		Urban
	0	
ttlement	59.579	
SFMA	830.536	
an	0	

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	225.009	0.00	0	0	0	0	0
NCA	225.009	0	0.72	0	0.477	0	0	0
Agriculture	0.00	0.72	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.477	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

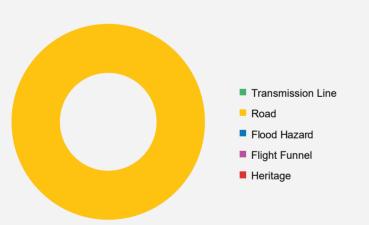
# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0.346	0	2.761	0	0	0	0.283	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	84.256
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 



# **Map Legend**

#### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing

Lease Land

#### Residential Land

Institutional Land Forest Management Unit

#### Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

#### Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

#### Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

Existing mines Airport Helipad O

Hydro Power Plants A

#### Hydro Power Waterways —

Basemap Boundaries

International --Dzongkhag - -

Perennial

#### Terrain Roads for different

Highway 300k ---Highway 50k === Highway 25k Highway 5k

Dzongkhag 50k = Dzongkhag 25k

Industrial 5k

#### Data Ownership

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport

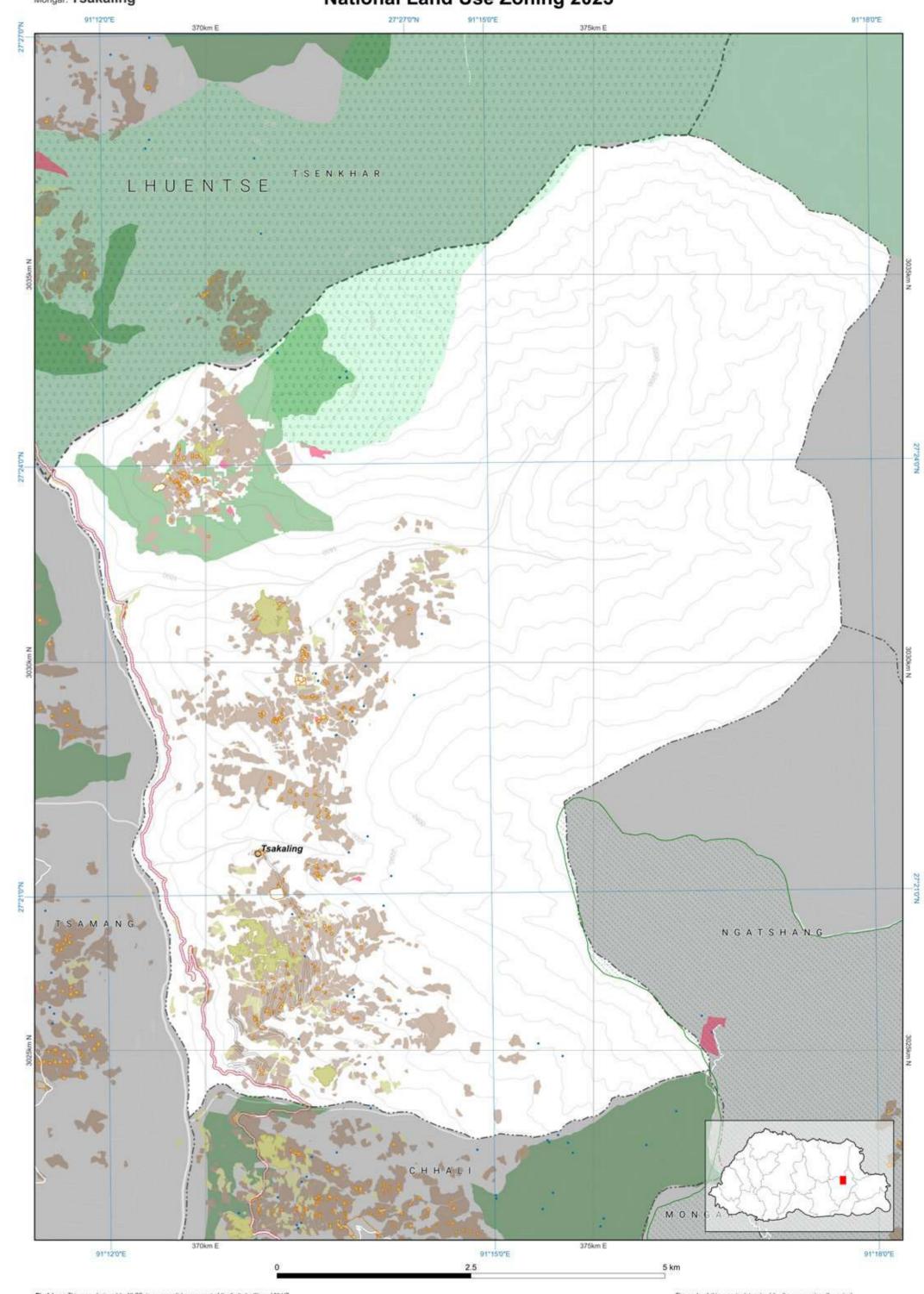
Data Owner of the Map Content

2.9

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

#### Mongar: Tsakaling

#### **National Land Use Zoning 2023**



337

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

7	one mea	
	Gewog	Tsamang
	Gewog code	715
	Gewog area	35751.06
	Zone	Area
	Agriculture	1516.762
	Cultural Heritage	6.469
	Industrial	0.099
	NCA	22676.542
	Rangeland	0
	Rural Settlement	90.603
	SFMA	1770.074
	Urban	0

# **Zone Conflict**

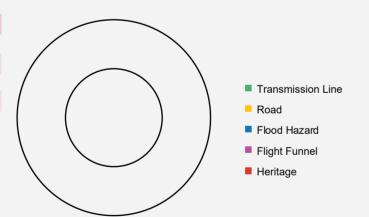
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	937.3	0.00	0	0	0	0	0
NCA	937.3	0	530.64	0	2.404	0.05	31.898	0
Agriculture	0.00	530.64	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	2.404	0	0	0	0	0	0
Industrial	0	0.05	0	0	0	0	0	0
Rural Settlement	0	31.898	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

Mongar: Tsamang

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Lease Land Residential Land Institutional Land

Forest Management Unit Community Forest

Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A Hydro Power Waterways —

> > Basemap Boundaries

Airport •

International --Dzongkhag - -Perennial

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

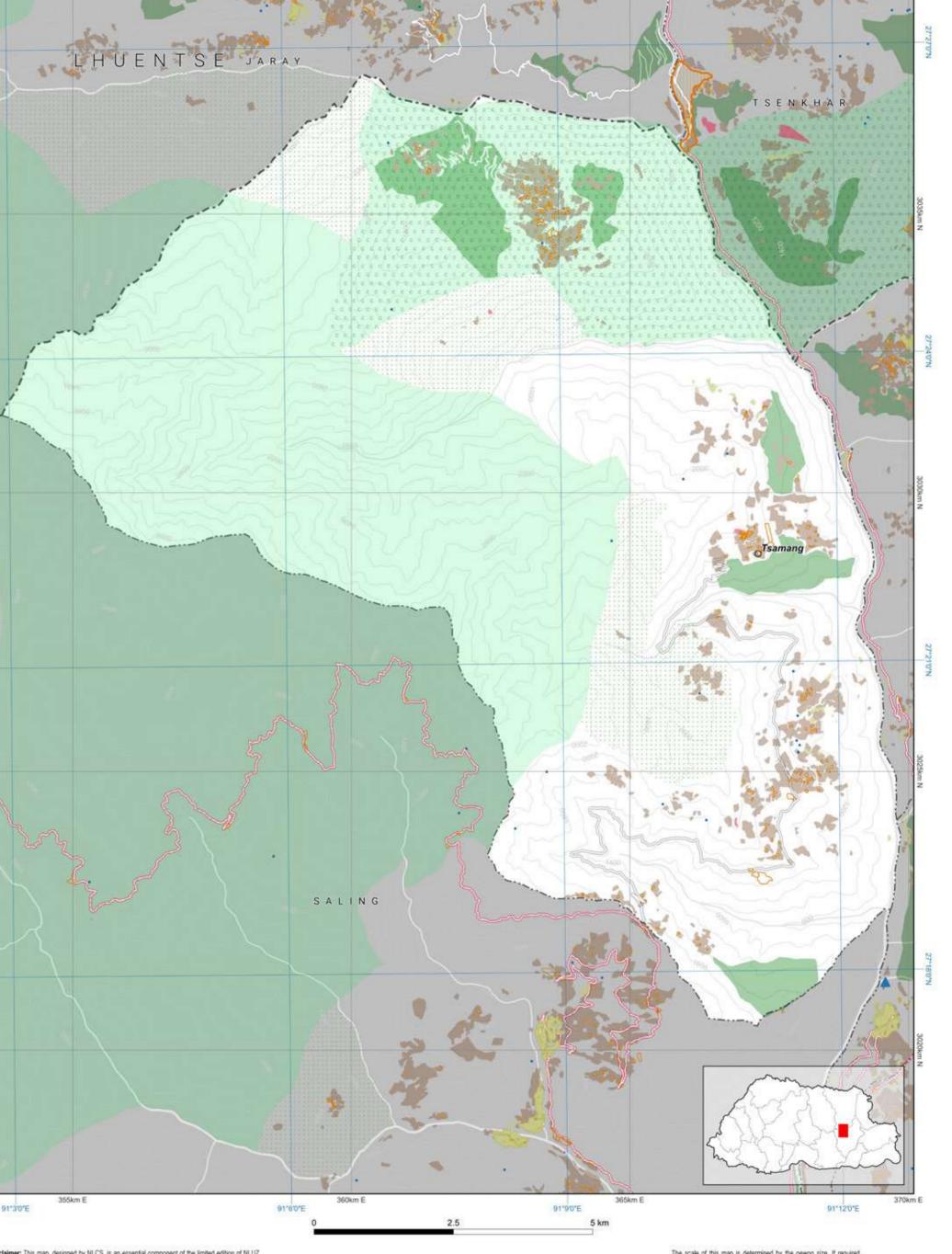
#### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

National Land Commission Secretariat

#### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population			Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total							
Tsamang	444	488	932	91	34	239	3.4			







All areas are in Acres.

Agriculture

Culture

Industrial

Urban

Rangeland

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area



Residential Land

Institutional Land

Forest Management Unit Community Forest

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone

**Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Rain Induced Flood

Hazard and Risk

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Manufacturing and Production

> Airport • Helipad O

Existing mines

Hydro Power Plants A Hydro Power Waterways -

> Basemap Boundaries International --

Dzongkhag - -Perennial

Terrain Roads for different

Highway 300k ---Highway 50k === Highway 25k Highway 5k

Dzongkhag 50k = Industrial 5k Dzongkhag 25k

**Zone Conflict** 

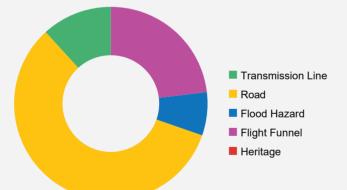
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	641.677	4909.37	40.656	69.667	173.237	1149.566	0
NCA	641.677	0	108.38	0	11.578	4.312	45.341	0
Agriculture	4909.37	108.38	0	2.261	11.204	2.258	0	0
Urban	40.656	0	2.261	0	2.916	0.107	1.979	0
Culture	69.667	11.578	11.204	2.916	0	0	36.862	0
Industrial	173.237	4.312	2.258	0.107	0	0	0.211	0
Rural Settlement	1149.566	45.341	0	1.979	36.862	0.211	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	164.73	0	52.366	0	0	0.237	3.54	0
Road	522.077	0	112.385	0	0.244	2.63	34.375	0
Flood Hazard	70.970	0	36.078	0	0.031	1.159	8.614	0
Flight Funnel	168.499	0	219.241	3.159	0.287	84.95	23.663	0
Heritage	0	0	0	0	0	0	0	0

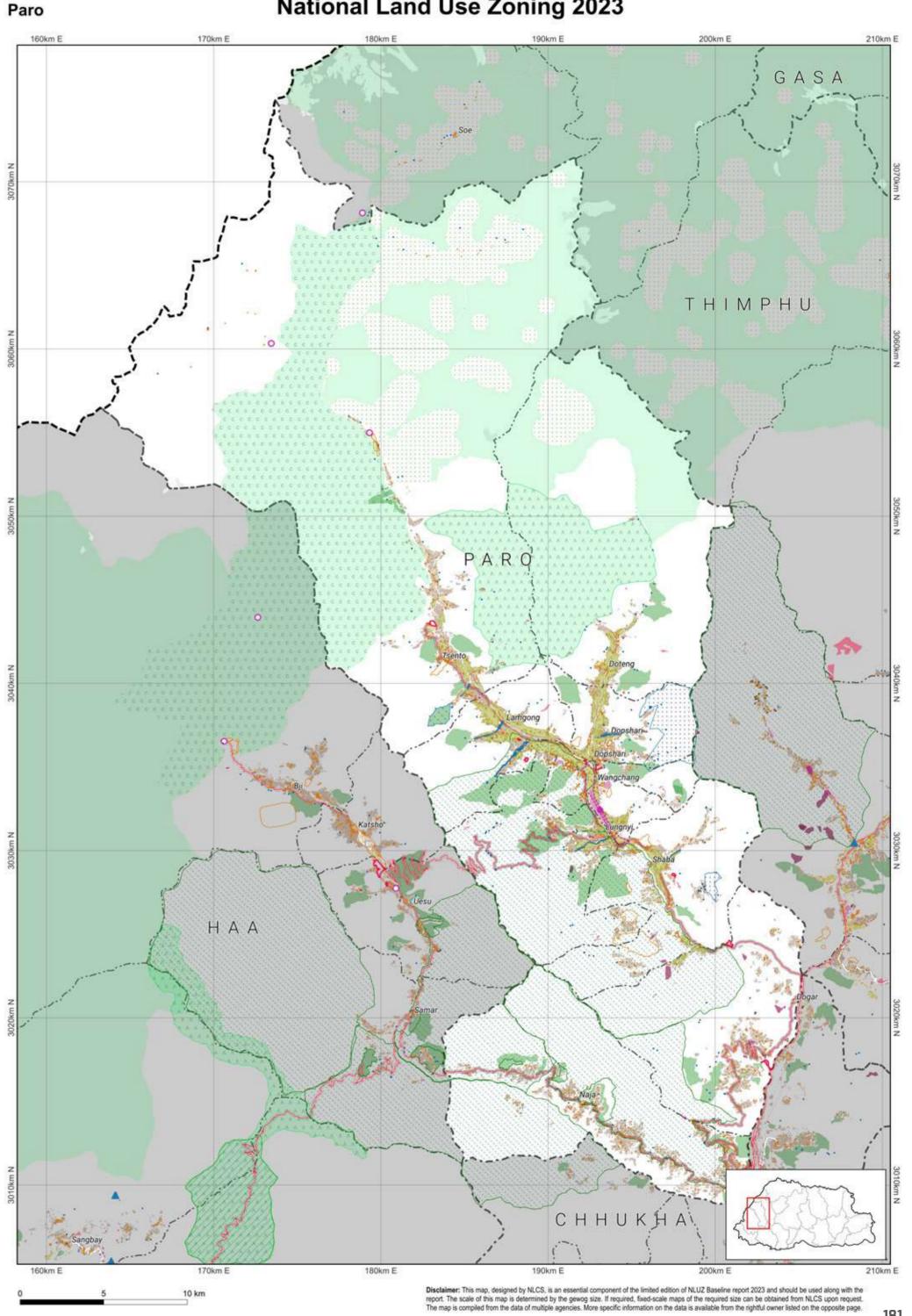
# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	213.689
Road	1051.015
Flood Hazard	131.212
Flight Funnel	419.296
Heritage	0



# **Demographic Table**

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size				
Dzongkhag	Male	Female	Total								
Paro	1,165	1,153	2,318	101.0	34.0	432	4.1				



Z	one Area	
	<b>Gewog</b> Gewog code	<b>Dogar</b> 801
	Gewog area	26190.704
	Zone	Area
	Agriculture	1818.395
	Cultural Heritage	39.316
	Industrial	151.787
	NCA	0
	Rangeland	0
	Rural Settlement	97.873
	SFMA	11536.449
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	196.92	0	0.436	64.048	8.758	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	196.92	0	0	0	0.265	1.853	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0.436	0	0.265	0	0	0	0	0
Industrial	64.048	0	1.853	0	0	0	0	0
Rural Settlement	8.758	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	8.860	0	0	0	0.081	0
Road	20.969	0	24.311	0	0.146	0.551	3.859	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

Transmission Line

Flood Hazard

Flight Funnel Heritage

Road

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	65.528
Road	247.001
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**









Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_ Flight Funnel

#### Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

# Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways —

#### Basemap

Boundaries International --

Dzongkhag - -Perennial

# Terrain

	mup scures
Highway 300k ——	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k
zongkhag 25k ===	Farm 5k

#### **Data Ownership**

Data Owner of the Map Content

Dzongkhag 5k

_	
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Geology and Mines Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Culture and Dzongkha Development Ministry of Home Affairs

Ministry of Infrastructure and Transport National Land Commission Secretariat

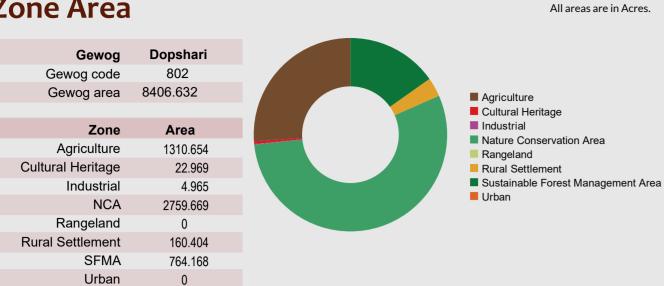
#### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size					
Gewog / Throm	Male	Female	Total									
Dogar	1,116	1,211	2,327	92.2	30.7	495	4.3					

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

NAJA

# National Land Use Zoning 2023 Paro: Dogar THIMPHU MEWANG



# **Zone Conflict**

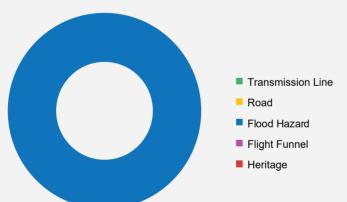
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	91.66	0.00	0	10.245	0	0	0
NCA	91.66	0	16.76	0	9.838	4.013	0.696	0
Agriculture	0.00	16.76	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	10.245	9.838	0	0	0	0	0	0
Industrial	0	4.013	0	0	0	0	0	0
Rural Settlement	0	0.696	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	8.779	0	0	0	8.779	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone Area
Transmission Line 0
Road 0
Flood Hazard 27.380
Flight Funnel 0
Heritage 0



# **Map Legend**

# **National Land Use Zoning**



# Residential Land

#### Institutional Land Forest Management Unit

#### Community Forest **Cultural Heritage**



#### Urban Zone **Nature Conservation Area** Protected Area

Core Zone	
Transistion Zone	
Buffer Zone	

#### Multi Use Zone Biological Corridor / Botanical Park

#### Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

#### Key Biodiversity Area High Conservation Value Rangeland

#### Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

#### Industrial Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

#### Hydro Power Waterways -

#### Basemap Boundaries

International --Dzongkhag - -

Perennial Terrain

#### Contour Roads for different

Thromde 50k	Highway 300k ===
Thromde 25k	Highway 50k ===
Thromde 5k	Highway 25k ====
Access 5k	Highway 5k
lndustrial 5k ≡	Dzongkhag 50k ===
Farm 5k =	Dzongkhag 25k ===

# Data Ownership

# Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock

Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Geology and Mines

Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources

Department of Human Settlement Ministry of Infrastructure and Transport National Land Commission Secretariat

#### **Demographic Table**



Disclaimer: The demographic statistics provided in the table above for Paro town encompass not only the area falling under the Dopshari gewog but also include the demographic statistics of the town area falling under the Lungnyi, Hungrel and Wangchang gewog. The same statistics for Paro town can be found under the Lungnyi, Hungrel and Wangchang gewog.

# National Land Use Zoning 2023 185

27°27'0'N

Gewog	Doteng
Gewog code	803
Gewog area	47989.04
Zone	Area
Agriculture	823.053
Cultural Heritage	27.205
Industrial	0.15
NCA	16413.679
Rangeland	0
Rural Settlement	85.469
SFMA	927.264
Urban	0

# **Zone Conflict**

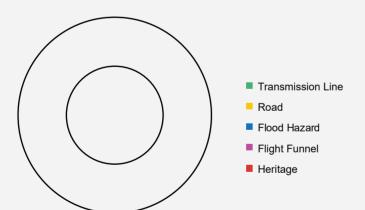
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0.523	0	0	0	0	0	0
NCA	0.523	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Paro: Doteng

TSENTO

National Land Use Zoning

Institutional Land

Heritage Village

Multi Use Zone Biological Corridor / Botanical Park

Right Of Way / Buffer Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

Payment for Ecosystem Services Water Sources •

Airport Helipad O

Boundaries Dzongkhag - -Gewog ---Perennial = Terrain

Thromde 5k

#### **Data Ownership**

Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Centre for Hydrology and Meteorology
National Land Commission Secretariat

# All areas are in Acres.



Forest Management Unit Community Forest

Religious Sites Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone

Hazard and Risk Rain Induced Flood

Heritage \_\_\_\_

High Conservation Value

Significant Watershed Potential Recharge Area

Manufacturing and Production Existing mines

> Hydro Power Plants A Hydro Power Waterways —

Basemap

International --

Highway 300k —— Highway 50k === Highway 25k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k Farm 5k

#### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Doteng	651	652	1,303	99.8	32.7	290	4.2			

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

LAMGONG

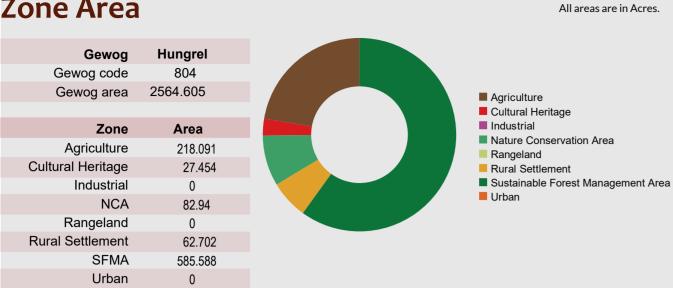
The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

THIMPHU

NARO

National Land Use Zoning 2023

MEWANG



# **Zone Conflict**

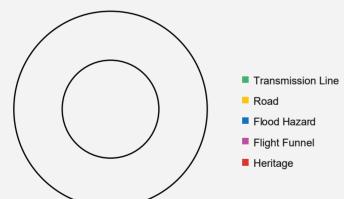
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	16.22	0.00	0	16.861	0	0	0
NCA	16.22	0	0.00	0	0	0	0	0
Agriculture	0.00	0	0	0	0.159	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	16.861	0	0.159	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

							Rural	
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

#### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land



Forest Management Unit







Key Biodiversity Area	111
h Conservation Value	6 -
Range	land





#### Helipad O Hydro Power Plants A Hydro Power Waterways -

#### Basemap Boundaries International --Dzongkhag -

Main river	_
Perennial — <b>Terrain</b>	
Contour	
Doodo for diffor	

	Roads for different map scale
Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ===	Farm 5k ==

# **Data Ownership**

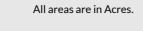
	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Culture and Dzongkha Developmer Ministry of Home Affairs
	National Land Commission Secretariat

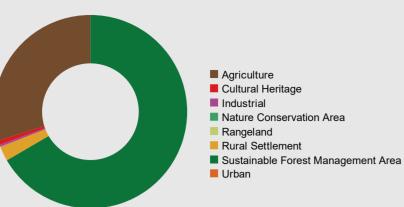
# **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Hungrel	266	70	336	380.0	25.5	45	3
Paro Town	5,828	5,620	11,448	103.7	17.2	2,642	3.8

Disclaimer: The demographic statistics provided in the table above for Paro town encompass not only the area falling under the Hungrel gewog but also include the demographic statistics of the town area falling under the Lungnyi, Dopshari and Wangchang gewog. The same statistics for Paro town can be found under the Lungnyi, Dopshari and Wangchang gewog.

(5)	<b>Zone Area</b>		
	Gewog	Lamgong	
	Gewog code	805	
	Gewog area	12118.537	
AR	Zone	Area	
	Agriculture	1654.06	
	Cultural Heritage	40.233	
	Industrial	19.658	
	NCA	0	
	Rangeland	0	
	Rural Settlement	137.57	
	SFMA	3691.762	
	Urban	0	





# **Zone Conflict**

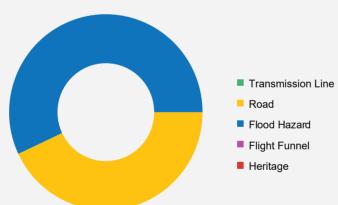
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	414.44	0	15.781	11.571	28.184	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	414.44	0	0	0	2.398	0	0	0
Urban	0	0	0	0		0	0	0
Culture	15.781	0	2.398	0		0	0	0
Industrial	11.571	0	0	0		0	0	0
Rural Settlement	28.184	0	0	0		0	0	0
Rangeland	0	0	0	0		0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	10.248	0	0	0.244	1.686	0
Flood Hazard	32.509	0	14.747	0	0	1.159	4.195	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	34.939
Flood Hazard	46.307
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Residential Land Institutional Land

Forest Management Unit Community Forest

**Cultural Heritage** 

#### Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone Nature Conservation Area Protected Area

#### Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site

#### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

#### High Conservation Value Tsamdro

Significant Watershed Potential Recharge Area

#### Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines

#### Airport Helipad O Hydro Power Plants A

Hydro Power Waterways —

#### Basemap Boundaries

International --Dzongkhag - -Gewog ---

#### Perennial Terrain Contour

#### Roads for different map scales

riigiiway oook	THIOHIGE SUK
Highway 50k ====	Thromde 25k =
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
Dzongkhag 50k ===	Industrial 5k =
Dzongkhag 25k ===	Farm 5k =

# **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Developm Ministry of Home Affairs

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

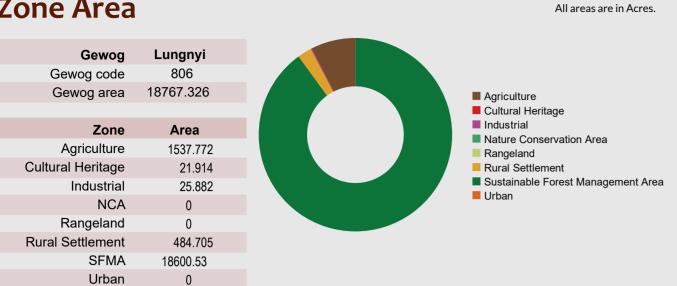
Department of Human Settlement Ministry of Infrastructure and Transport

# 27°27'0'N 27°27'0"N 191

National Land Use Zoning 2023

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Total Population Sex ratio Aging Index Number of household Mean Househ								
Gewog / Throm	Male	Female	Total						
Lamgong	2,972	2,874	5,846	103.4	27.9	1,389	3.8		



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	1,475.52	0	21.914	21.215	463.871	0
NCA	0	0	0	0	0	0	0	0
Agriculture	1,475.52	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	21.914	0	0	0	0	0	0	0
Industrial	21.215	0	0	0	0	0	0	0
Rural Settlement	463.871	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	56.99	0	10.649	0	0	0.01	1.425	0
Road	257.372	0	11.285	0	0.083	0.87	11.605	0
Flood Hazard	38.461	0	7.591	0	0.031	0	1.906	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	56.99
Road	0
Flood Hazard	40.270
Flight Funnel	7.352
•	0
riomago	· ·
	Transmission Line Road

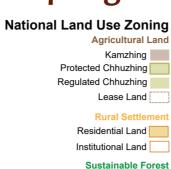
#### **Demographic Table**

	Gev	vog wise Ke	ey Demographic	Indicators, 2017 ( So	ource: NSB, PHCB 2017)	
Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Male	Female	Total				
2,453	2,274	4,727	107.9	23.2	1,046	3.9
5,828	5,620	11,448	103.7	17.2	2,642	3.8
	<b>Male</b> 2,453	Total Population Male Female 2,453 2,274	Total Population  Male Female Total  2,453 2,274 4,727	Total Population         Sex ratio           Male         Female         Total           2,453         2,274         4,727         107.9	Total Population Sex ratio Aging Index  Male Female Total  2,453 2,274 4,727 107.9 23.2	Male         Female         Total           2,453         2,274         4,727         107.9         23.2         1,046

#### Disclaimer: The demographic statistics provided in the table above for Paro town encompass not only the area falling under the Lungnyi gewog but also include the demographic statistics of the town area falling under the Hungrel, Dopshari and Wangchang gewog. The same statistics for Paro town can be found under the Hungrel, Dopshari and Wangchang gewog.

# **Map Legend**

Paro: Lungnyi





Forest Management Unit





Heritage \_\_\_\_ Flight Funnel

#### Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

#### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

#### Hydro Power Waterways -Basemap

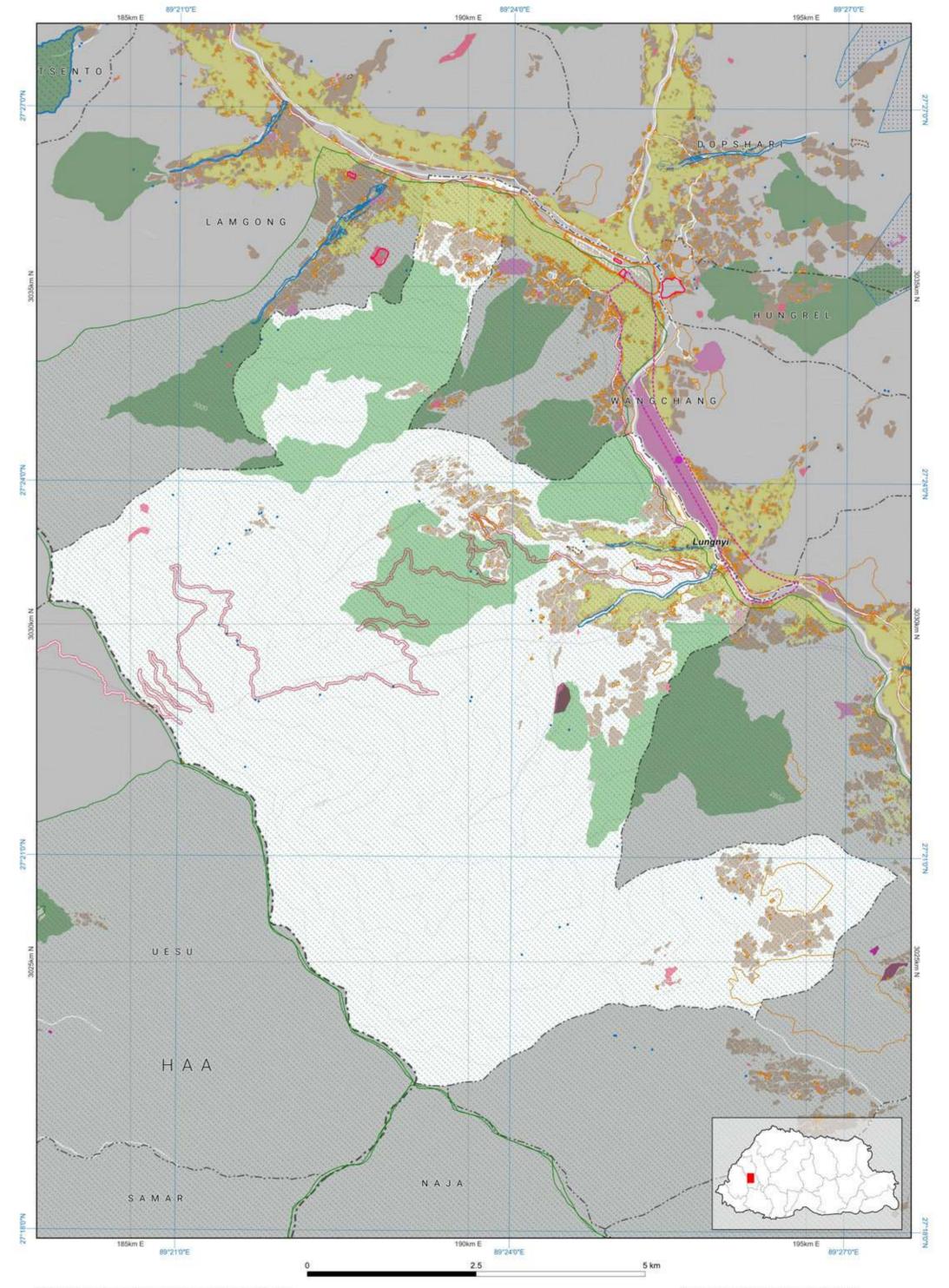
Boundaries International --Dzongkhag - -Perennial

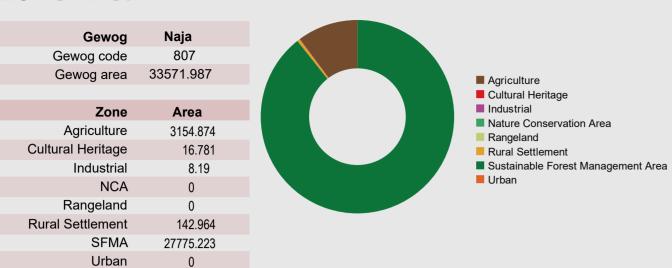
# Terrain Contour

	map scale
Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k ==
Dzongkhag 5k	

#### **Data Ownership**







# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	1,541.52	0	11.386	8.09	44.966	0
NCA	0	0	0	0	0	0	0	0
Agriculture	1,541.52	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	11.386	0	0	0	0	0	0	0
Industrial	8.09	0	0	0	0	0	0	0
Rural Settlement	44.966	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	222.382	0	42.000	0	0	0	6.728	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

	<b>Buffer Zone</b>	Area
Tra	ansmission Line	0
	Road	338.331
	Flood Hazard	0
	Flight Funnel	0
	Heritage	0



# **Map Legend**

All areas are in Acres.

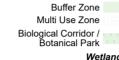
#### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Residential Land Institutional Land

#### Forest Management Unit Community Forest **Cultural Heritage**







#### Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

#### Key Biodiversity Area High Conservation Value

#### Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial

#### Manufacturing and Production Existing mines Airport

Helipad O Hydro Power Plants A Hydro Power Waterways -

# Basemap

Boundaries International --Dzongkhag - -

#### Perennial Terrain

#### Roads for different

I hromde 50k	nigriway 300k
Thromde 25k	Highway 50k
Thromde 5k	Highway 25k
Access 5k	Highway 5k
Industrial 5k	zongkhag 50k
Farm 5k	zongkhag 25k

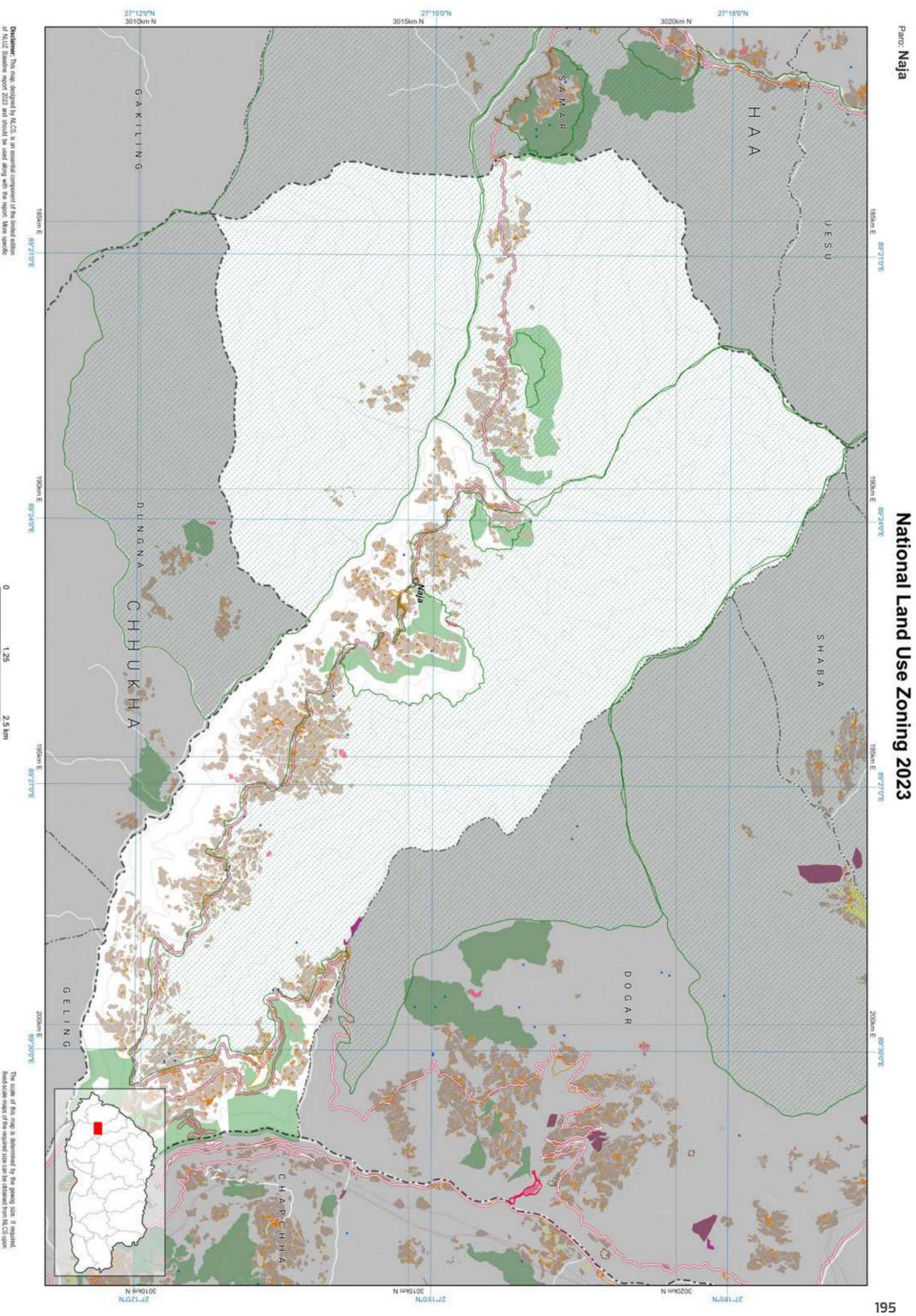
#### **Data Ownership**

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Naja	1,664	1,623	3,287	102.5	31.9	735	4.3	
Beteykha Town	230	235	465	97.9	6.7	59	3.4	

outa Owner of the map content
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat



Gewog	Shaba
Gewog code	808
Gewog area	19864.318
Zone	Area
Agriculture	1843.642
Cultural Heritage	43.279
Industrial	50.857
NCA	249.674
Rangeland	0
Rural Settlement	676.229
SFMA	8490.212
Urban	0

# **Zone Conflict**

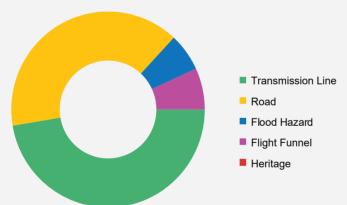
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	792.11	0	2.03	39.022	499.237	0
NCA	0	0	10.96	0	1.608	0	0	0
Agriculture	792.11	10.96	0	0	7.44	0.405	0	0
Urban	0	0	0	0	0	0	0	0
Culture	2.03	1.608	7.44	0	0	0	0.281	0
Industrial	39.022	0	0.405	0	0	0	0.211	0
Rural Settlement	499.237	0	0	0	0.281	0.211	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	76.863	0	30.629	0	0	0.227	0.936	0
Road	0.308	0	9.001	0	0	0.48	2.526	0
Flood Hazard	0	0	2.790	0	0	0	1.166	0
Flight Funnel	0	0	0	0	0	0	0.014	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	79.585
Road	66.487
Flood Hazard	10.522
Flight Funnel	11.493
Heritage	0



# **Map Legend**

Paro: Shaba



All areas are in Acres.

Regulated Chhuzhing Lease Land Residential Land

#### Forest Management Unit Community Forest

Religious Sites Heritage Village Heritage Conservation Zone

#### Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood Right Of Way / Buffer

Heritage \_\_\_\_

#### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A

#### Hydro Power Waterways —

Airport •

Boundaries International --

Basemap

Dzongkhag - -

	Roads for differen map scales
Highway 300k ====	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ====	Industrial 5k

#### Data Ownership

Dzongkhag 25k =

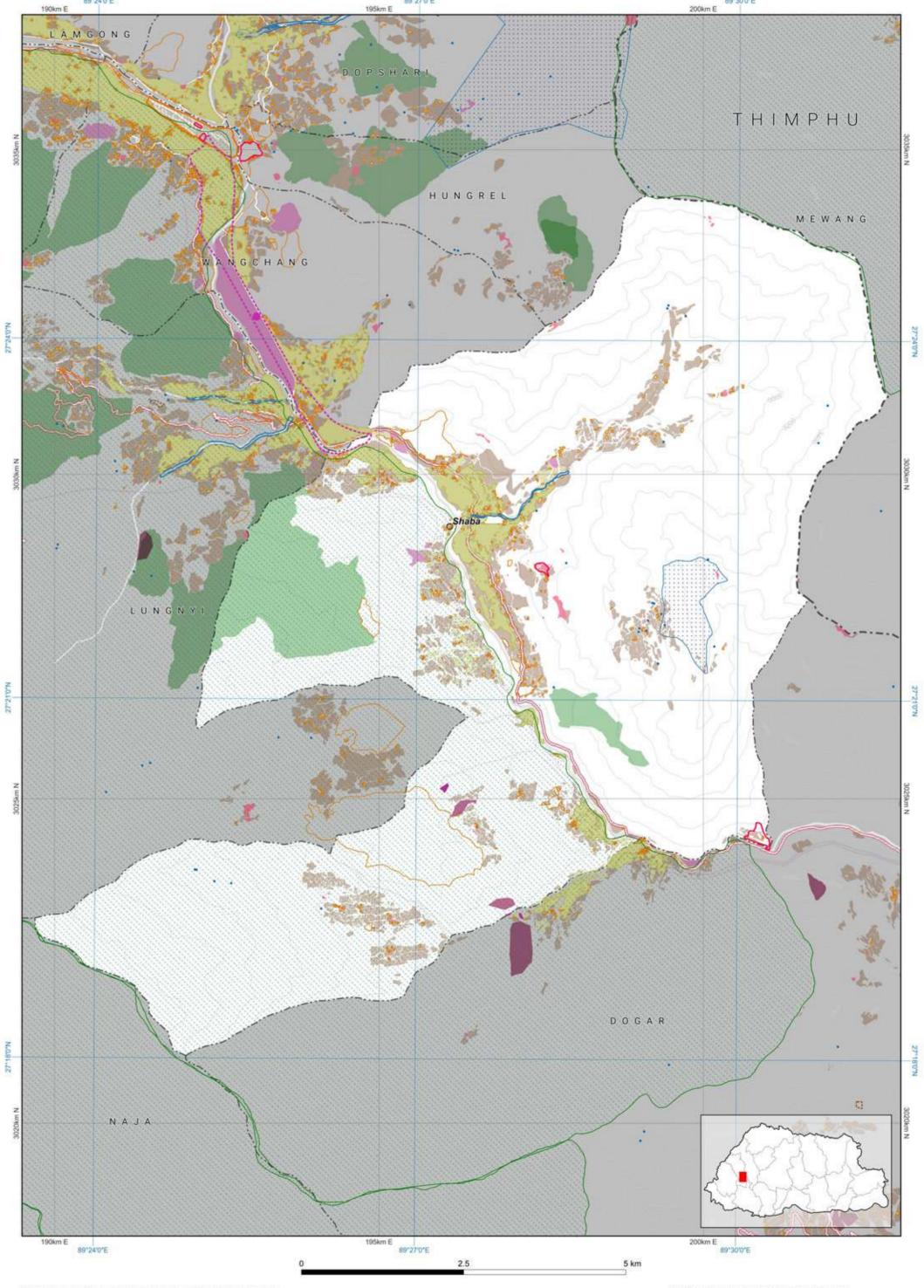
Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	
Department of Energy Ministry of Energy and Natural Resources	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Geology and Mines Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
Department of Culture and Dzongkha Development Ministry of Home Affairs	nt
Department of Air Transport Ministry of Infrastructure and Transport	

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Shaba	3,258	2,683	5,941	121.4	22.2	1,269	3.8	

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ. Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.



# SENTO

### **Zone Area**

Gewog	Tsento
Gewog code	810
Gewog area	143110.58
Zone	Area
Agriculture	2131.567
Cultural Heritage	37.834
Industrial	20.985
NCA	85513.617
Rangeland	0
Rural Settlement	372.948
SFMA	1265.692
Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	533.274	0.00	0	0	0	0	0
NCA	533.274	0	80.66	0	0.133	0.3	44.645	0
Agriculture	0	80.66	0	0	0.943	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.133	0.943	0	0	0	19.72	0
Industrial	0	0.3	0	0	0	0	0	0
Rural Settlement	0	44.645	0	0	19.72	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	1.554	0	9.455	0	0.015	0.361	2.949	0
Flood Hazard	0	0	2.171	0	0	0	0.02	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

_	
Buffer Zone	Area
Transmission Line	0
Road	49.704
Flood Hazard	6.733
Flight Funnel	0
Heritage	0

# Transmission LineRoadFlood Hazard

Flight FunnelHeritage

# **Map Legend**

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

All areas are in Acres.

Rural Settlement
Residential Land
Institutional Land

Lease Land

Management Area
Forest Management Unit
Community Forest

Religious Sites Heritage Village Heritage Conservation Zone Urban Urban Zone

Nature Conservation Area
Protected Area
Core Zone
Transistion Zone
Buffer Zone

Multi Use Zone
Biological Corridor /
Botanical Park

Wetland
Ramsar Site

Rain Induced Flood
Glacier Lake
Outburst Flood
Right Of Way / Buffer
Heritage
Road

Powerlines
Flight Funnel
Other Effective Area-based
Conservation Measures

Key Biodiversity Area
High Conservation Value

Significant Watershed

Rangeland

Potential Recharge Area
Payment for Ecosystem Services
Water Sources
Industrial

Industrial
Manufacturing and Production
Service
Existing mines
Airport

Helipad O
Hydro Power Plants 
Hydro Power Waterways

Basemap

Boundaries

International = = Dzongkhag = = Gewog = = Rivers
Main river Perennial = Terrain

Terrain
Contour

Roads for differer

Highway 300k Thromde 50k Highway 50k Thromde 25k Thromde 55k Highway 25k Access 5k Dzongkhag 50k Industrial 5k Dzongkhag 55k Dzongkhag 55k Dzongkhag 56k

# Data Ownership Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Air Transport Ministry of Infrastructure and Transport
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
National Centre for Hydrology and Meteorology
National Land Commission Secretariat

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population Sex ratio Aging Index Number of household Mean Household size							
Gewog / Throm	Male	Female	Total				
Tsento	3,122	2,824	5,946	110.6	21.6	1,206	4

# National Land Use Zoning 2023 Paro: Tsento DOTENG BJI HAA

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page. 190km E 89\*24'0"E



#### All areas are in Acres.

# **National Land Use Zoning**

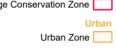


# Lease Land

#### Residential Land Institutional Land

#### Forest Management Unit Community Forest **Cultural Heritage**





#### **Nature Conservation Area** Protected Area Core Zone Transistion Zone

#### Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

#### Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood
ht Of Way / Buffer
Heritage
Dood

#### Flight Funnel Other Effective Area-based Conservation Measures

#### Key Biodiversity Area High Conservation Value

#### Tsamdro Significant Watershed otential Recharge Area

	ayment for Ecosystem Services
•	Water Sources

#### Manufacturing and Production Existing mines

#### Airport Helipad O

#### Hydro Power Plants A Hydro Power Waterways -

#### Basemap Boundaries

#### International --Dzongkhag - -

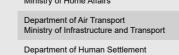
#### Perennial Terrain

Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
Dzongkhag 50k ===	Industrial 5k =
Dzongkhag 25k ===	Farm 5k ≡

#### Data Ownership Data Owner of the Map Content



Department of Culture and Dzongkha Development



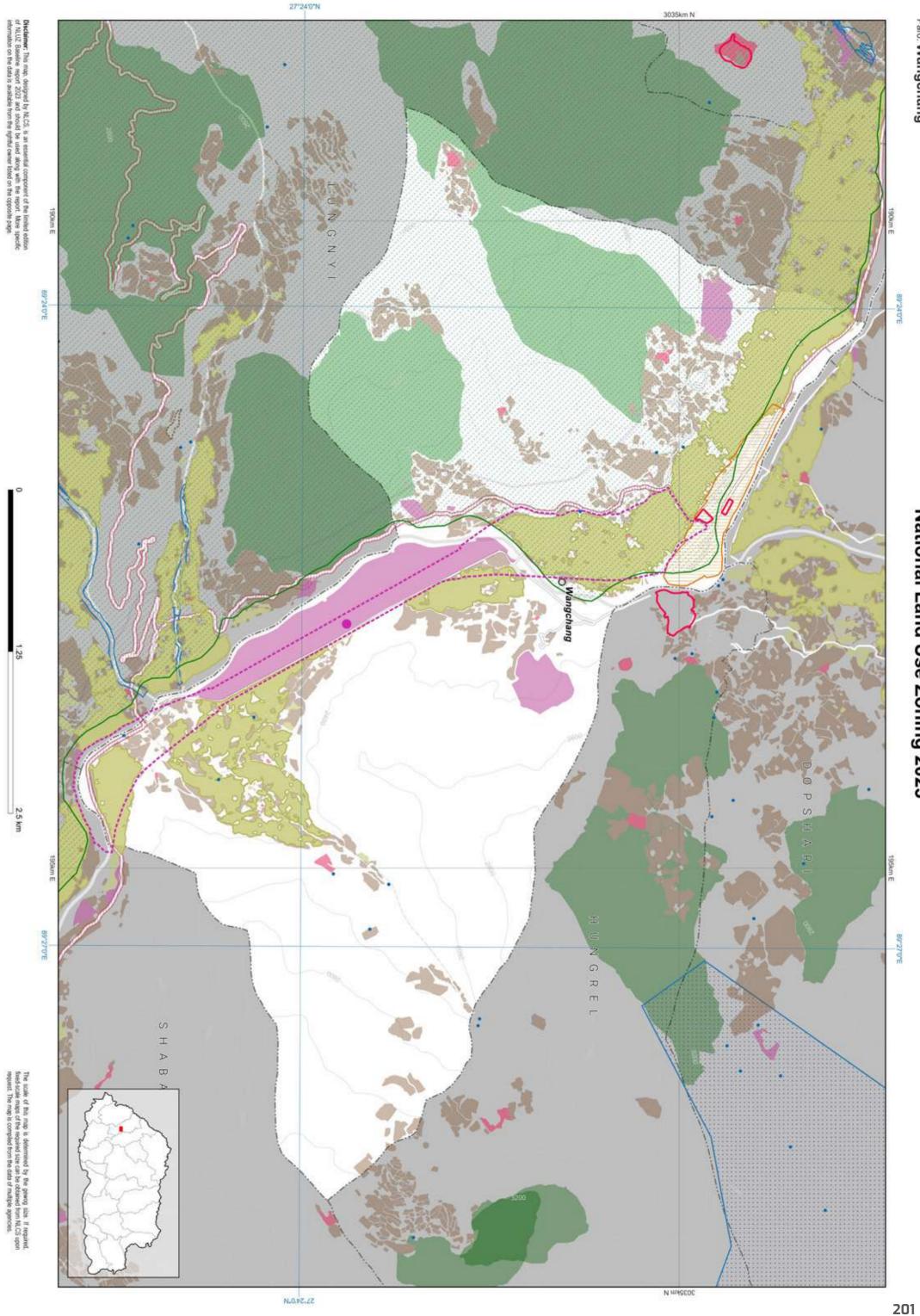
Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population Sex ratio Aging Index Number of household Mean Household size							
Gewog / Throm	Male	Female	Total				
Wangchang	758	599	1,357	126.5	46.2	322	3.5
Paro Town	5,828	5,620	11,448	103.7	17.2	2,642	3.8



Disclaimer: The demographic statistics provided in the table above for Paro town encompass not only the area falling under the Wangchang gewog but also include the demographic statistics of the town area falling under the Lungnyi, Hungrel and Dopshari gewog. The same statistics for Paro town can be found under the Lungnyi, Hungrel and Dopshari gewog.



# **Map Legend**

# Agriculture

#### Cultural Heritage Industrial Nature Conservation Area

- Rangeland
- Rural Settlement ■ Sustainable Forest Management Area

# **Zone Conflict**

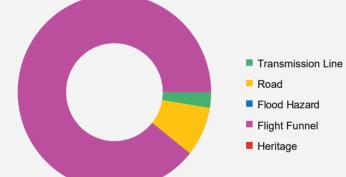
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	488.86	40.656	7.875	29.291	104.55	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	488.86	0	0	2.261	0	0	0	0
Urban	40.656	0	2.261	0	2.916	0.107	1.979	0
Culture	7.875	0	0	2.916	0	0	0	0
Industrial	29.291	0	0	0.107	0	0	0	0
Rural Settlement	104.55	0	0	1.979	0	0	0	0
Rangeland	0	0	0		0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	11.585	0	2.227	0	0	0	1.099	0
Road	19.492	0	6.084	0	0	0.124	5.021	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	168.499	0	219.241	3.159	0.287	84.95	23.65	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	11.585
Road	36.591
Flood Hazard	0
Flight Funnel	400.451
Heritage	0



Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population Sex ratio Aging Index Number of household Mean Household size							
Gewog / Throm	Male	Female	Total				
Wangchang	758	599	1,357	126.5	46.2	322	3.5
Paro Town	5,828	5,620	11,448	103.7	17.2	2,642	3.8
D: 1.							

200

**Zone Conflict** 

SFMA

Agriculture

Culture

**RoW / Buffer Conflict** 

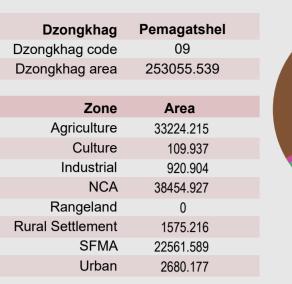
**Buffer Zone** 

Flood Hazard

Flight Funnel

Heritage

Transmission Line



759.272

0.009

7.764

Area

635.789

1187.524

2.562

402.703

236.38

# **Map Legend**

All areas are in Acres.

Agriculture

Culture

Industrial

Urban

Rangeland

Rural Settlement

0.17

7.764

0.009

236.38

Rural

10.292

Transmission Line

Flood Hazard

Flight Funnel Heritage

Road

69.964

■ Nature Conservation Area

■ Sustainable Forest Management Area





#### Residential Land Institutional Land

#### Forest Management Unit Community Forest Cultural Heritage





#### Protected Area Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park

#### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

#### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

#### Industria Manufacturing and Production Existing mines

Airport • Helipad O

#### Hydro Power Plants A Hydro Power Waterways —

#### Basemap Boundaries International --

Dzongkhag - -

Perennial Terrain

#### Roads for different map scales

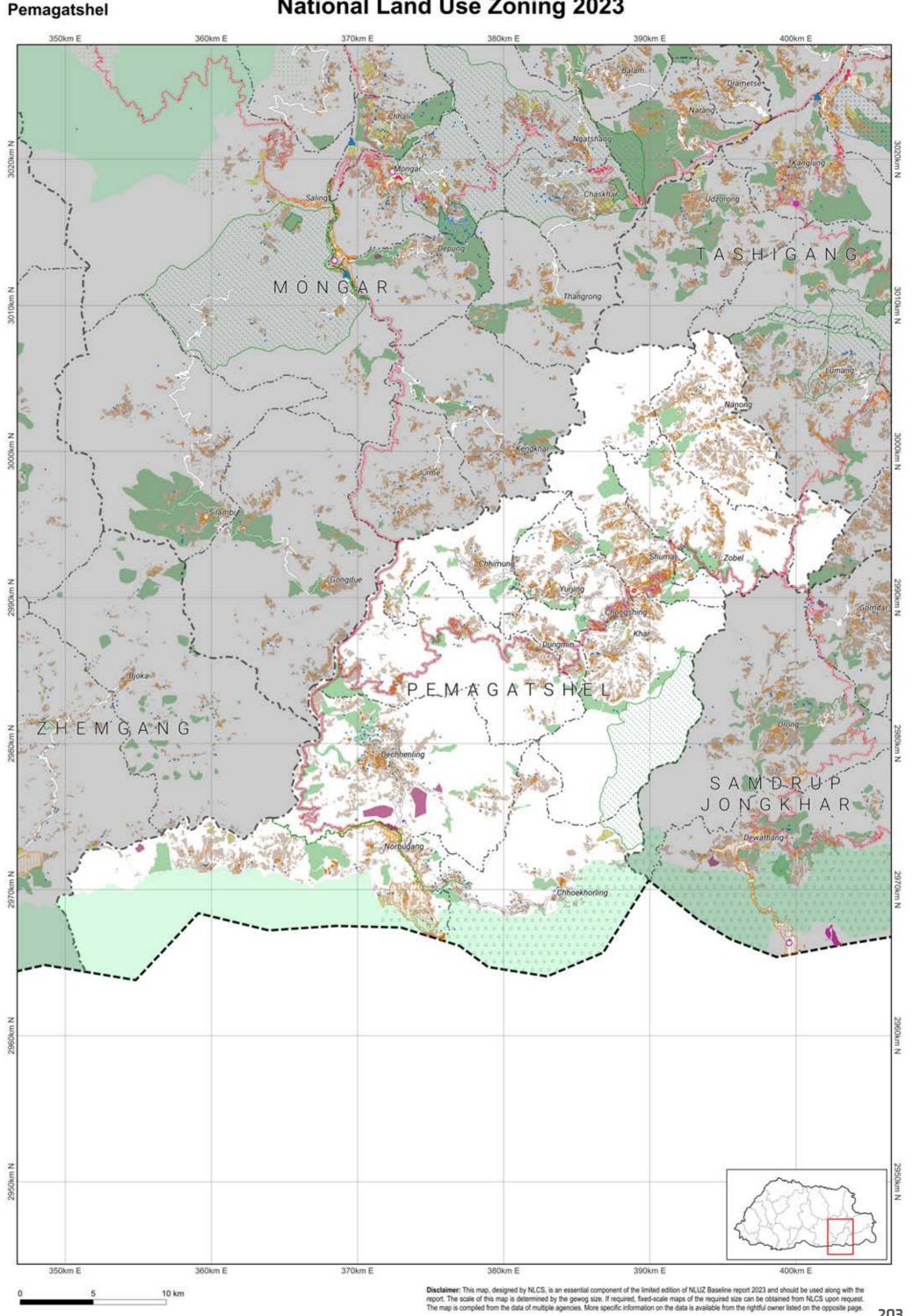
giillay oook	THIOHIUE JUK
lighway 50k ===	Thromde 25k
lighway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ngkhag 50k ===	Industrial 5k =
ngkhag 25k ===	Farm 5k ≡

# Thromde 50k

Highway 25k ===	Thromde 5k =
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =
ongkhag 25k ===	Farm 5k <sup>≡</sup>

# Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size	
Dzongkhag	Male	Female	Total					
Pemagatshel	11,922	11,710	23,632	101.8	35.4	6,075	3.5	



Gewog	Chhimung	
vog code	901	
wog area	13102.942	- Agriculture
_		■ Agriculture ■ Cultural Heritage
Zone	Area	■ Industrial
Agriculture	1389.206	Nature Conservation Area
ıral Heritage	1.002	Rangeland Rural Settlement
Industrial	0	■ Sustainable Forest Management Area
NCA	0	Urban
Rangeland	0	
Rural Settlement	49.178	
SFMA	718.992	
Urban	0	

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

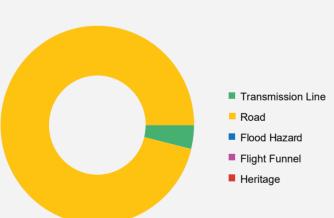
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

50.3

# RoW / Buffer Area

Demographic Table

Buffer Zone	Area
Transmission Line	1.395
Road	34.201
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Residential Land Institutional Land

Forest Management Unit Community Forest

#### Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone Nature Conservation Area

#### Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park

#### Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

#### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

#### Water Sources • Manufacturing and Production

Helipad O Hydro Power Plants A

#### Hydro Power Waterways —

Boundaries International --

Dzongkhag - -Perennial

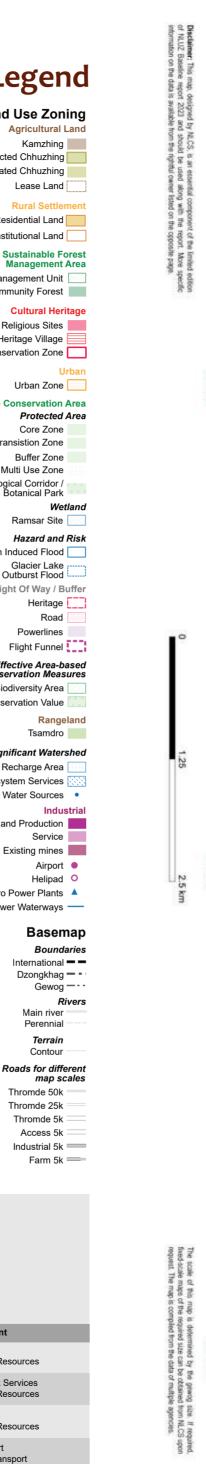
Highway 300k ---Highway 50k === Highway 25k Highway 5k \_ Dzongkhag 50k =

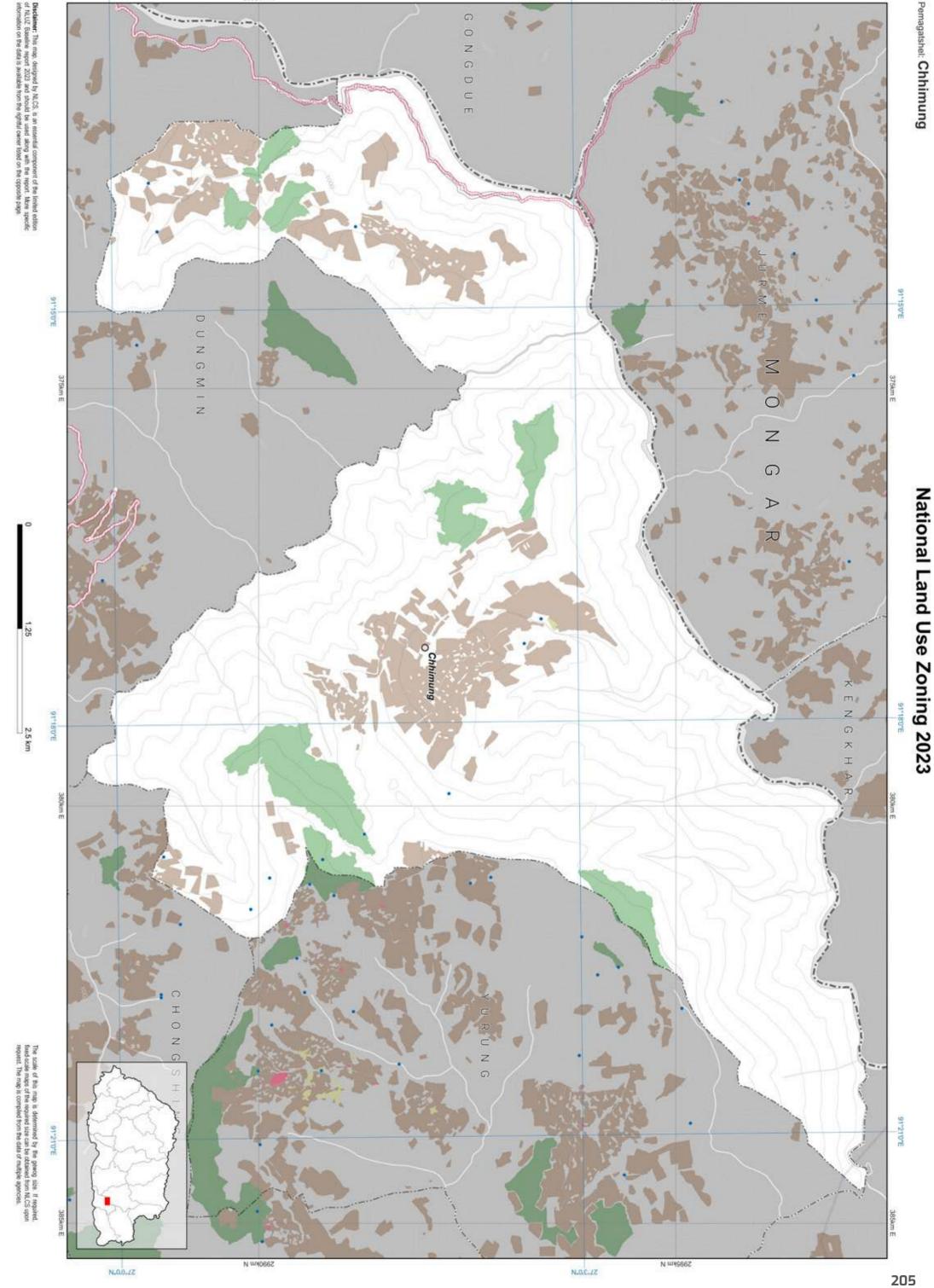
# **Data Ownership**

Dzongkhag 25k =

	Data Owner of the map Content
	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Surface Transport Ministry of Infrastructure and Transport

	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Surface Transport Ministry of Infrastructure and Transport
	National Land Commission Socratoriat





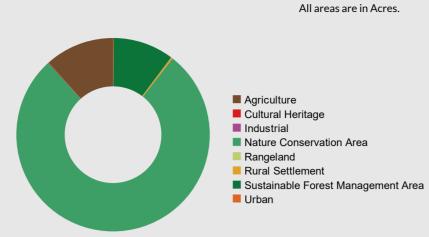
204

# CHHOEKHORLING

# PEMAGATSHEI

# Zone Area

Gewog	Chhoekhorling
Gewog code	908
Gewog area	31298.091
Zone	Area
Agriculture	2085.245
Cultural Heritage	18.285
Industrial	0.1
NCA	14005.879
Rangeland	0
Rural Settlement	55.003
SFMA	1830.779
Urban	15.048



# **Zone Conflict**

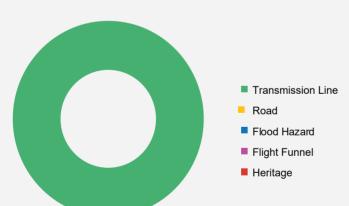
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	205.80	3.535	0	0	2.103	0
Agriculture	0	205.80	0	0	0	0	0	0
Urban	0	3.535	0	0	0	0	8.319	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	2.103	0	8.319	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	10	15.501	44.738	0	0	0	0.06	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

	<b>Buffer Zone</b>	Area
Tr	ansmission Line	160.183
	Road	0.016
	Flood Hazard	0
	Flight Funnel	0
	Heritage	0



# **Map Legend**

# National Land Use Zoning Agricultural Land Kamzhing

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

# Rural Settlement Residential Land Institutional Land

Sustainable Forest Management Area
Forest Management Unit

# Cultural Heritage

Religious Sites
Heritage Village
Heritage Conservation Zone

# Urban Zone Nature Conservation Area Protected Area

Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone

#### Biological Corridor / Botanical Park *Wetland* Ramsar Site

Hazard and Risk
Rain Induced Flood Glacier Lake
Outburst Flood

Right Of Way / Buffer
Heritage

# Powerlines Flight Funnel

Other Effective Area-based Conservation Measures
Key Biodiversity Area

High Conservation Value Rangeland

# Tsamdro Significant Watershed

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services

Water Sources • Industrial
Manufacturing and Production

Existing mines

Airport

Helipad O
Hydro Power Plants A
Hydro Power Waterways —

#### Basemap

Boundaries
International - -

Dzongkhag — -

Rivers
Main river
Perennial
Terrain

# Contour — Roads for different

Highway 300k Thromde 50k
Highway 50k Thromde 25k
Highway 25k Thromde 5k
Highway 5k Access 5k
Dzongkhag 50k Industrial 5k
Dzongkhag 25k Farm 5k

#### Data Ownership

Data Owner of the Map Content

Department of Agriculture
Ministry of Agriculture and Livestock

Department of Energy
Ministry of Energy and Natural Resources

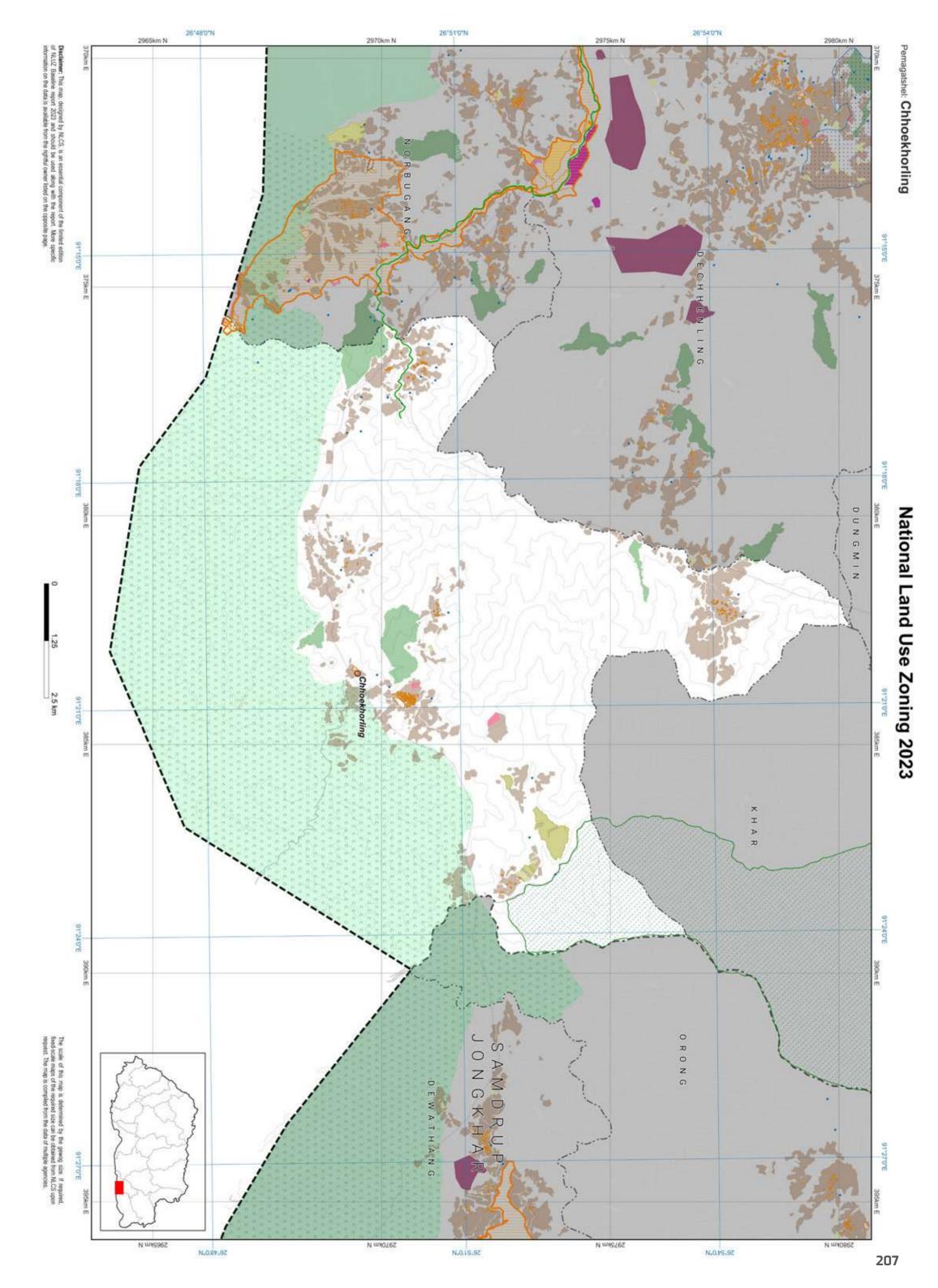
Department of Forests and Park Services
Ministry of Energy and Natural Resources

Department of Water
Ministry of Energy and Natural Resources

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Total Population				Sex ratio	Aging Index	Number of household	Mean Household size	
	Gewog / Throm	Male	Female	Total					
	Chhoekhorling	338	365	703	92.6	151.0	250	2.7	

# Department of Water Ministry of Energy and Natural Resources Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



Zone Area	
<b>Gewog</b> Gewog code	Chongshing 902
Gewog area	7929.186 <b>Area</b>
Agriculture Cultural Heritage	2115.423 1.654
Industrial	0.201
Rangeland	0
Rural Settlement SFMA	70.783 418.695
Urban	0

# **Zone Conflict**

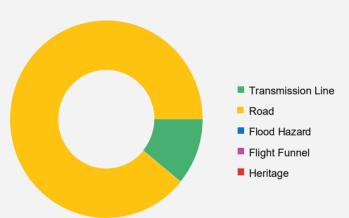
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	12.236	0	0	0	0.025	0
Road	0.92	0	62.628	0	0.004	0.012	1.031	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	21.376
Road	173.104
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Pemagatshel: Chongshing

#### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

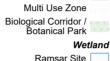
#### Residential Land Institutional Land

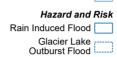
Lease Land

#### Forest Management Unit Community Forest **Cultural Heritage**











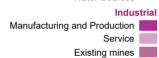
#### Powerlines Flight Funnel

#### Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

#### Significant Watershed Potential Recharge Area





#### Airport • Helipad O Hydro Power Plants A

#### Hydro Power Waterways -Basemap

#### Boundaries International --

Dzongkhag - -Perennial Terrain

ghway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k =
nakhaa 2Ek —	F 51.

#### Data Ownership

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

#### Data Owner of the Map Content Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

#### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Chongshing	352	419	771	84.0	82.7	219	3.5

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

National Land Use Zoning 2023

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

5 km

91"24"0"E

ne Area	
Gewog	Dechhenling
Gewog code	909
Gewog area	34008.092
Zone	Area
Agriculture	4943.27
Cultural Heritage	8.788
Industrial	828.431
NCA	950.274
Rangeland	0
Rural Settlement	146.802
SFMA	2062.733
Urban	171.733

# **Zone Conflict**

0 0 5.511 0 0 0
0 0
O O
54 15.949 0
0 0
0 0
0 0
0 0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	8.08	0	0	0	1.456	0
Road	5.015	0	6.821	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

The demographic statistics provided in the table above for Nganglam town encompass not only the area falling under the Dechhenling gewog but also

include the demographic statistics of the town area falling under the Norbugang gewog. The same statistics for Nganglam town can be found under the

57.1

10.7

519

1,242

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	26.005
Road	188.709
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 

Nganglam Town

**Total Population** 

890

2,555

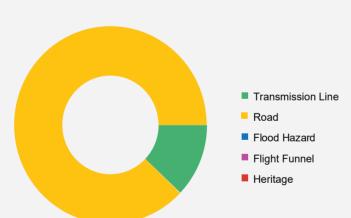
Female Total

1,680

5,418

88.8

112.1



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Residential Land Institutional Land

Forest Management Unit Community Forest

#### **Cultural Heritage** Religious Sites Heritage Village

Heritage Conservation Zone Urban Zone

#### **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production Existing mines

> Airport Helipad O Hydro Power Plants A Hydro Power Waterways -

#### Basemap

Boundaries International --Dzongkhag - -

Perennial Terrain

# Roads for different

Highway 300k ---Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

Data Owner of the Map Content

Department of Geology and Mines Ministry of Energy and Natural Resources

Ministry of Energy and Natural Resources Department of Human Settlement Ministry of Infrastructure and Transport

# Data Ownership



Department of Water

Mean Household size

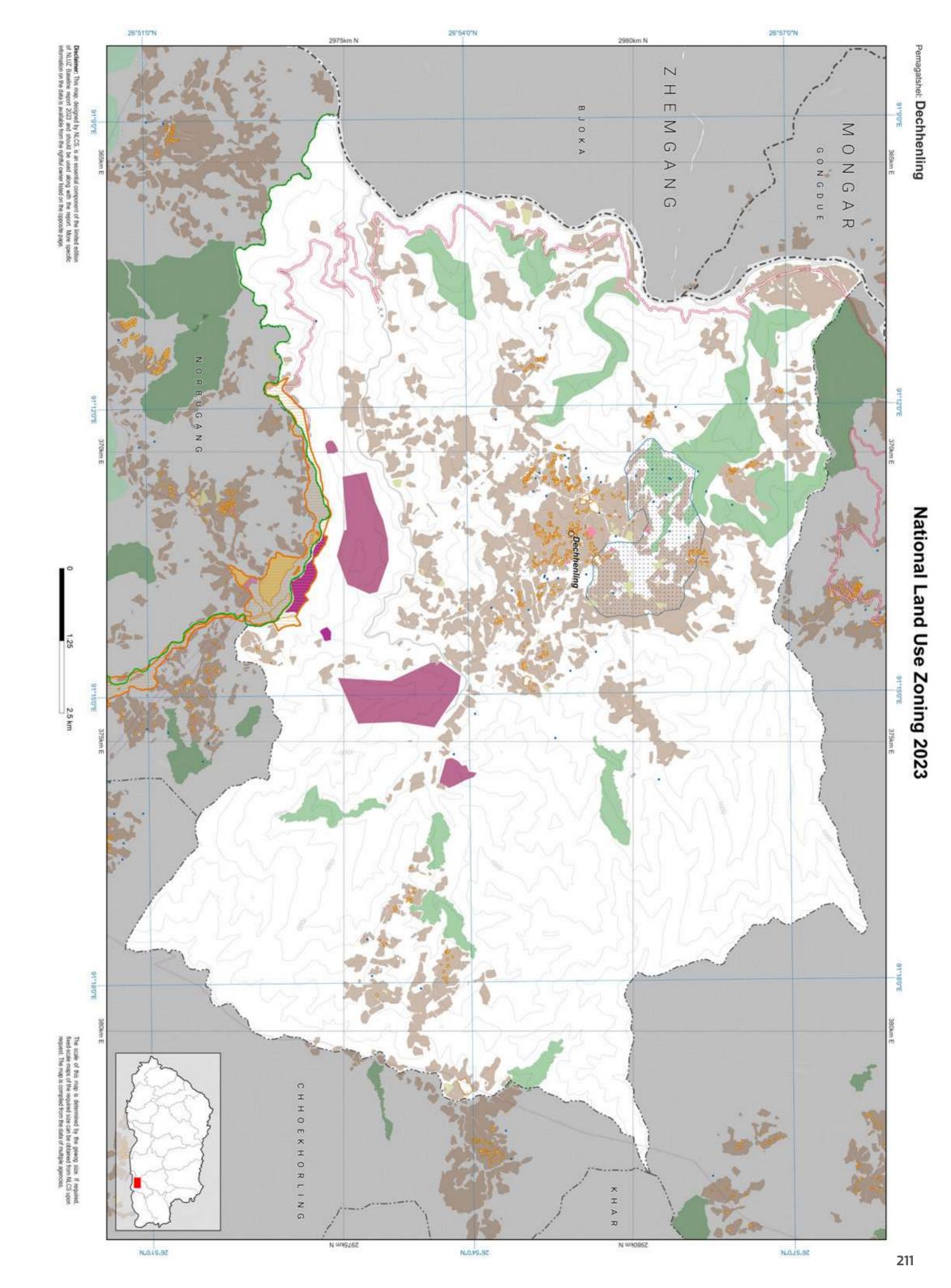
2.9

3.6

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat





# DUGMIN

# PEMAGATSHE

# **Zone Area**

Gewog	Dungmin
Gewog code	903
Gewog area	26901.967
Zone	Area
Agriculture	2563.347
Cultural Heritage	2.514
Industrial	13.856
NCA	0
Rangeland	0
Rural Settlement	135.565
SFMA	1445.429
Urban	0

# **Zone Conflict**

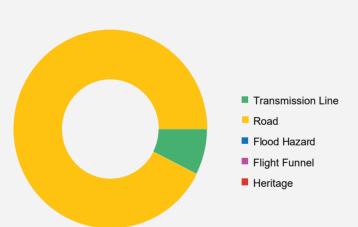
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0.885	0	4.597	0	0	0	0	0
Road	44.717	0	19.027	0	0	0	3.903	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	33.654
Road	413.396
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

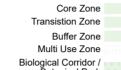
# National Land Use Zoning Agricultural Land Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Rural Settlement

# Residential Land Institutional Land Sustainable Forest

Forest Management Unit

# Community Forest Cultural Heritage Religious Sites Heritage Village Heritage Conservation Zone









# Powerlines Flight Funnel Other Effective Area-based Conservation Measures

# Key Biodiversity Area High Conservation Value

# Tsamdro Significant Watershed

- 11-11	Potential Recharge Area
	ayment for Ecosystem Services
•	Water Sources

Water Sources	•
Indus	strial
Manufacturing and Production	
Service	
Existing mines	

# Helipad O Hydro Power Plants A

# Hydro Power Waterways — Basemap

# Boundaries International - -

Dzongkhag — • Gewog — • Rivers

Main river
Perennial

Terrain

# Roads for different map scales

riigiiway 500k	Thromae suk
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k <sup>□</sup>
Dzongkhag 5k	

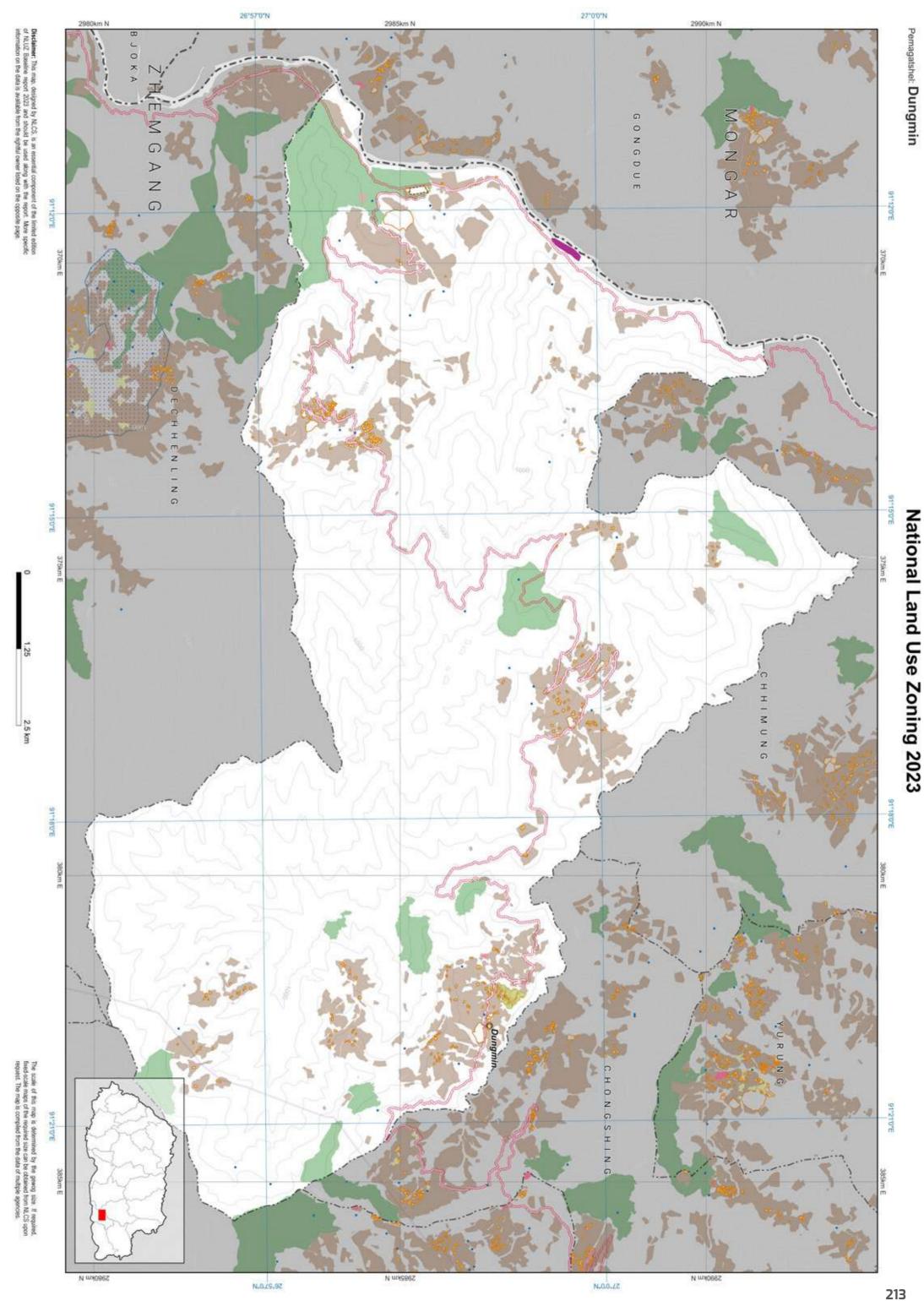
#### Data Ownership

# Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Surface Transport

Ministry of Infrastructure and Transport National Land Commission Secretariat

# Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Dungmin	662	609	1,271	108.7	53.8	352	3.3



Gewog	Khar
Gewog code	904
Gewog area	28097.699
Zone	Area
Agriculture	2908.765
Cultural Heritage	7.238
Industrial	0
NCA	0
Rangeland	0
Rural Settlement	104.247
SFMA	9800.028
Urban	0

# All areas are in Acres. Map Legend

National Land Use Zoning

Agricultural Land
Kamzhing
Protected Chhuzhing
Regulated Chhuzhing
Lease Land

Pemagatshel: Khar

Rural Settlement

Sustainable Forest

Management Area
Forest Management Unit
Community Forest

**Cultural Heritage** 

Religious Sites
Heritage Village
Heritage Conservation Zone

Urban
Urban Zone 
Nature Conservation Area

Protected Area
Core Zone
Transistion Zone
Buffer Zone

Multi Use Zone
Biological Corridor /
Botanical Park

Wetland
Ramsar Site

Hazard and Risk

Rain Induced Flood Glacier Lake
Outburst Flood
Right Of Way / Buffer
Heritage

Heritage Road
Powerlines

Flight Funnel Cother Effective Area-based Conservation Measures

Key Biodiversity Area
High Conservation Value

Tsamdro Significant Watershed

Potential Recharge Area
Payment for Ecosystem Services
Water Sources
Industrial

Industrial

Manufacturing and Production
Service
Existing mines
Airport

Helipad O
Hydro Power Plants 
Hydro Power Waterways —

Basemap

Boundaries
International — Dzongkhag — Gewog — Rivers
Main river

Rivers
Main river
Perennial
Terrain

Roads for different map scales Thromde 50k

Highway 50k Thromde 25k
Highway 25k Thromde 5k
Highway 5k Access 5k
Dzongkhag 50k Industrial 5k
Dzongkhag 25k Farm 5k

# **Zone Conflict**

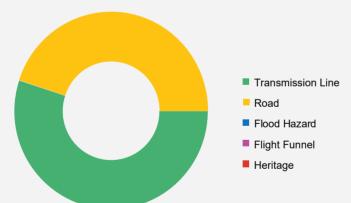
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	1.87		0.501		0.17	0
NCA	0	0	0	0	0	0	0	0
Agriculture	1.87	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0.501	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0.17	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	25.973	0	0	0	0.802	0
Road	5.912	0	2.944	0	0	0	0.081	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	43.616
Road	35.617
Flood Hazard	0
Flight Funnel	0
Heritage	0



Agriculture

Industrial

RangelandRural Settlement

■ Cultural Heritage

■ Nature Conservation Area

■ Sustainable Forest Management Area

## Data Ownership

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock

Highway 300k ---

Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Water
Ministry of Energy and Natural Resources

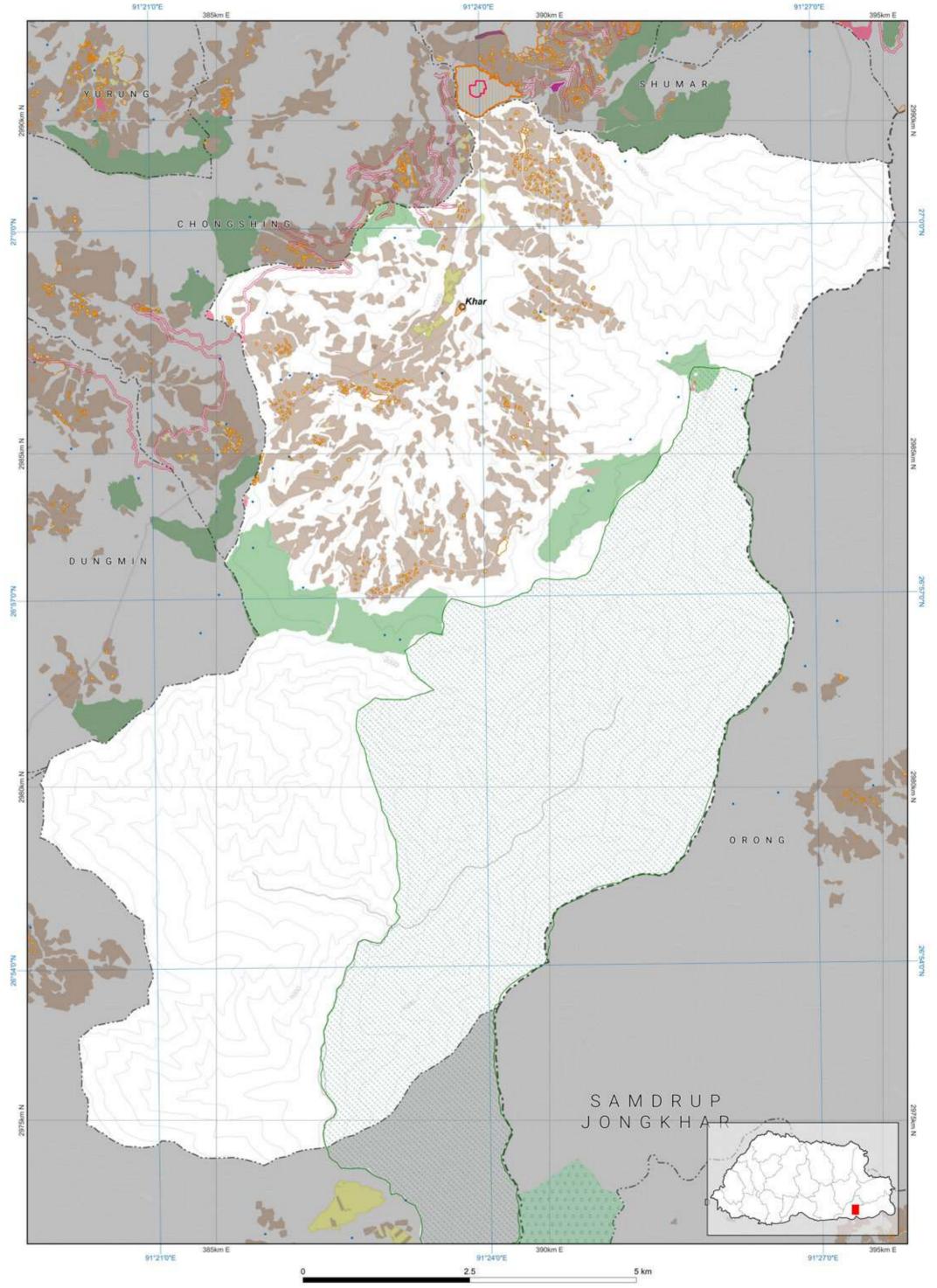
Department of Surface Transport

Ministry of Infrastructure and Transport

Demographic Table



# National Land Commission Secretariat Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ. Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.



Zone Area	l
<b>Gewog</b> Gewog code Gewog area	<b>Nanong</b> 910 20117.055
Zone	Area
Agriculture	4719.637
Cultural Heritage	9.247
Industrial	0.135
NCA	0
Rangeland	0
Rural Settlement	173.791
SFMA	757.344
Lirban	0

# **Zone Conflict**

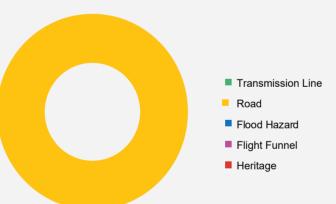
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0.275	0	0.407	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area	
Transmission Line	0	
Road	55.884	
Flood Hazard	0	
Flight Funnel	0	
Heritage	0	



# **Map Legend**

Pemagatshel: Nanong

UDZORONG

91°27'0°E

KHALING

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest

> **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood Right Of Way / Buffer

Heritage \_\_\_\_ Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -Perennial

Highway 300k —— Highway 50k =

Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

## **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# **Demographic Table**

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( So	ource: NSB, PHCB 2017)	
	Tot	al Population	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Nanong	1,056	1,067	2,123	99.0	32.9	530	3.7

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

# 91°30'0"E The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies. 217

91'33'0'E

National Land Use Zoning 2023

91°27'0"E

one Area	
Gewog	Norbugang
Gewog code	911
Gewog area	45269.069
<b>Zone</b>	<b>Area</b>
Agriculture	4958.873
Cultural Heritage	9.983
Industrial	64.547
NCA	23498.774
Rangeland	0
Rural Settlement	276.764
SFMA	1919.005
Urban	2237.965

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	32.26	0	0	0	0	0	0
NCA	32.26	0	92.05	393.38	0	0.05	0.15	0
Agriculture	0	92.05	0	648.285	0	0	0	0
Urban	0	393.38	648.285	0	4.979	8.71	170.316	0
Culture	0	0	0	4.979	0	0	0	0
Industrial	0	0.05	0	8.71	0	0	0	0
Rural Settlement	0	0.15	0	170.316	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	1.035	41.394	70.728	6.552	0.273	2.329	4.678	0
Road	0	5.577	0.571	0	0	0	0.054	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

52.4

10.7

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	220.013
Road	24.102
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 

645

2,555

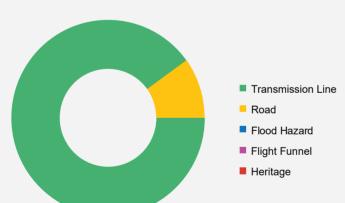
1,368

5,418

112.1

112.1

Norbugang



# **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Residential Land Institutional Land

Forest Management Unit Community Forest

Lease Land

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone Nature Conservation Area Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value Tsamdro

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Manufacturing and Production

> Existing mines Airport Helipad O

Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Perennial

Highway 300k —— Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Forests and Park Services

Department of Human Settlement Ministry of Infrastructure and Transport

The demographic statistics provided in the table above for Nganglam town encompass not only the area falling under the Norbugang gewog but also include the demographic statistics of the town area falling under the Dechhenling gewog. The same statistics for Nganglam town can be found under

392

1,242

Mean Household size

3.3

3.6



# 26"45"0"N National Land Use Zoning 2023 Se.21.0.N 219

218

zone Area	
Gewog	Shumar
Gewog code	905
Gewog area	22900.947
Zone	Area
Agriculture	3201.387
Cultural Heritage	20.35
Industrial	10.099
NCA	0
Rangeland	0
Rural Settlement	280.818
SFMA	1489.786

# **Zone Conflict**

Urban

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	2.885	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	37.437	0	0	0	0
Urban	2.885	0	37.437	0	10.699	0	29.499	0
Culture	0	0	0	10.699	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	29.499	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

231.563

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0.7	0	55.592	1.887	0.061	0	1.286	0
Road	1.224	0	51.559	0	0	0.211	4.146	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

•	
Buffer Zone	Area
Transmission Line	116.999
Road	116.184
Flood Hazard	0
Flight Funnel	0
Heritage	0

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Shumar	1,478	1,648	3,126	89.7	32.3	774	3.9
Denchi Town	227	113	340	200.9	23.8	71	3.6
Old Pema Gatshel To	wn547	491	1,038	111.4	11.9	231	3.6
Kherigonpa Town	32	29	61	110.3	13.3	20	3.1
Yalang Town	29	33	62	87.9	8.3	17	3.6
Khothakpa Town	78	68	146	114.7	5.8	38	3.7
Nangkor Town	282	240	522	117.5	11.4	108	4
Mongling Town	21	17	38	123.5	14.3	11	3.4

The demographic statistics provided in the table above for old Pema Gatshel, Kherigonpa and Mongling town encompass not only the area falling under the Shumar gewog but also include the demographic statistics of the town area falling under the Zobel gewog. The same statistics for old Pema Gatshel, Kherigonpa and Mongling town can be found under the Zobel gewog.



Pemagatshel: Shumar

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production Existing mines

> Airport • Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap

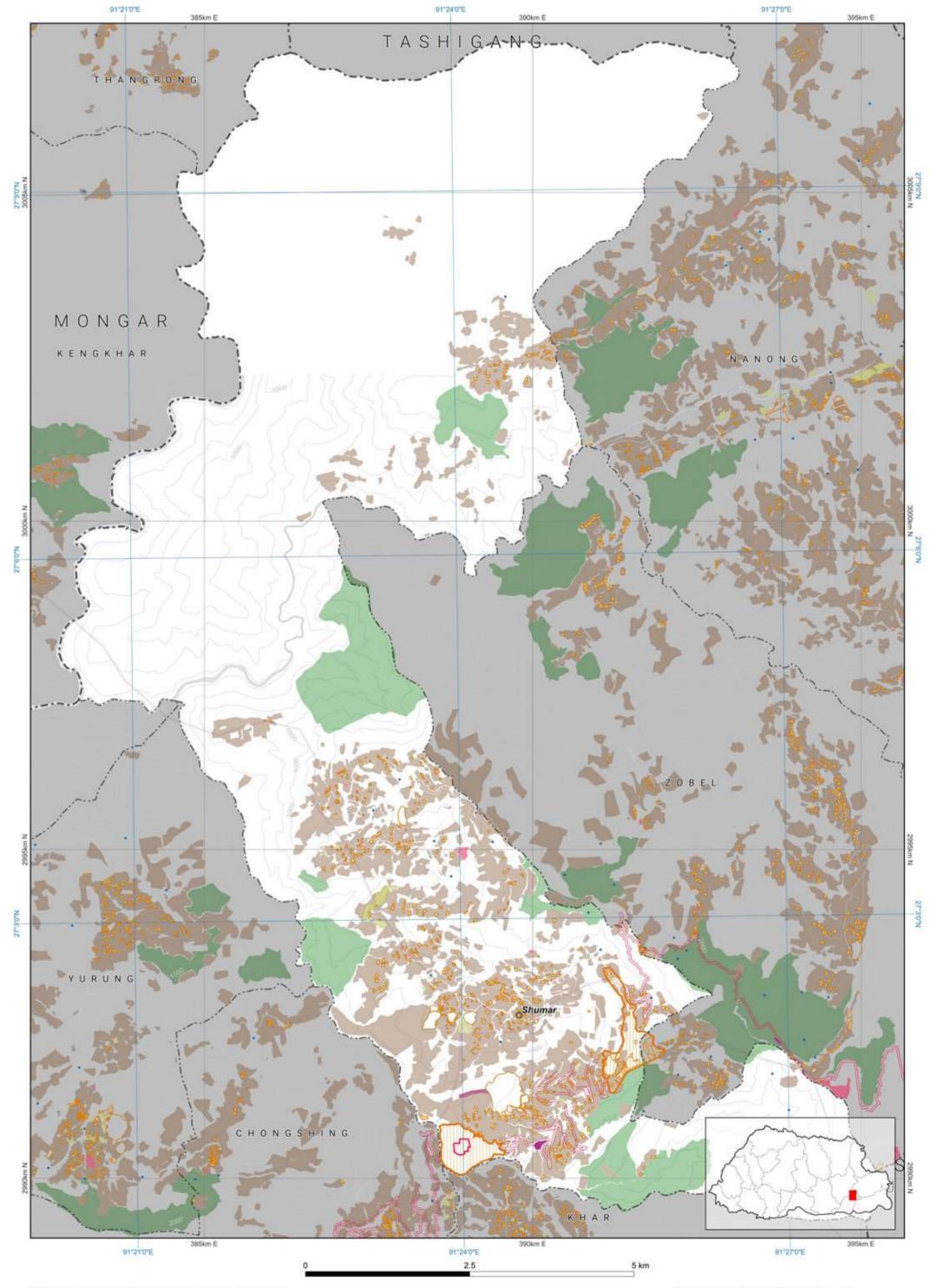
Boundaries International --Dzongkhag - -Perennial

Highway 300k —— Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

#### **Data Ownership**

Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development, Ministry of Home Affairs
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat



one Area	
Gewog Gewog code Gewog area	<b>Yurung</b> 906 6872.873
<b>Zone</b> Agriculture	<b>Area</b> 1734.249
Cultural Heritage Industrial	7.497 0.05
NCA Rangeland	0
Rural Settlement SFMA	114.051 495.918
Urban	0

# **Zone Conflict**

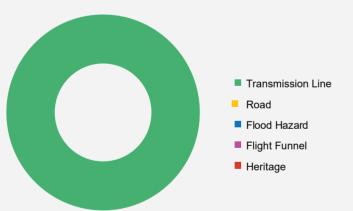
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	1.401
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Pemagatshel: Yurung

nal Land Use Zon	inç
Agricultural L	_an
Kamzhing	
Protected Chhuzhing	
Regulated Chhuzhing	
Lease Land	
Rural Settler	ner
Residential Land	
Institutional Land	

















#### Helipad O Hydro Power Plants A Hydro Power Waterways —

#### Basemap Boundaries

International	•
Dzongkhag	
Gewog —	-
Rivers	s
Main river	
Perennial	
Terrain	
Contour	

	Terrain
	Contour
	Roads for differen map scale
0k ===	Thromde 50k
0k ===	Thromde 25k

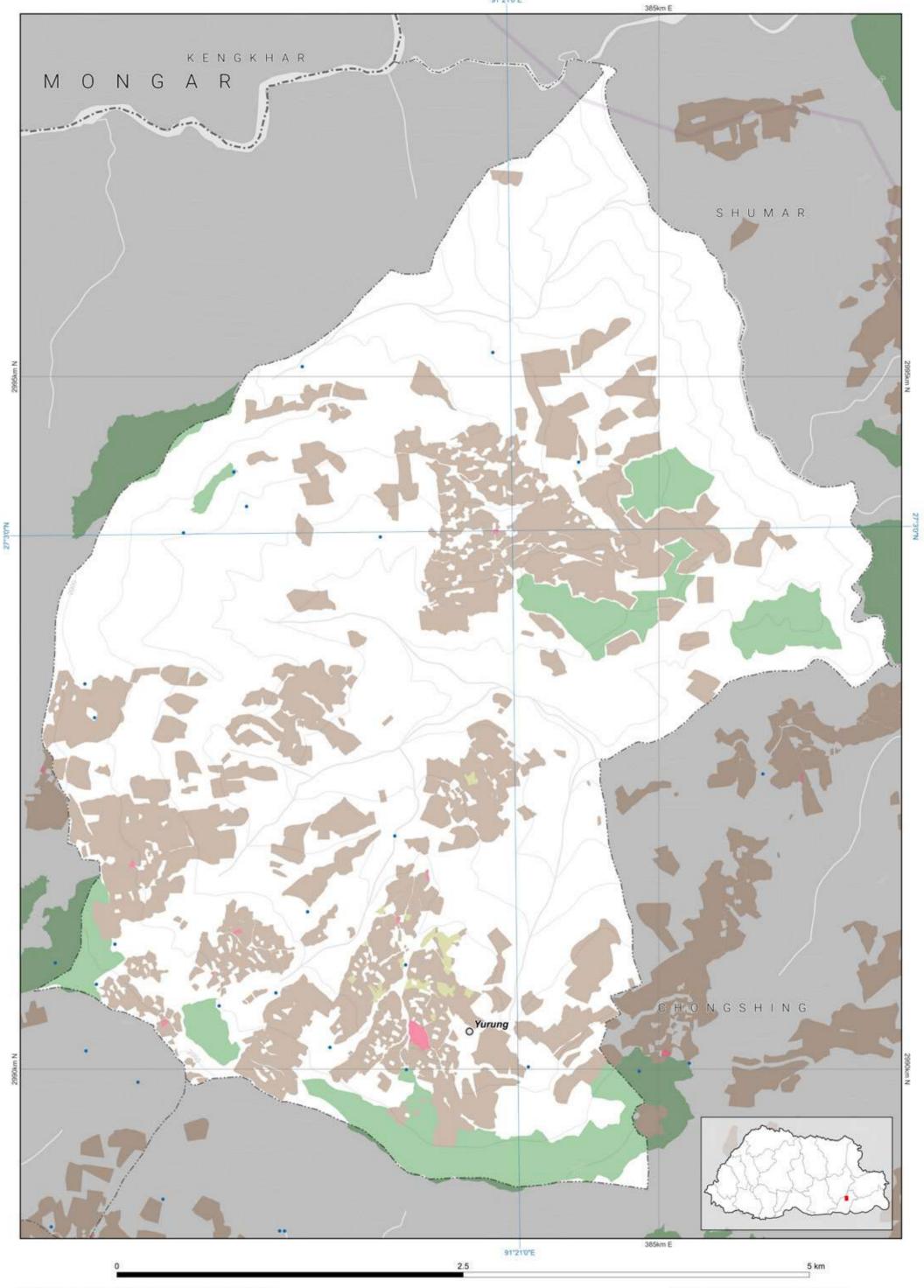
Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k ==
zongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

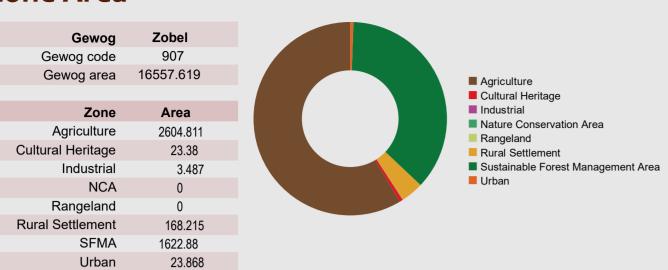
# **Demographic Table**

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Yurung	516	612	1,128	84.3	49.0	315	3.5				

#### Data Ownership

Data Owner of the Map Content
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat





# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0.851	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	1.094	0	0	0.009	0
Urban	0.851	0	1.094	0	0	0	12.297	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0.009	12.297	0	0	0	0
Rangeland	0	0		0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	3.57	0	5.247	0	0	0	0.185	0
Road	32.163	0	0.539	0	0.092	0.355	1.077	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	11.148
Road	146.312
Flood Hazard	0
Flight Funnel	0
Heritage	0
· ·	
	Transmission Line Road Flood Hazard Flight Funnel

# **Map Legend**

All areas are in Acres.



#### Residential Land Institutional Land

#### Forest Management Unit Community Forest **Cultural Heritage**





Core Zone	
Transistion Zone	
Buffer Zone	
Multi Use Zone	

# Biological Corridor / Botanical Park Ramsar Site

#### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

# Tsamdro

# Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

# Manufacturing and Production Existing mines

Airport Helipad O

#### Hydro Power Plants A Hydro Power Waterways -

#### Basemap Boundaries International --

Dzongkhag -Perennial Terrain

#### Roads for different map scales

griway 300k — Thro	mde 50k
Highway 50k === Thro	mde 25k
Highway 25k === Thr	omde 5k
Highway 5k A	ccess 5k
ongkhag 50k === Ind	ustrial 5k
ongkhag 25k ===	Farm 5k

Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ====	Industrial 5k
Dzongkhag 25k ====	Farm 5k
Dzongkhag 5k	

# **Data Ownership**

#### Data Owner of the Map Content Department of Energy Ministry of Energy and Natural Resources

Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

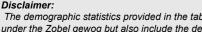
Department of Human Settlement Ministry of Infrastructure and Transport

Department of Surface Transport Ministry of Infrastructure and Transport

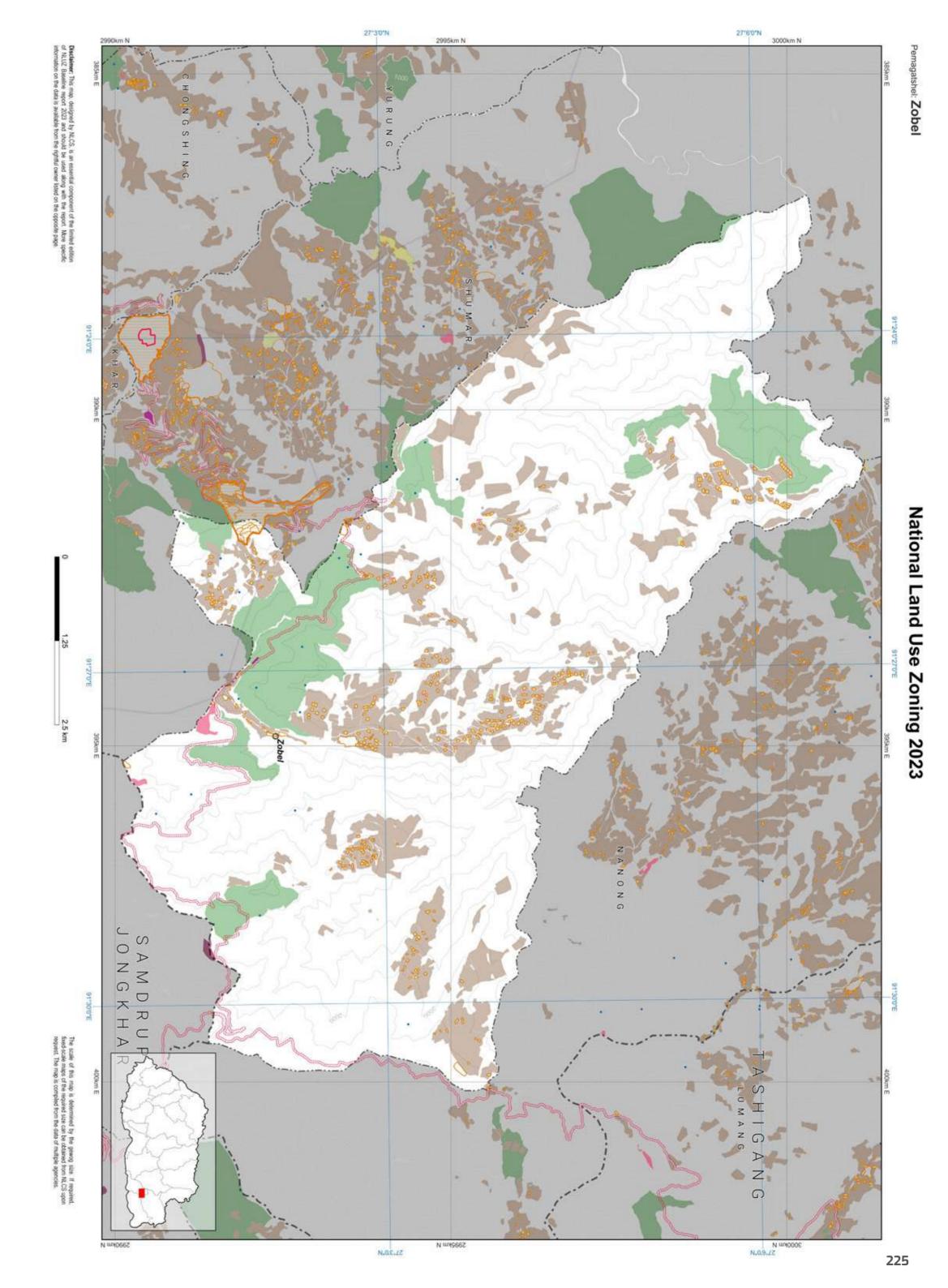
National Land Commission Secretariat

#### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Zobel	832	864	1,696	96.3	39.6	448	3.3		
Old Pema Gatshel T	own547	491	1,038	111.4	11.9	448	3.6		
Kherigonpa Town	32	29	61	110.3	13.3	20	3.1		
Mongling Town	21	17	38	123.5	14.3	11	3.4		







66.605

158366.063

0

1367.106

292.045

10729.78

#### **Zone Area** All areas are in Acres. Punakha Dzongkhag 10 Dzongkhag code Dzongkhag area 274485.104 ■ Agriculture Culture Industrial Zone Area ■ Nature Conservation Area Agriculture 13203.142 Rangeland Rural Settlement Culture 330.962

■ Sustainable Forest Management Area

# **Zone Conflict**

Industrial

Rangeland

Rural Settlement

NCA

SFMA

Urban

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	834.01	0.00	0	0	0	0	0
NCA	834.01	0	628.21	0	22.253	0.515	220.041	0
Agriculture	0.00	628.21	0	35.374	58.139	0	0.003	0
Urban	0	0	35.374	0	5.367	0.05	71.53	0
Culture	0	22.253	58.139	5.367	0	0.2	0.008	0
Industrial	0	0.515	0	0.05	0.2	0	0	0
Rural Settlement	0	220.041	0.003	71.53	0.008	0	0	0
Rangeland	0	0		0	0	0	0	0

# **RoW / Buffer Conflict**

							Rural	
	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Settlement	Rangeland
Transmission Line	19.733	97.789	16.383	0	0.611	0.078	5.538	0
Road	3.899	235.754	45.565	0	0.185	0.992	16.025	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Bu	ffer Zone	Area
Transmi	ssion Line	201.948
	Road	589.235
Floo	od Hazard	0
Flig	ht Funnel	0
	Heritage	0

# **Map Legend**



Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways -

> > Basemap Boundaries International --

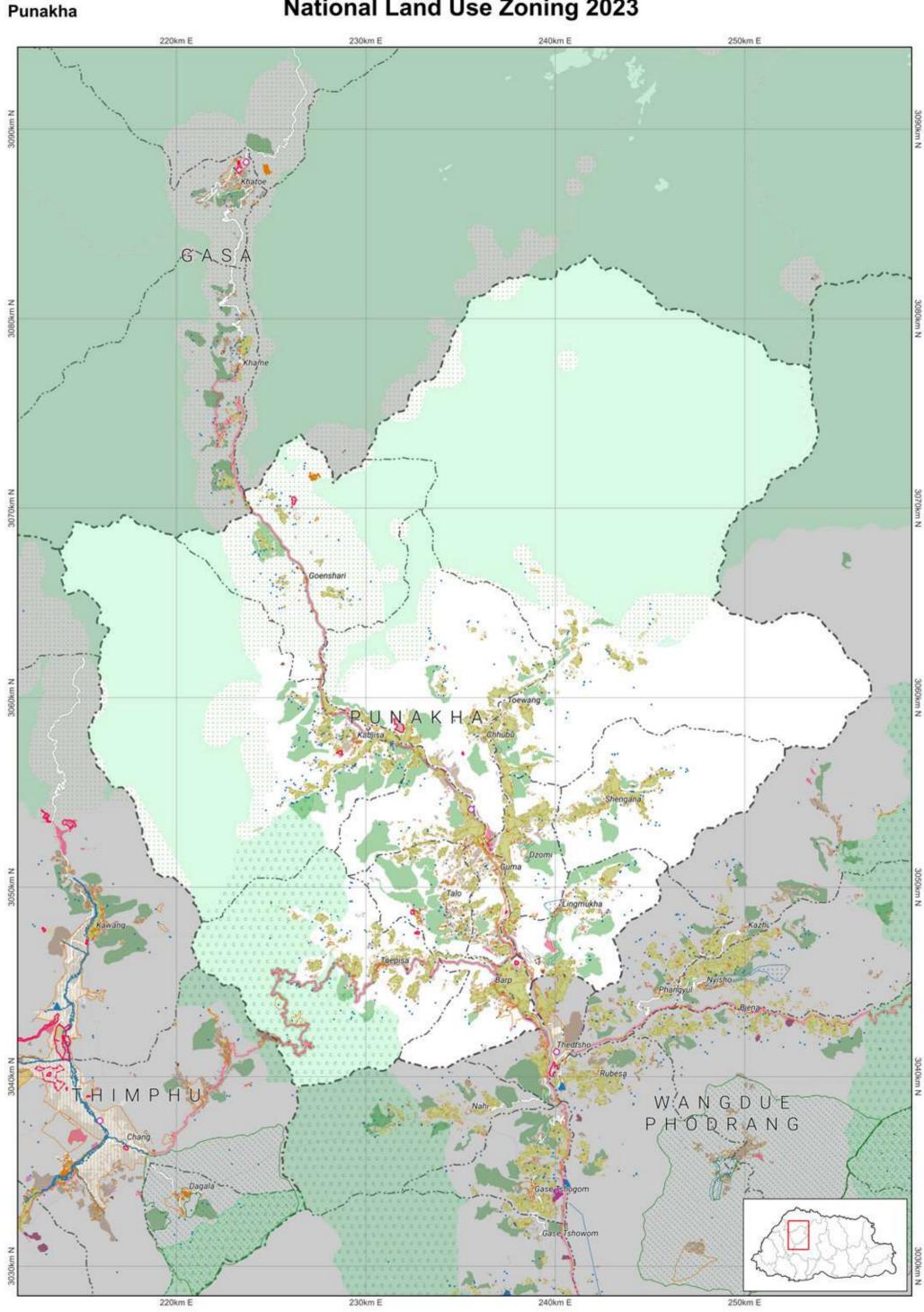
Dzongkhag - -Perennial

Highway 300k =

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

#### Demographic Table

		Dzo	ongkhag Ke	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	Tot	al Population	on	Sex ratio	Aging Index	Number of household	Mean Household size
Dzongkhag	Male	Female	Total				
Punakha	15,079	13,661	28,740	110.4	24.8	6,079	3.8



Zone Area	l
Gewog	Barp
Gewog code	1010
Gewog area	6116.012
Zone	Area
Agriculture	1142.906
Cultural Heritage	19.63
Industrial	25.441
NCA	0
Rangeland	0
Rural Settlement	275.148
SFMA	79.357
Urban	0

# **Zone Conflict**

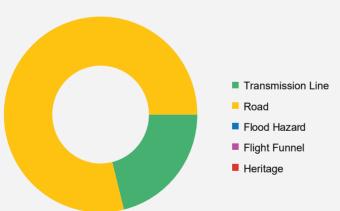
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	0	0	0	0	0.116	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0.116	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	6.257	0	0.611	0.078	3.604	0
Road	0	0	8.027	0	0	0.914	4.604	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	22.265
Road	83.145
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**





Forest Management Unit







#### Flight Funnel Other Effective Area-based Conservation Measures

#### Key Biodiversity Area High Conservation Value

#### Significant Watershed Potential Recharge Area



#### Airport Helipad O Hydro Power Plants A

#### Hydro Power Waterways — Basemap

#### Boundaries International --

Dzongkhag - -Perennial Terrain

# Roads for different

0 ,	
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
Dzongkhag 50k ===	Industrial 5k =
Dzongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

### Data Ownership

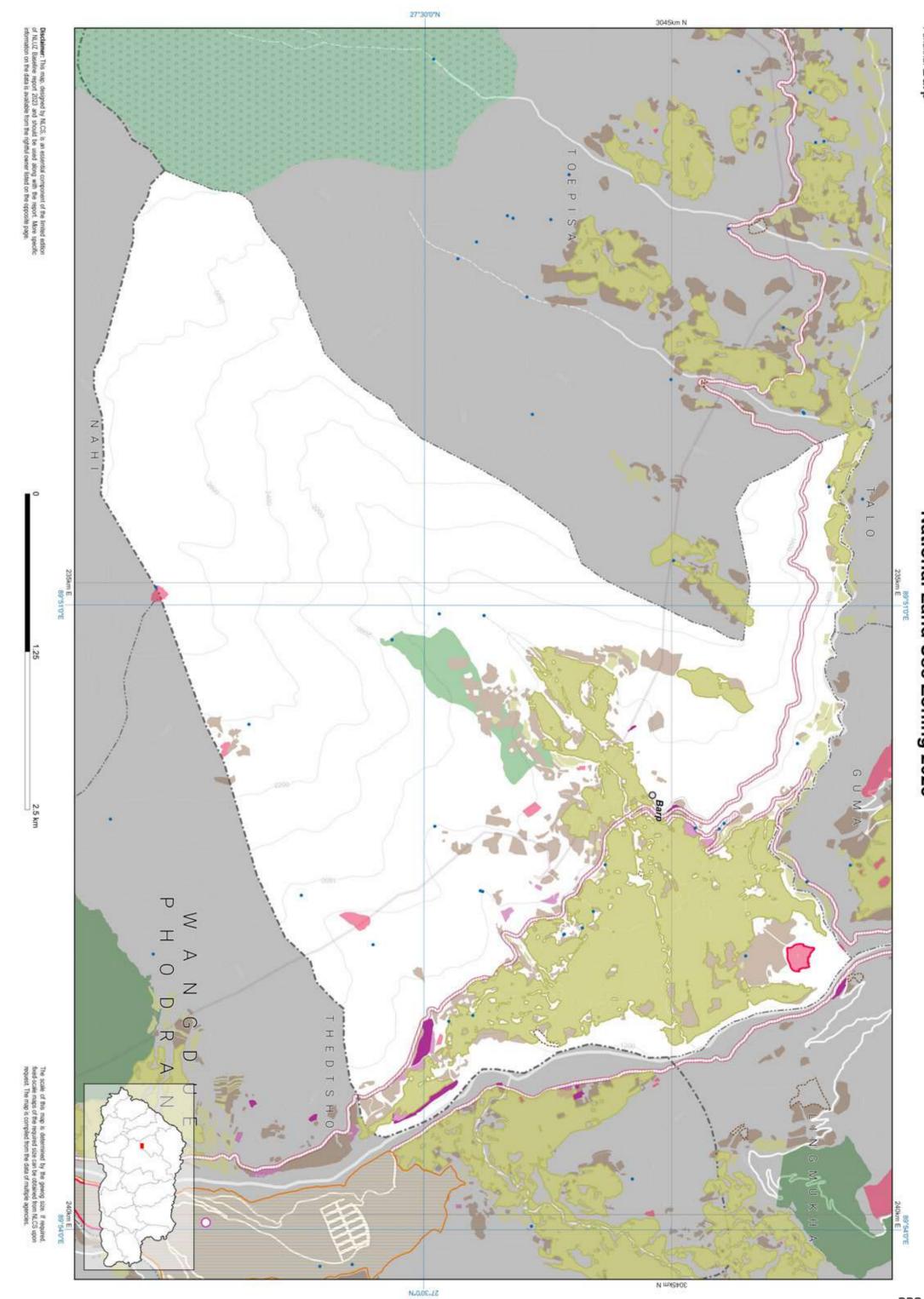
Highway 300k =

Data Owner of the	e Map Content
Department of Agr Ministry of Agricult	
Department of Ene Ministry of Energy	ergy and Natural Resources
	ests and Park Services and Natural Resources
Department of Wa Ministry of Energy	ter and Natural Resources
Department of Cul Ministry of Home A	ture and Dzongkha Development offairs
Department of Sur Ministry of Infrastry	face Transport

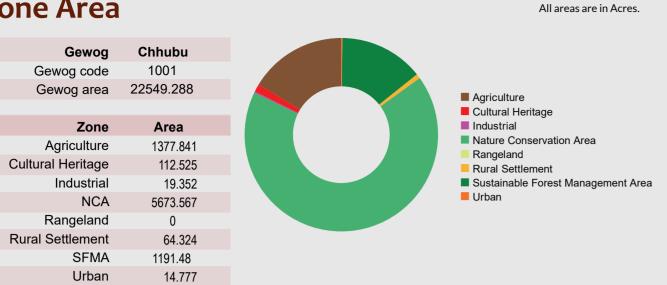
National Land Commission Secretariat

# Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Barp	2,531	2,411	4,942	105	16.6	1,172	3.5
Lobesa	406	378	784	107.407	6.6	197	3.5



228



# **Zone Conflict**

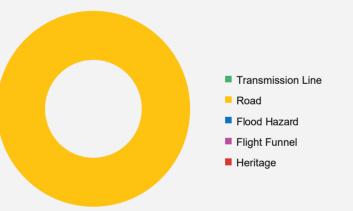
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	8.798	0.00	0	0	0	0	0
NCA	8.798	0	14.00	0	0	0	0.257	0
Agriculture	0.00	14.00	0	0	0	0	0	0
Urban	0	0	0	0	3.038	0	6.347	0
Culture	0	0	55.28	3.038	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.257	0	6.347	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0.002
Flood Hazard	0
Flight Funnel	0
Heritage	0
	Transmission Line Road Flood Hazard Flight Funnel



# **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land

> Forest Management Unit Community Forest **Cultural Heritage**

Institutional Land

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

> Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A Hydro Power Waterways —

> > Basemap Boundaries

Airport

International --Dzongkhag - -Gewog --Perennial Terrain

Roads for different Thromde 50k

Highway 300k ---Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k Farm 5k ====

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Chhubu	916	735	1,651	124.6	30.6	313	4.3
Punakha Town	3,440	2,822	6,262	121.9	12.3	1,049	4

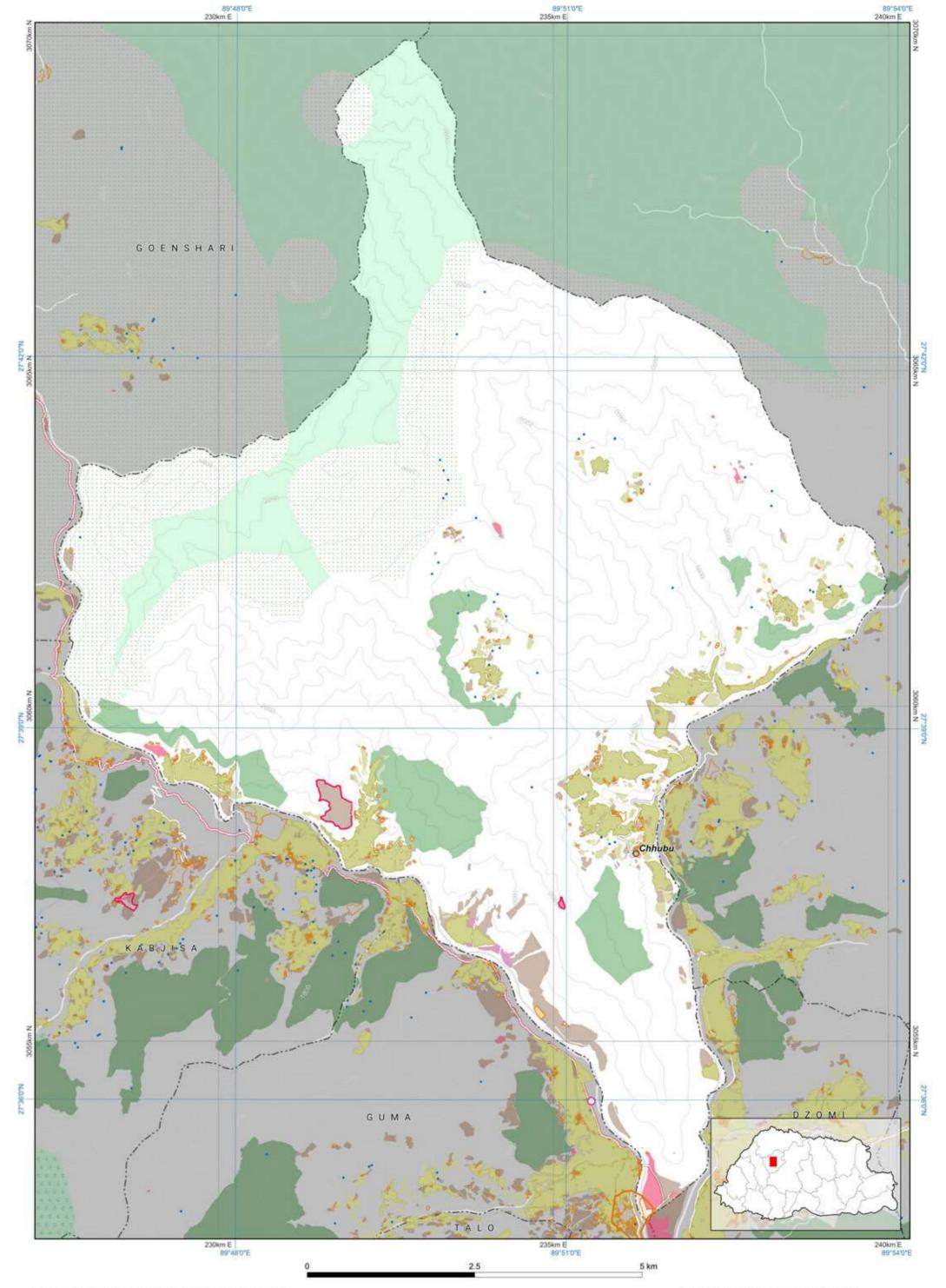
# Disclaimer: Disclaimer: Th include the de

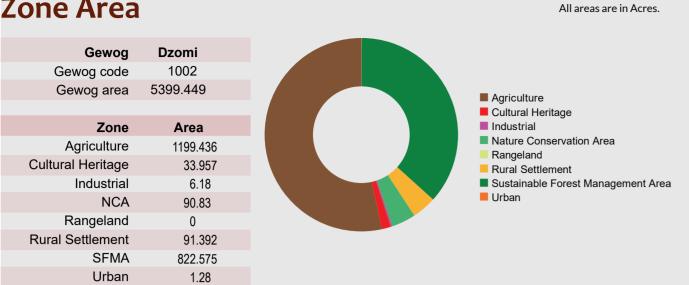
•
The demographic statistics provided in the table above for Punakha town encompass not only the area falling under the Chhubu gewog but also
demographic statistics of the town area falling under the Guma and Dzomi gewog. The same statistics for Punakha town can be found under the
Dzomi gewog.

#### **Data Ownership**

	•
ı	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Culture and Dzongkha Development Ministry of Home Affairs
	Department of Human Settlement Ministry of Infrastructure and Transport
	National Land Commission Secretariat

#### National Land Use Zoning 2023 Punakha: Chhubu





# **Zone Conflict**

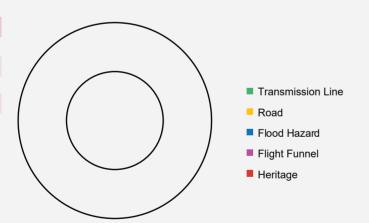
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	0.57	0	0	0	1.312	0
Agriculture	0	0.57	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	1.312	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Punakha: Dzomi

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

> Residential Land Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area Core Zone Transistion Zone

Multi Use Zone Biological Corridor / Botanical Park Ramsar Site

Buffer Zone

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport • Helipad O

> Hydro Power Plants A Hydro Power Waterways ----

Basemap Boundaries

International --Dzongkhag - -Gewog --Perennial Terrain

Roads for different Highway 300k ---Thromde 50k

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k Farm 5k

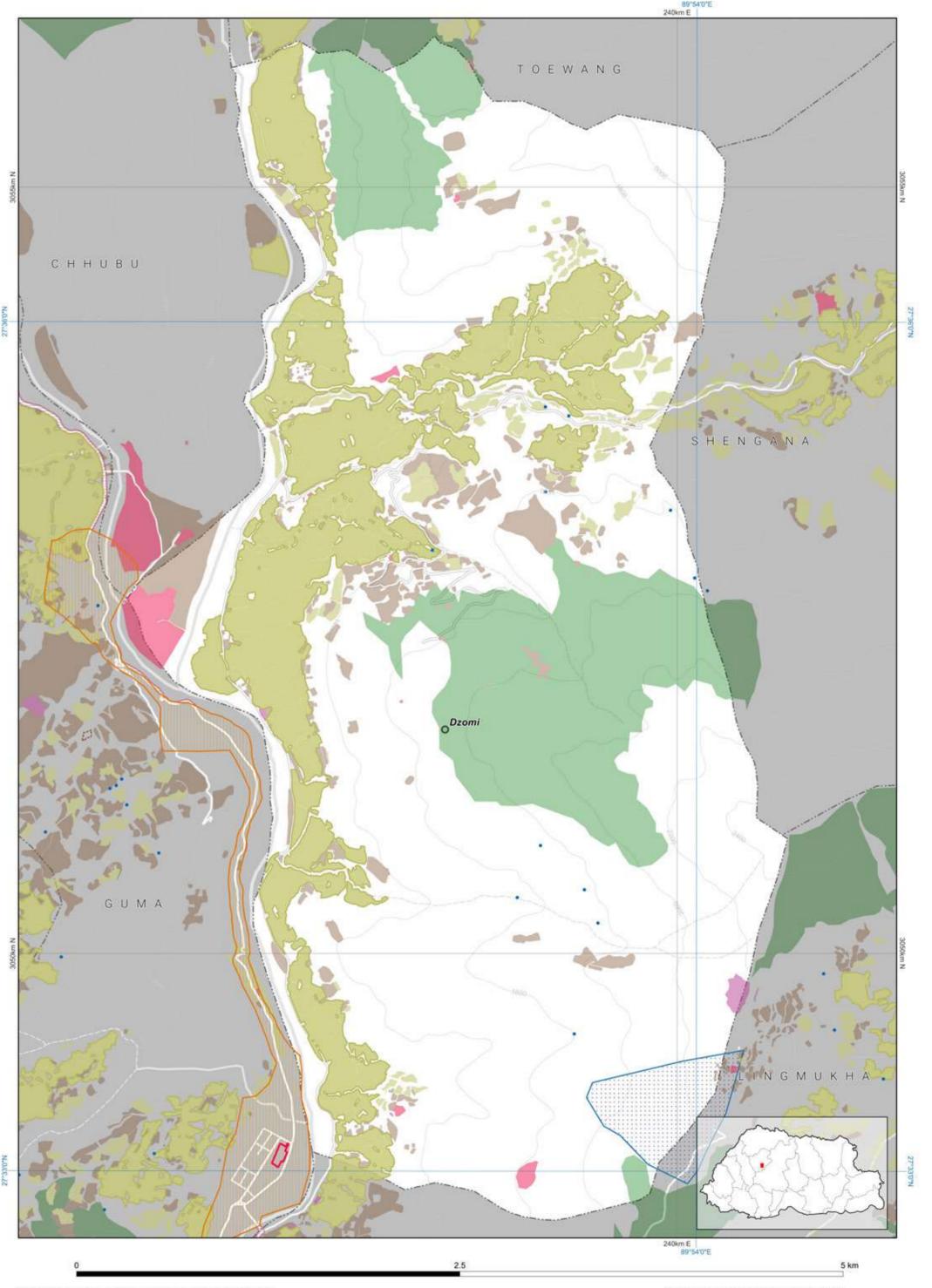
#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Dzomi	1,036	1,111	2,147	93.2	20.9	395	4.2	
Punakha Town	3,440	2,822	6,262	121.9	12.3	1,049	4	

Disclaimer: The demographic statistics provided in the table above for Punakha town encompass not only the area falling under the Dzomi gewog but also include the demographic statistics of the town area falling under the Chhubu and Guma gewog. The same statistics for Punakha town can be found under the Chhubu and Guma gewog.

#### Data Ownership

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
National Land Commission Secretariat



Gewog         Goenshari           Gewog code         1003           Gewog area         21840.861           Zone           Agriculture         505.471           Cultural Heritage         17.144           Industrial         0.2           NCA         21373.506           Rangeland         0           Rural Settlement         61.309           SFMA         392.71           Urban         0

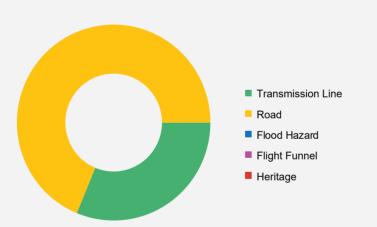
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	392.71	0.00	0	0		0	0
NCA	392.71	0	456.31	0	17.144	0.2	61.309	0
Agriculture	0	456.31	0	0	0.571	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	17.144	0.571	0	0	0	0.005	0
Industrial	0	0.2	0	0	0	0	0	0
Rural Settlement	0	61.309	0	0	0.005	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	4.135	0	0.000	0	0	0	0.156	0
Road	0	77.108	2.886	0	0	0	1.093	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	38.224
Road	84.205
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Punakha: Goenshari

#### Residential Land Institutional Land

Forest Management Unit Community Forest

#### Religious Sites Heritage Village Heritage Conservation Zone

**Cultural Heritage** 

Urban Zone Nature Conservation Area

#### Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Ramsar Site

#### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

#### Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

#### Industrial Manufacturing and Production Existing mines

Airport Helipad O

#### Hydro Power Plants A Hydro Power Waterways -

#### Basemap Boundaries

International --Dzongkhag - -Gewog ---

Perennial Terrain

	Roads for differe map scale
Highway 300k ——	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k ==

#### Data Ownership

п	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources

#### Demographic Table

	Department of Culture and Dzongkha Development Ministry of Home Affairs							
Gewog / Throm	To <i>Mal</i> e	tal Populatio <i>Femal</i> e	n <i>Total</i>	Sex ratio	Aging Index Number of household Mea		Mean Household size	Department of Surface Transport Ministry of Infrastructure and Transport
Goenshari	413	281	694	147.0	47.8	145	3.6	National Land Commission Secretariat

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

KABJISA

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

CHHUBU

TOEWANG

National Land Use Zoning 2023

LUNANA



Zone Area	
<b>Gewog</b> Gewog code	<b>Guma</b> 1004
Gewog area	9136.982
Zone	Area
Agriculture	1702.384
Cultural Heritage	36.185
Industrial	9.804
NCA	0
Rangeland	0
Rural Settlement	207.018
SFMA	1152.677
Urban	275.988

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	35.374	0		0.003	0
Urban	0	0	35.374	0	2.329	0.05	65.183	0
Culture	0	0	0	2.329	0	0	0	0
Industrial	0	0	0	0.05	0	0	0	0
Rural Settlement	0	0	0.003	65.183	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0.247	0	13.141	0	0	0	3.309	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

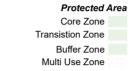
•	
Buffer Zone	Area
Transmission Line	0
Road	75.202
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**

Punakha: Guma







Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -

Perennial

Roads for different

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Guma	1,454	1,298	2,752	112.0	30.2	588	3.8	
Punakha Town	3,440	2,822	6,262	121.9	12.3	1,049	4	

Disclaimer: The demographic statistics provided in the table above for Punakha town encompass not only the area falling under the Guma gewog but also include the demographic statistics of the town area falling under the Chhubu and Dzomi gewog. The same statistics for Punakha town can be found under the Chhubu and Dzomi gewog.

#### **Data Ownership** Data Owner of the Map Content

Department of Water

Dzongkhag 5k

Highway 300k ---

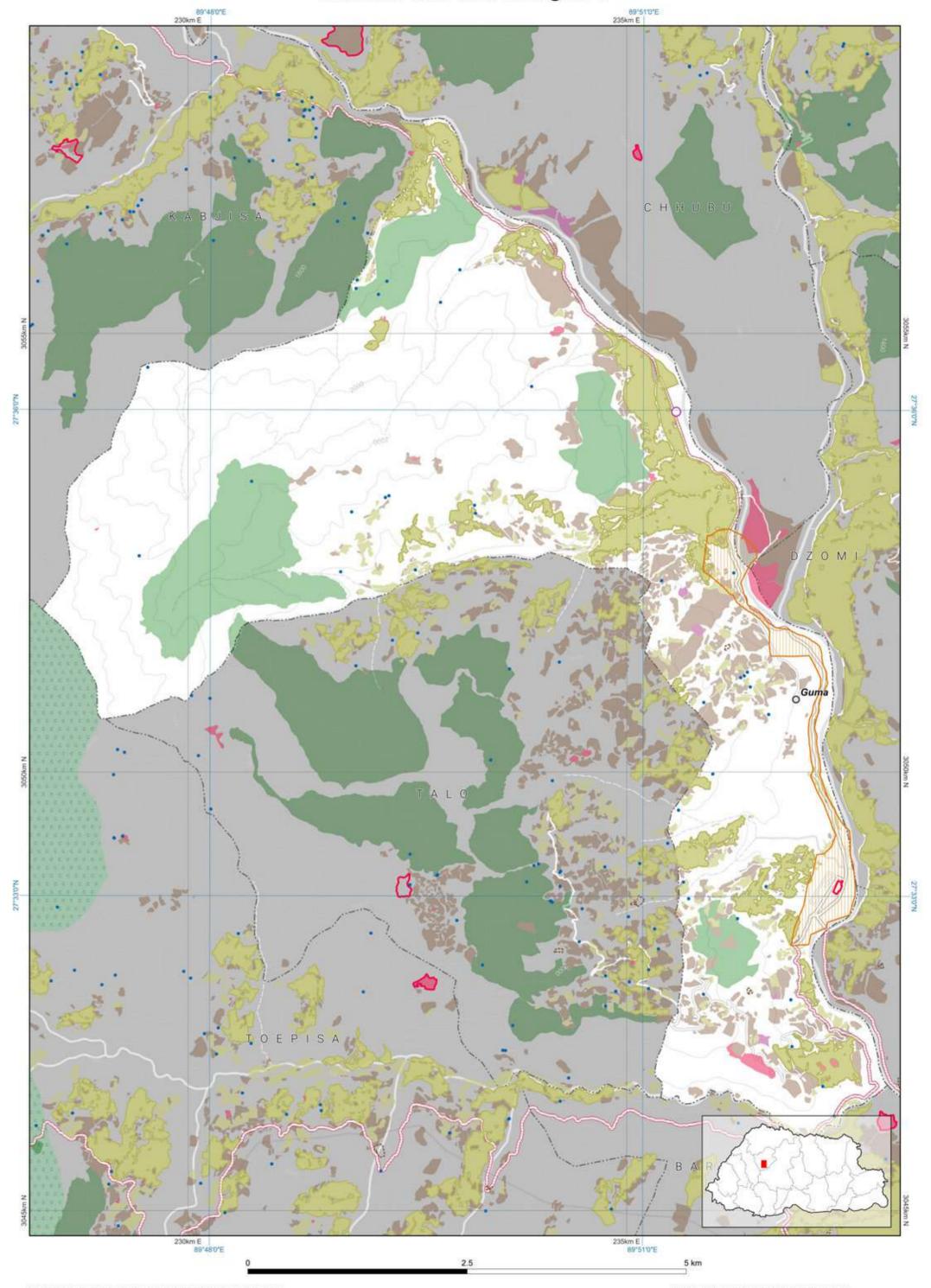
Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources

Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs Department of Air Transport

Department of Human Settlement Ministry of Infrastructure and Transport

Ministry of Infrastructure and Transport

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



# 70ne Area

Zone Ar	ea	
Gew	_	Kabjisa
Gewog co Gewog ar		1005 51007.008
Zo	ne	Area
Agricultu		1398.114
Cultural Herita	•	14.728
Indust		0.35
	CA	40160.625
Rangela	and	0
Rural Settleme	ent	139.621
SFI	MA	2535.514
Urb	oan	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	241.378	0.00	0	0	0	0	0
NCA	2 41.378	0	17.32	0	1.131	0	0	0
Agriculture	0	17.32	0	0	2.172	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	1.131	2.172	0	0	0.1	0.002	0
Industrial	0	0	0	0	0.1	0	0	0
Rural Settlement	0	0	0	0	0.002	0	0	0
Rangeland	0	0	0	0	0	0	0	0

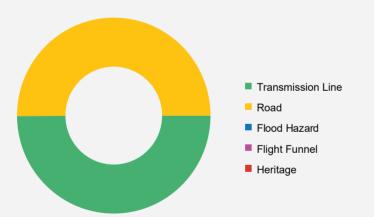
# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	10.814	17.863	0.448	0	0	0	0	0
Road	3.51	0	9.466	0	0.079	0	2.453	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	64.918
Road	65.12
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



# Map Legend

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Punakha: Kabjisa

NARO

#### Residential Land Institutional Land

Forest Management Unit

#### Community Forest **Cultural Heritage** Religious Sites

Urban Zone

Heritage Village Heritage Conservation Zone

#### **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood

> Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production

Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways ----

# Basemap

Boundaries International --

Dzongkhag - -Perennial

# Terrain

ghway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k

Thromde 5k	Highway 25k ====
Access 5k	Highway 5k
Industrial 5k	zongkhag 50k ===
Farm 5k	zongkhag 25k ===

#### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development

Ministry of Home Affairs Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

1,246 2,542 4.3

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

215km E 89\*39\*0\*E

KAWANG

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

TOEPISA.

CHHUBU

National Land Use Zoning 2023

GASA

Z	one Area	
	Gewog	Lingmukha
	Gewog code	1006
	Gewog area	8437.484
	Zone	Area
	Agriculture	851.22
	Cultural Heritage	59.048
	Industrial	4.094
	NCA	34.873
	Rangeland	0
	Rural Settlement	107.898
	SFMA	1438.915
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	1.74	0	0.477	0	17.869	0
Agriculture	0	1.74	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.477	0	0	0	0.1	0	0
Industrial	0	0	0	0	0.1	0	0	0
Rural Settlement	0	17.869	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0.636	0	0	0.07	2.28	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

•	
Buffer Zone	Area
Transmission Line	0
Road	28.954
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**











#### Key Biodiversity Area High Conservation Value Tsamdro





#### Hydro Power Plants A Hydro Power Waterways — Basemap

Boundaries
International
Dzongkhag
Gewog
Rivers
Main river

comog
Rive
Main river
Perennial -
Terrain
Contour —

Roads for different
map scales
Thromde 50k
Thromde 25k
Thromdo 5k

Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

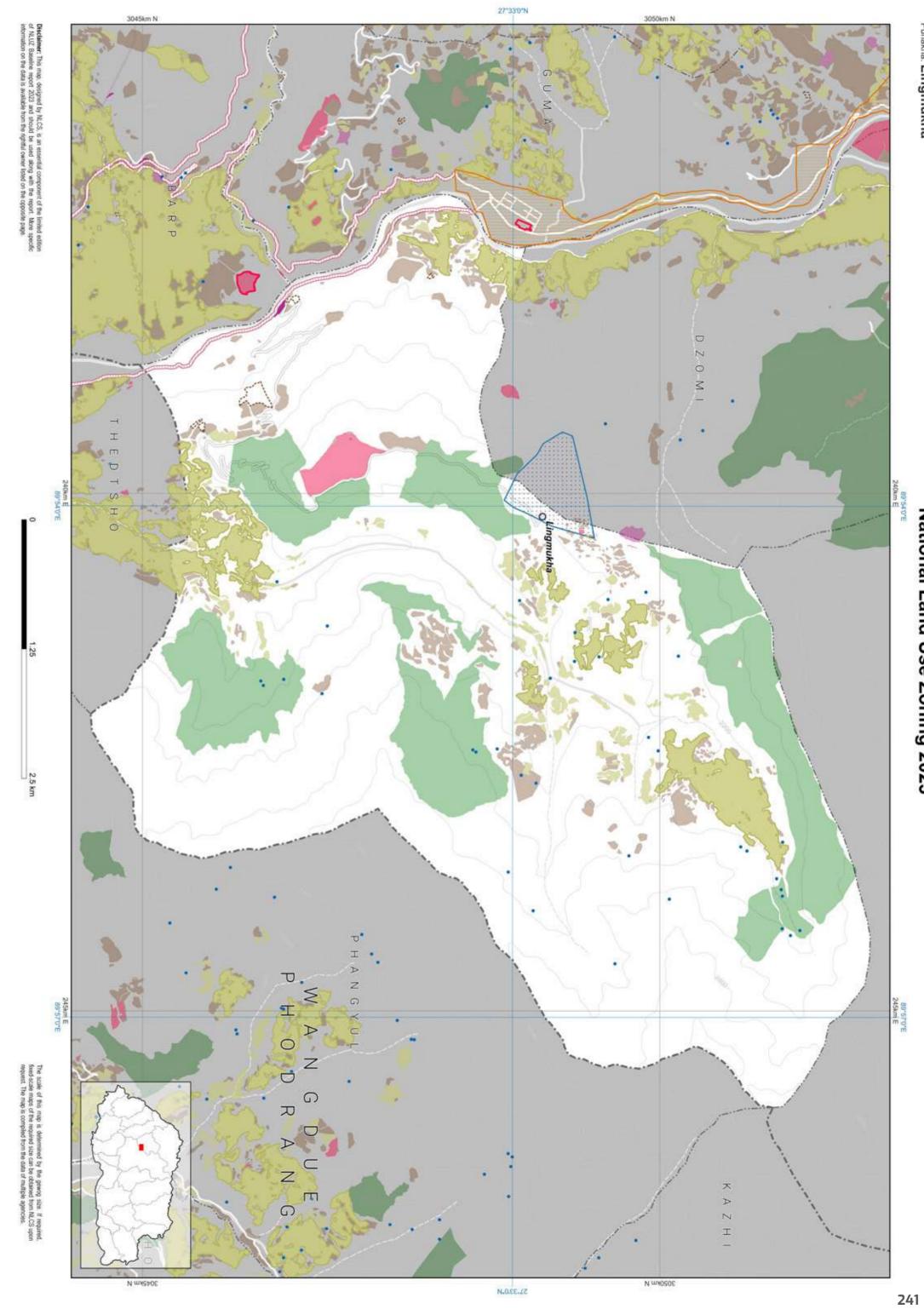
#### **Data Ownership**

Highway 300k

Data Owner of the map content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								Department of Water Ministry of Energy and Natural Resources
Total Population  Gewog / Throm <i>Male Female Total</i>		Sex ratio	Aging Index	Number of household	Mean Household size	Department of Surface Transport Ministry of Infrastructure and Transport		
Lingmukha	535	483	1,018	110.8	41.7	260	3.7	National Land Commission Secretariat



o <b>g</b> de ea	<b>Shengana</b> 1007 15421.86	Agriculture
		■ Agriculture ■ Cultural Heritage ■ Industrial
<b>Area</b> 939.513		■ Nature Conservation Area
5.71		Rangeland Rural Settlement
0.27		■ Sustainable Forest Management Area ■ Urban
0		- Orban
0		
54.866		
430.268		
0		

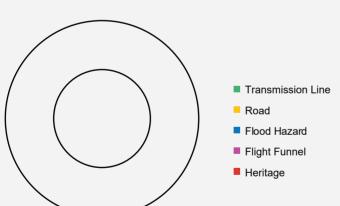
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Residential Land Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** 

#### Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area

#### Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A

Hydro Power Waterways — Basemap

#### Boundaries International --

Dzongkhag - -Gewog --Perennial Terrain

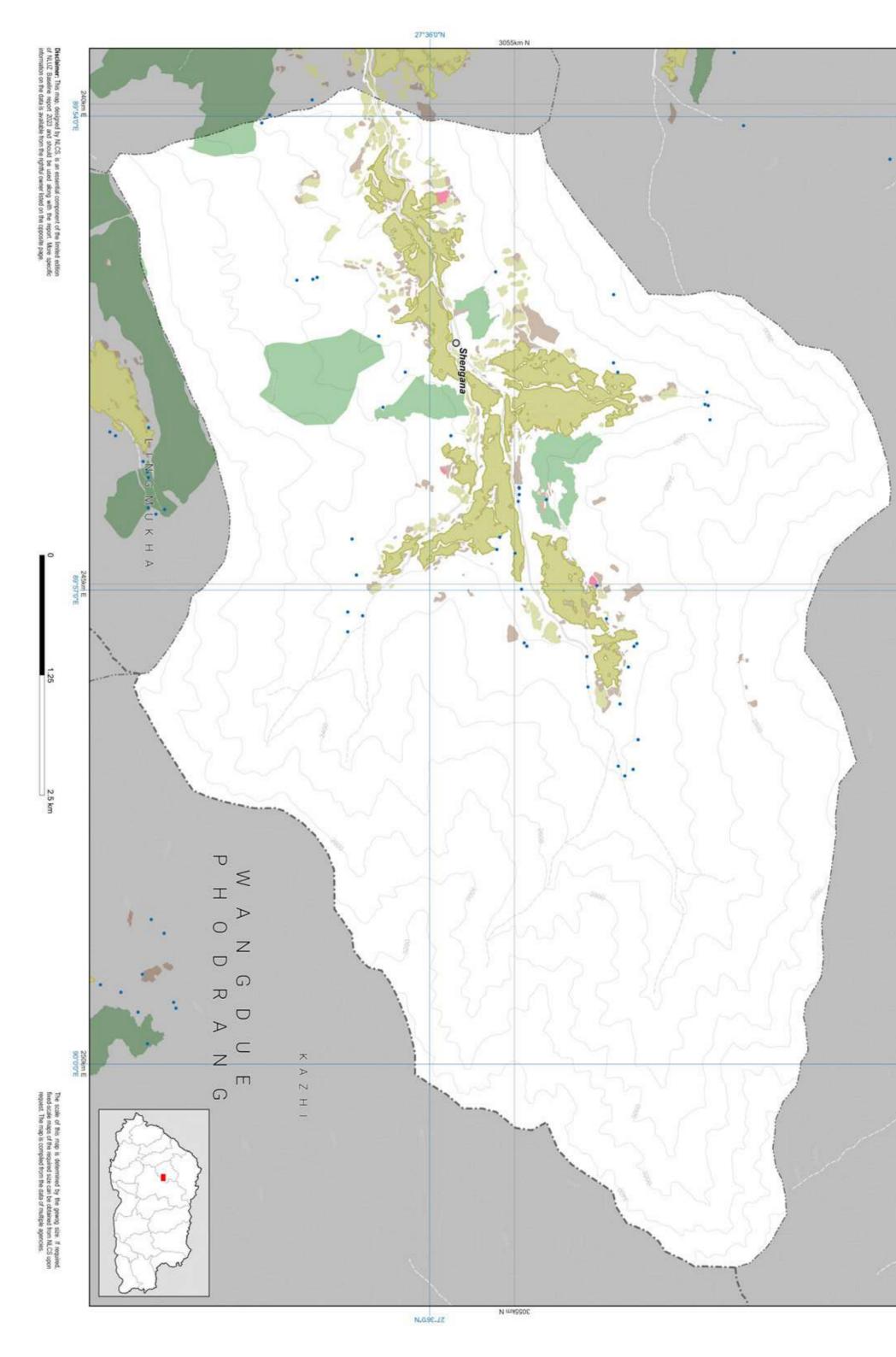
# Roads for different

Highway 300k —— Thromde 50k Highway 50k === Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k = Industrial 5k Dzongkhag 25k

Data Owner of the Map Content

# Data Ownership

	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Forests and Park Service Ministry of Energy and Natural Resource
ı	Department of Water Ministry of Energy and Natural Resource
-	National Land Commission Secretariat



# Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Changana	E22	404	1.002	100 E	4F 0	220	2.7

	ıı Ca	
	Gewog	Talo
Gew	og code	1008
Gew	og area	6293.82
	Zone	Area
Agr	riculture	1136.925
Cultural F	Heritage	15.732
Ir	ndustrial	0
	NCA	0
Rar	ngeland	0
Rural Set	ttlement	89.532
	SFMA	1625.22
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

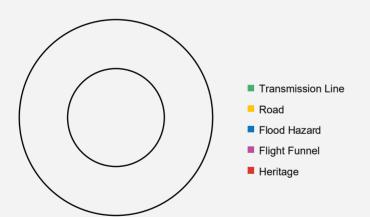
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

1,205

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 



# **Map Legend**

All areas are in Acres.

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

> Residential Land Institutional Land

Forest Management Unit Community Forest Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Manufacturing and Production

Existing mines Airport • Helipad O

Hydro Power Plants A

Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -Perennial

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

#### **Data Ownership** Data Owner of the Map Content

3.2

Highway 300k =

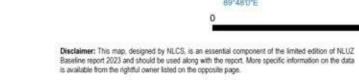
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
National Land Commission Secretariat

#### Punakha: Talo

. 16

Bat 2

# National Land Use Zoning 2023



235km E 89°51'0"E 5 km

Zone Area	
Gewog Gewog code Gewog area	<b>Toepisa</b> 1011 25357.804
<b>Zone</b> Agriculture Cultural Heritage	<b>Area</b> 1639.962 14.762
Industrial NCA	0.499 16407.399
Rangeland Rural Settlement SFMA	0 210.767 344.601
Urban	0

# **Zone Conflict**

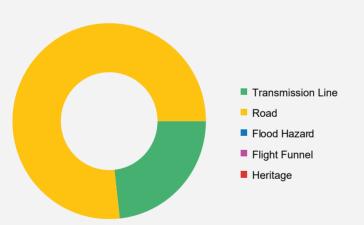
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	125.719	0.00	0	0	0	0	0
NCA	125.719	0	93.37	0	3.501	0.315	131.444	0
Agriculture	0	93.37	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	3.501	0	0	0	0	0	0
Industrial	0	0.315	0	0	0	0	0	0
Rural Settlement	0	131.444	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	14.784	43.908	9.678	0	0	0	1.779	0
Road	0.142	158.647	11.409		0.106	0.007	2.287	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	76.541
Road	252.606
Flood Hazard	0
Flight Funnel	0
Heritage	0



# Map Legend

Lease Land

Forest Management Unit Community Forest

Heritage Village

Protected Area Core Zone Transistion Zone Buffer Zone

Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

> Existing mines Airport •

> > Hydro Power Plants A

Boundaries International --

Dzongkhag - -Perennial

#### Data Ownership

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water

Department of Culture and Dzongkha Development Ministry of Home Affairs

Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

# **National Land Use Zoning**



Punakha: Toepisa

Residential Land Institutional Land

**Cultural Heritage** Religious Sites Heritage Conservation Zone

Urban Zone **Nature Conservation Area** 

Multi Use Zone

Flight Funnel

Significant Watershed

Manufacturing and Production

Helipad O Hydro Power Waterways -

Basemap

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

# **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)												
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size					
Gewog / Throm	Male	Female	Total									
Toepisa	1,282	1,145	2,427	112.0	29.1	526	3.4					

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

BARP

zone A	rea	
	ewog	Toewang
Gewog		1009
Gewog	g area	102924.533
	Zone	Area
Agric	culture	1309.37
Cultural He	ritage	1.542
Indi	ustrial	0.415
	NCA	74625.264
Rang	geland	0
Rural Settle	ement	65.232
5	SFMA	716.462
Ţ	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	65.405	0.00	0	0	0	0	0
NCA	65.405	0	44.91	0	0	0	7.85	0
Agriculture	0	44.91	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	7.85	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Punakha: Toewang

#### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

# Residential Land Institutional Land





Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Ramsar Site Hazard and Risk

Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

Significant Watershed Potential Recharge Area

# Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport

#### Hydro Power Plants A Hydro Power Waterways — Basemap

Helipad O

Boundaries International --

Dzongkhag - -Gewog ---Perennial

#### Terrain Roads for different

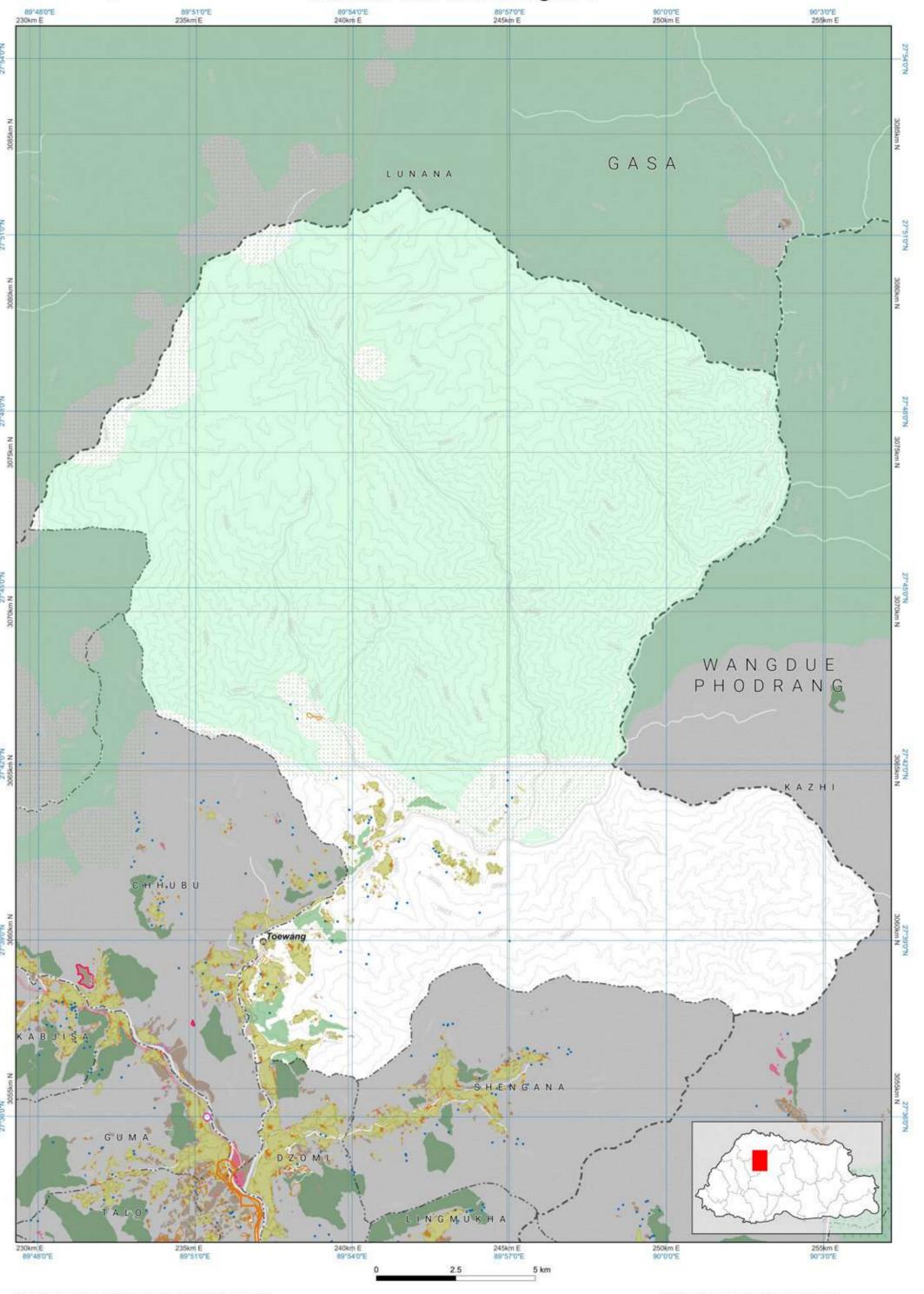
Highway 300k ==== Highway 50k === Highway 25k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k Farm 5k ====

#### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)												
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size						
Gewog / Throm	Male	Female	Total										
Toewang	620	693	1,313	89.5	36.8	305	4.1						

### **Data Ownership**

ı	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	National Land Commission Secretariat





**Zone Conflict** 

# **Map Legend** All areas are in Acres.

Agriculture

Culture

10.303

0.023

Industrial

Rangeland Rural Settlement

> 1060.283 0.002

40.871

Nature Conservation Area

■ Sustainable Forest Management Area





#### Residential Land Institutional Land

# Forest Management Unit







#### Core Zone Transistion Zone Buffer Zone Multi Use Zone

# Biological Corridor / Botanical Park

#### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

# Powerlines

Flight Funnel

#### Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

#### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

# Manufacturing and Production Existing mines

Airport • Helipad O

#### Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries International --

Dzongkhag - -Perennial Terrain Contour

#### Roads for different map scales

Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =
ongkhag 25k ===	Farm 5k =
rongkhag 5k	

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Settlement	Rangeland
Transmission Line	12.083	145.169	114.083	2.798	0	4.583	2.196	0
Road	0	1.505	50.240	0	0	0.195	17.729	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

1,624.82

0.637

0.002

354.74

0.023

40.871

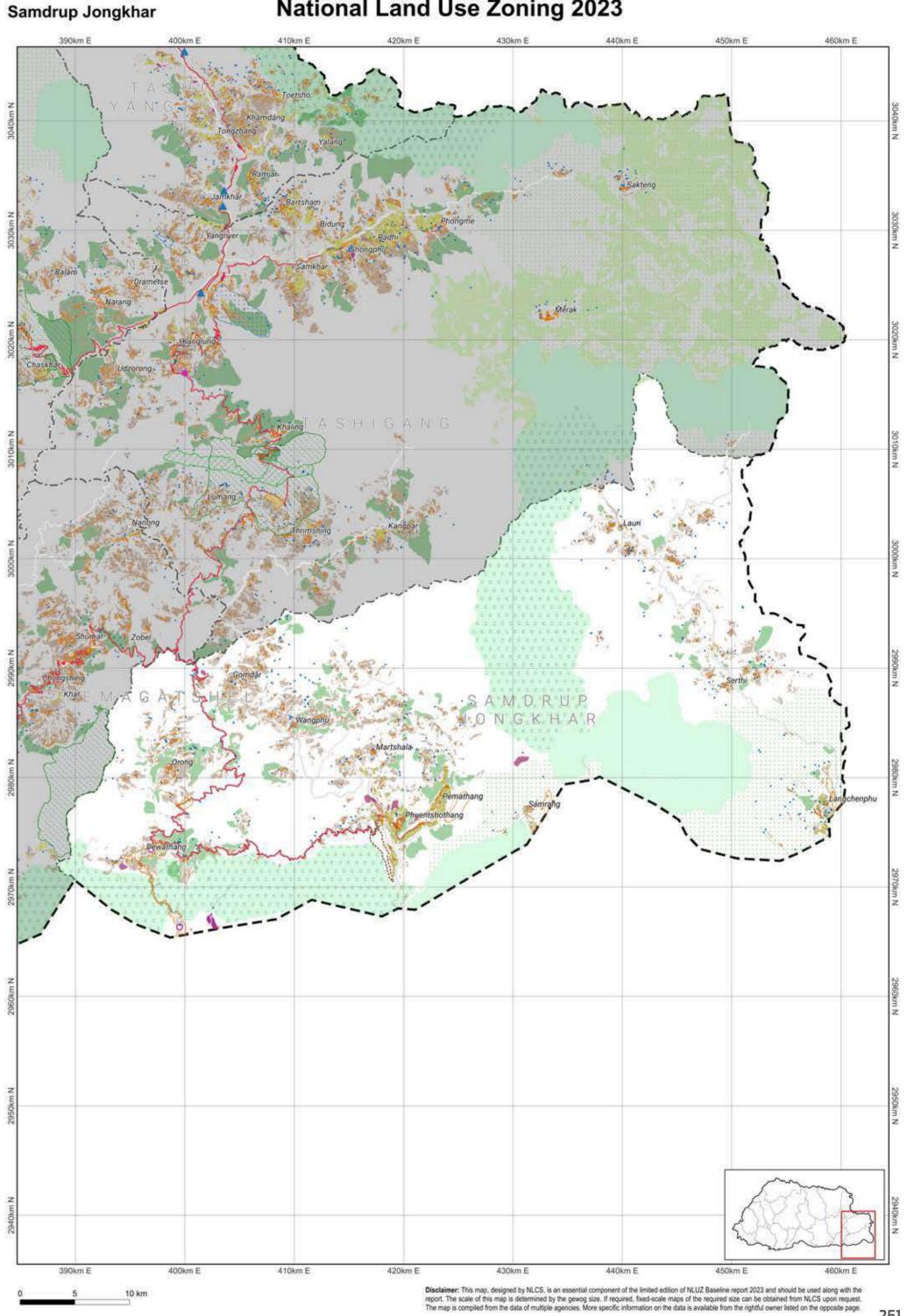
# RoW / Buffer Area

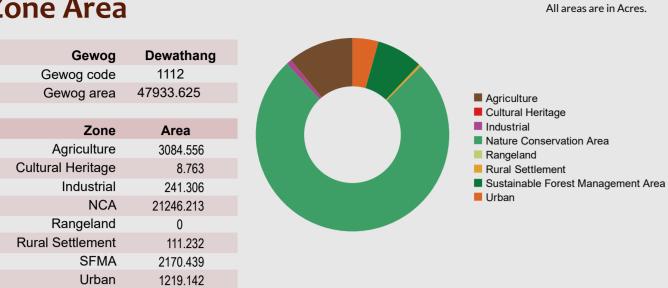
**RoW / Buffer Conflict** 

Buffer Zone	Area
Transmission Line	563.523
Road	825.392
Flood Hazard	0
Flight Funnel	0
Heritage	0

## Demographic Table

		Dzo	ngkhag K	ey Demographic	Indicators, 2017 ( So	ource: NSB, PHCB 2017)	
	Tot	al Population	n	Sex ratio	Aging Index	Number of household	Mean Household size
Dzongkhag	Male	Female	Total				
Samdrup Jongkhar	18,329	16,750	35,079	109.4	22.1	8,053	3.7





# **Zone Conflict**

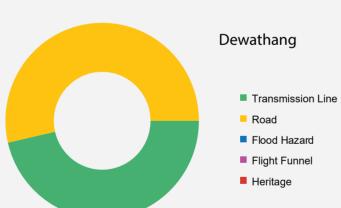
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	328.688	0	0.301	0	0	0	0
NCA	328.688	0	292.94	157.852	0	0	6.611	0
Agriculture	0	292.94	0	36.944	0	0.636	0	0
Urban	0.301	157.852	36.944	0	0	0	1.442	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0.636	0	0	0	0	0
Rural Settlement	0	6.611	0	1.442	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	127.244	42.263	2.798	0	2.271	1.884	0
Road	7.678	1.505	16.198	0	0	0.161	2.57	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	245.715
Road	283.741
Flood Hazard	0
Flight Funnel	0
Heritage	0



# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Dewathang	1,599	1,315	2,914	121.6	14.5	685	3.8
Samdrup J. Thr.	5,016	4,309	9,325	116.4	11.0	2,055	3.7

# **Map Legend**

### **National Land Use Zoning** Kamzhing

Protected Chhuzhing Regulated Chhuzhing Lease Land

#### Rural Settlement Residential Land Institutional Land

Sustainable Forest Forest Management Unit

#### Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

#### Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

#### Biological Corridor / Botanical Park Wetland Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value Rangeland Tsamdro

### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production

Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

# Basemap

Boundaries International --Dzongkhag - -

Gewog ---Rivers Perennial

Terrain Contour

Farm 5k ====

# Roads for different

Highway 300k ==== Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k Dzongkhag 50k === Industrial 5k

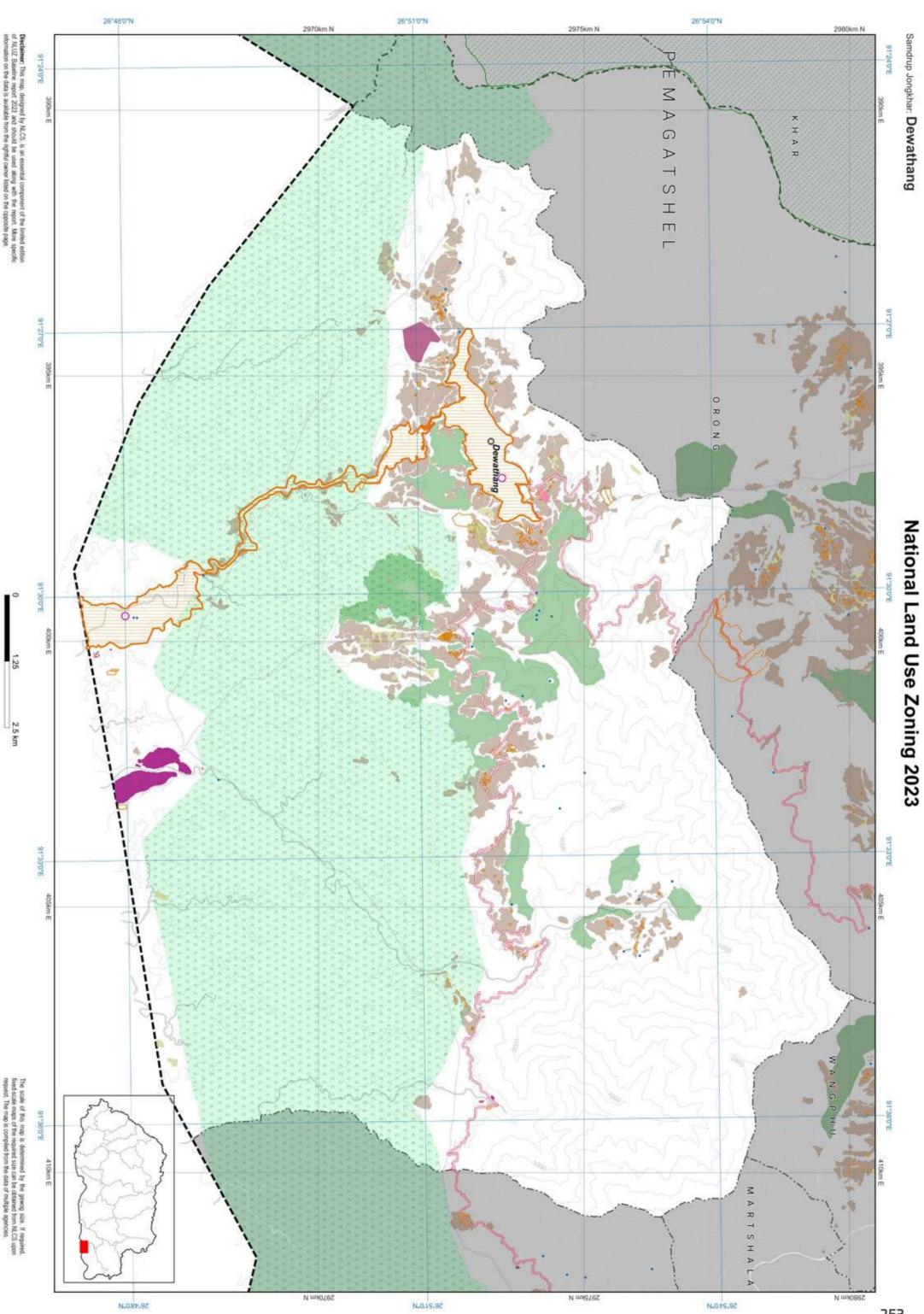
# **Data Ownership**

Dzongkhag 25k

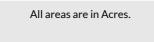
Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources Department of Air Transport Ministry of Infrastructure and Transport

Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

Department of Geology and Mines Ministry of Energy and Natural Resources National Land Commission Secretariat



Gewog	Gomdar
Gewog code	1102
Gewog area	40328.222
Zone	Area
Agriculture	4345.308
Cultural Heritage	15.009
Industrial	50.87
NCA	0
Rangeland	0
Rural Settlement	128.592
SFMA	1117.712
Urban	0





■ Sustainable Forest Management Area

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0.002	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0.002	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	21.143	0	0	0	0.153	0
Road	0.004	0	3.465	0	0	0	0.207	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

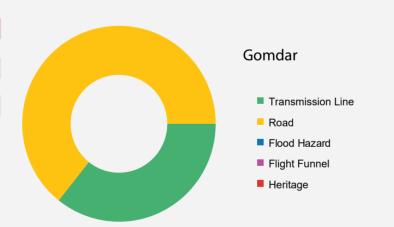
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	51.368
Road	92.518
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table

1,578 1,628 3,206



Forest Management Unit

Heritage Village

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Rain Induced Flood Glacier Lake Outburst Flood

Hazard and Risk

Powerlines

Key Biodiversity Area High Conservation Value

Tsamdro

Payment for Ecosystem Services Water Sources •

> Boundaries International --Dzongkhag - -

Perennial Terrain

Roads for different Thromde 50k

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Dzongkhag 25k

Data Owner of the Map Content Department of Energy

3.3

#### **Data Ownership**

Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# **Map Legend**



Samdrup Jongkhar: Gomdar

LUMAN

Lease Land Residential Land Institutional Land

Community Forest

**Cultural Heritage** Religious Sites Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area Core Zone Transistion Zone

Wetland Ramsar Site

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Significant Watershed Potential Recharge Area

Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -Basemap

Industrial 5k



91°33'0°E

one Area	
Gewog	Langchenphu
Gewog code	1103
Gewog area	54543.835
Zone	Area
Agriculture	992.716
Cultural Heritage	5.35
Industrial	9.353
NCA	54584.472
Rangeland	0
Rural Settlement	252.628
SFMA	514.006
Urban	196.803

# **Zone Conflict**

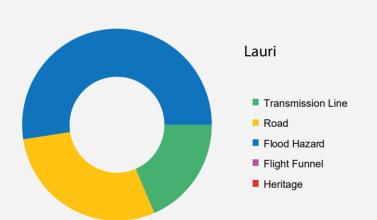
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	513.46	0.00	0	0	0	0	0
NCA	513.46		991.66	196.59	5.344	9.343	252.357	0
Agriculture	0	991.66	0	0.559	0	0	0	0
Urban	0	196.59	0.559	0	0	0.023	39.385	0
Culture	0	5.344	0	0	0	0	0	0
Industrial	0	9.343	0	0.023	0	0	0	0
Rural Settlement	0	252.357	0	39.385	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0
Rangeland	0	0	U	0	U	U	Ü	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	17.852	0	21.946	5.255	0	0	0.258	0
Road	50.513	0.022	13.248	0	0.043	3.227	0.492	0
Flood Hazard	0	0	8.020	89.935	0	174.754	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	161.239
Road	251.883
Flood Hazard	455.281
Flight Funnel	0
Heritage	0



# **Map Legend**

#### National Land Use Zoning Kamzhing Protected Chhuzhing Regulated Chhuzhing

Lease Land **Rural Settlement** Residential Land Institutional Land

# Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

# Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

#### Biological Corridor / Botanical Park Wetland Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

#### Rangeland Tsamdro

#### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines

> Airport Helipad O

#### Hydro Power Plants A Hydro Power Waterways —

#### Basemap Boundaries International --

Dzongkhag - -Gewog ---Perennial =

#### Terrain Contour Roads for different

Farm 5k ====

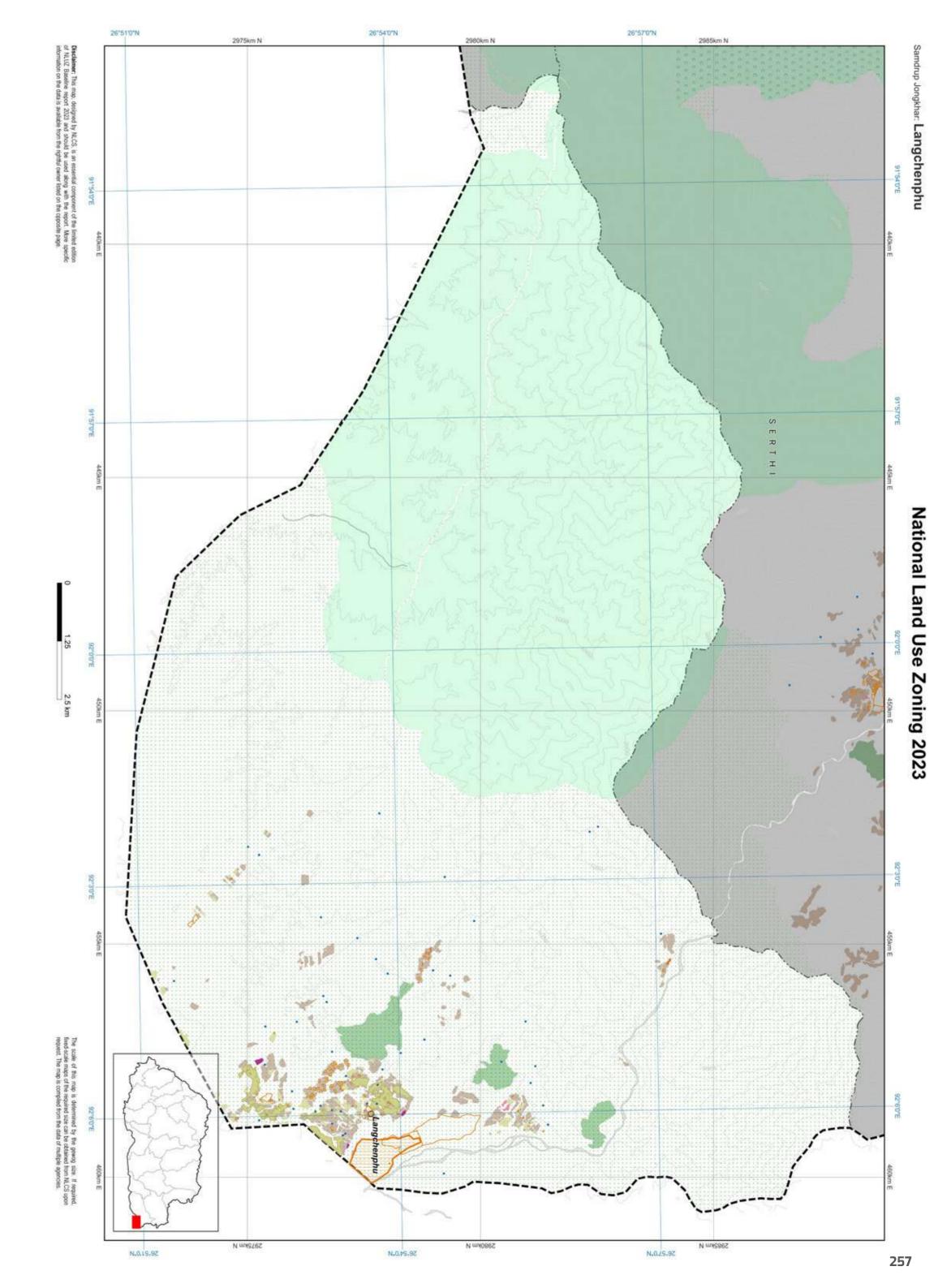
Highway 300k ==== Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k === Industrial 5k Dzongkhag 25k ====

## Data Ownership

Data Owner of the map content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
National Land Commission Secretariat

# Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Langchenphu	514	454	968	113.2	44.6	243	3.8			
Jomotsangkha Town	600	536	1,136	111.9	6.3	287	3.7			



Zone Area	1
Gewog Gewog code Gewog area	<b>Lauri</b> 1104 67282.681
<b>Zone</b> Agriculture Cultural Heritage	<b>Area</b> 3126.713 15.57
Industrial NCA	0.25 10157.783
Rangeland Rural Settlement	158.707 127.74
SFMA Urban	461.015 0
Olban	U

# **Zone Conflict**

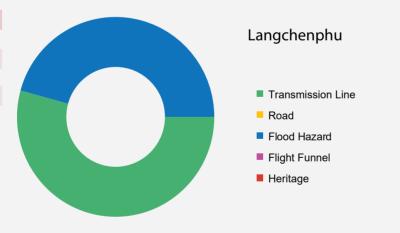
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	4.64	0	0	0	0	0
Agriculture	0.00	4.64	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	6.664	2.58	15.896	0	0	7.286	2.401	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	29.28	0.082	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	102.808
Road	0
Flood Hazard	86.659
Flight Funnel	0
Heritage	0



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National Land Commission Secretariat

# **Map Legend**

Samdrup Jongkhar: Lauri

KANGPAR

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

> Residential Land Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

> Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood

Protected Area

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value Rangeland

Significant Watershed Potential Recharge Area

Tsamdro

Payment for Ecosystem Services Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -Basemap

> Boundaries International --Dzongkhag - -Gewog ---

Perennial Terrain

Roads for different Highway 300k ---Thromde 50k Highway 50k === Highway 25k Thromde 5k

Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Lauri	830	884	1,714	93.9	40.8	498	3.0		

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

91"51"0"E

91°48'0°E

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

92°0'0°E

92'0'0'E

National Land Use Zoning 2023

MERAK

TASHIGANG

SAKTENG

SERTHI

91°57'0"E

159.225

1396.381

#### **Zone Area** All areas are in Acres. Martshala 1105 Gewog code 73076.767 Gewog area Agriculture ■ Cultural Heritage Industrial Area Zone ■ Nature Conservation Area Agriculture 5504.878 Rangeland Cultural Heritage 16.872 Rural Settlement 0.794 ■ Sustainable Forest Management Area Industrial Urban NCA 16086.219 Rangeland 0

# **Zone Conflict**

SFMA

Urban

Rural Settlement

SFMA         0		SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Agriculture         0         0         0         0         0         0         0           Urban         0         0         0         0         0         0         0         0           Culture         0         0         0         0         0         0         0         0           Industrial         0         0         0         0         0         0         0	SFMA	0	0	0	0	0	0	0	0
Urban         0         0         0         0         0         0         0         0           Culture         0         0         0         0         0         0         0         0           Industrial         0         0         0         0         0         0         0         0	NCA	0	0	0	0	0	0	0	0
Culture         0 </th <th>Agriculture</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th>	Agriculture	0	0	0	0	0	0	0	0
Industrial   0   0   0   0   0   0   0   0	Urban	0	0	0	0	0	0	0	0
	Culture	0	0	0	0	0	0	0	0
Rural Settlement 0 0 0 0 0 0 0 0	Industrial	0	0	0	0	0	0	0	0
	Rural Settlement	0	0	0	0	0	0	0	0
<b>Rangeland</b> 0 0 0 0 0 0 0 0	Rangeland	0	0	0	0	0	0	0	0

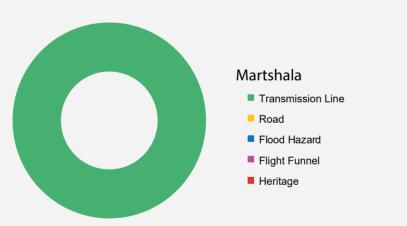
# RoW / Buffer Conflict

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	9.684	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	33.886
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



# **Map Legend**

#### **National Land Use Zoning** Kamzhing Protected Chhuzhing

Regulated Chhuzhing Lease Land

> Rural Settlement Residential Land

Institutional Land Sustainable Forest

Forest Management Unit Community Forest **Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park Wetland

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer

Ramsar Site

Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Rangeland Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources • Industrial

Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap

Airport

Boundaries International --Dzongkhag - -Gewog --Perennial

Farm 5k ====

Terrain Contour Roads for different

Highway 300k ==== Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k Dzongkhag 50k ==== Industrial 5k

### Data Ownership

Data Owner of the Map Content

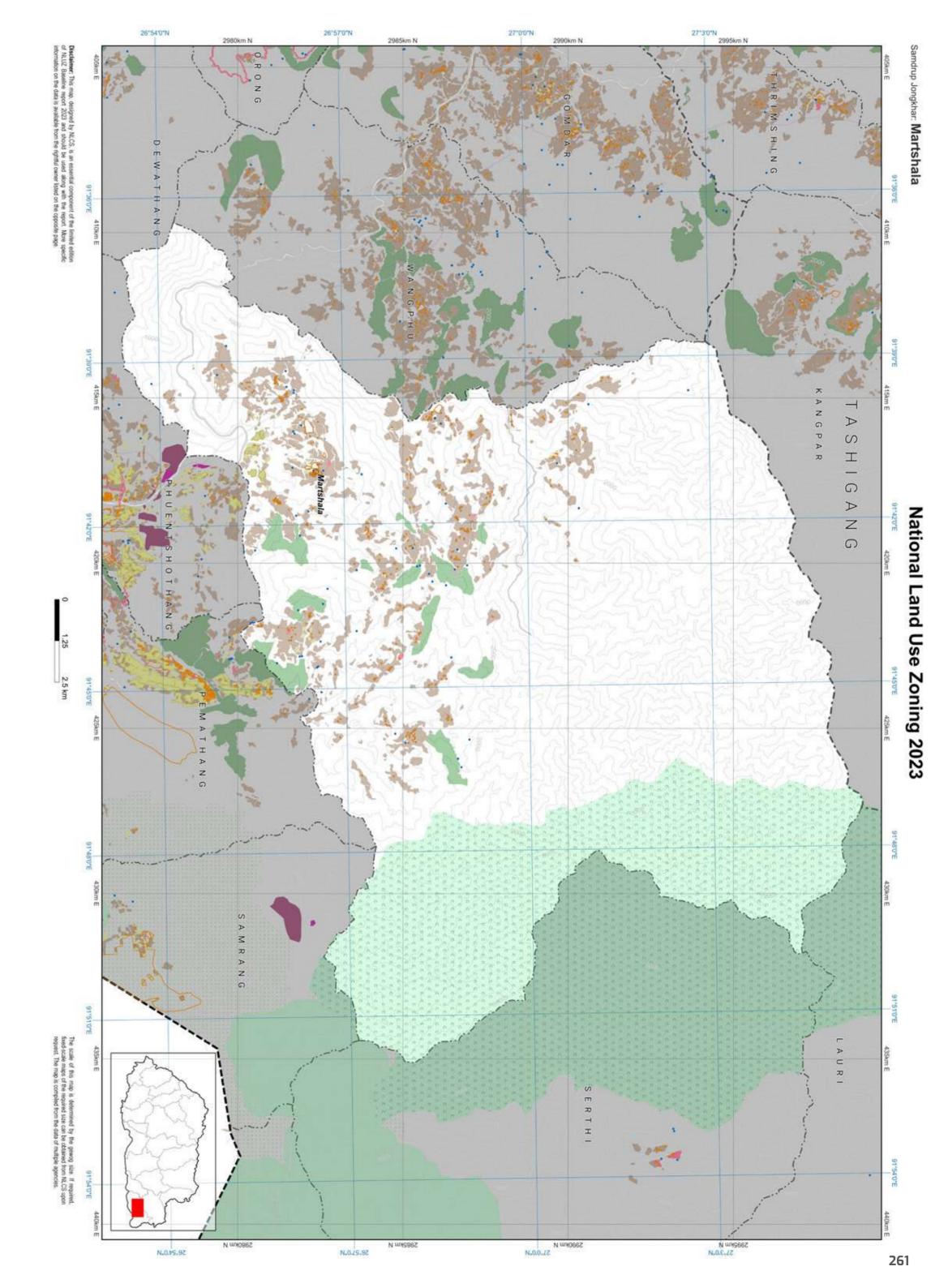
Dzongkhag 25k

Dzongkhag 5k

# Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resource

## Gewog wise Key Demographic Indicators, 2017 ( Source: NSE, PHCB 2017) 1,381 1,208 2,589 571

······-, ·· <del>-</del> ···-g, ····
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat



#### **Zone Area** All areas are in Acres. Orong 1107 Gewog code 40328.222 Gewog area Agriculture Cultural Heritage Industrial Zone Area ■ Nature Conservation Area Agriculture 4094.911 Rangeland Cultural Heritage 3.37 Rural Settlement ■ Sustainable Forest Management Area Industrial 6.826 NCA 1216.921 Rangeland 0 Rural Settlement 381.426

# **Zone Conflict**

**SFMA** 

Urban

2438.075

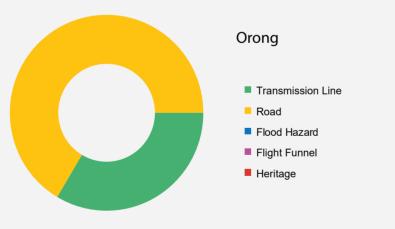
SFMA         0         0         0.00         0         0         0         0         0           NCA         0         0         0.19         0         0         0         0         0         0           Agriculture         0         0.19         0         0         0         0         0         0           Urban         0         0         0         0         0         0         0         0           Culture         0         0         0         0         0         0         0         0           Industrial         0         0         0         0         0         0         0         0           Rural Settlement         0         0         0         0         0         0         0           Rangeland         0         0         0         0         0         0         0		SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Agriculture         0         0.19         0         0         0         0         0         0         0           Urban         0         0         0         0         0         0         0         0         0           Culture         0         0         0         0         0         0         0         0           Industrial         0         0         0         0         0         0         0         0           Rural Settlement         0         0         0         0         0         0         0	SFMA	0	0	0.00	0	0	0	0	0
Urban         0         0         0         0         0         0         0         0           Culture         0         0         0         0         0         0         0         0           Industrial         0         0         0         0         0         0         0         0           Rural Settlement         0         0         0         0         0         0         0	NCA	0	0	0.19	0	0	0	0	0
Culture         0         0         0         0         0         0         0           Industrial         0         0         0         0         0         0         0         0           Rural Settlement         0         0         0         0         0         0         0         0	Agriculture	0	0.19	0	0	0	0	0	0
Industrial   0   0   0   0   0   0   0   0   0	Urban	0	0	0	0	0	0	0	0
Rural Settlement         0         0         0         0         0         0         0	Culture	0	0	0	0	0	0	0	0
	Industrial	0	0	0	0	0	0	0	0
Rangeland 0 0 0 0 0 0 0 0	Rural Settlement	0	0	0	0	0	0	0	0
	Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	5.697	16.274	17.548	0	0	0	0.043	0
Road	0.002	0	2.513	0	0	0.034	6.869	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	104.151
Flood Hazard	206.496
Flight Funnel	0
Heritage	0



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Department of Water Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# **Map Legend**

Samdrup Jongkhar: Orong

ational Land Use Zoni	in
Agricultural L	.an
Kamzhing	
Protected Chhuzhing	
Regulated Chhuzhing	

#### Residential Land Institutional Land

Lease Land

#### Forest Management Unit Community Forest **Cultural Heritage**

#### Religious Sites Heritage Village Heritage Conservation Zone

#### Urban Zone **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Ramsar Site Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

> Airport • Helipad O Hydro Power Plants A

#### Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -

Perennial

# Terrain

	iliap scal
way 300k ===	Thromde 50k
jhway 50k ===	Thromde 25k
jhway 25k ===	Thromde 5k
ighway 5k	Access 5k

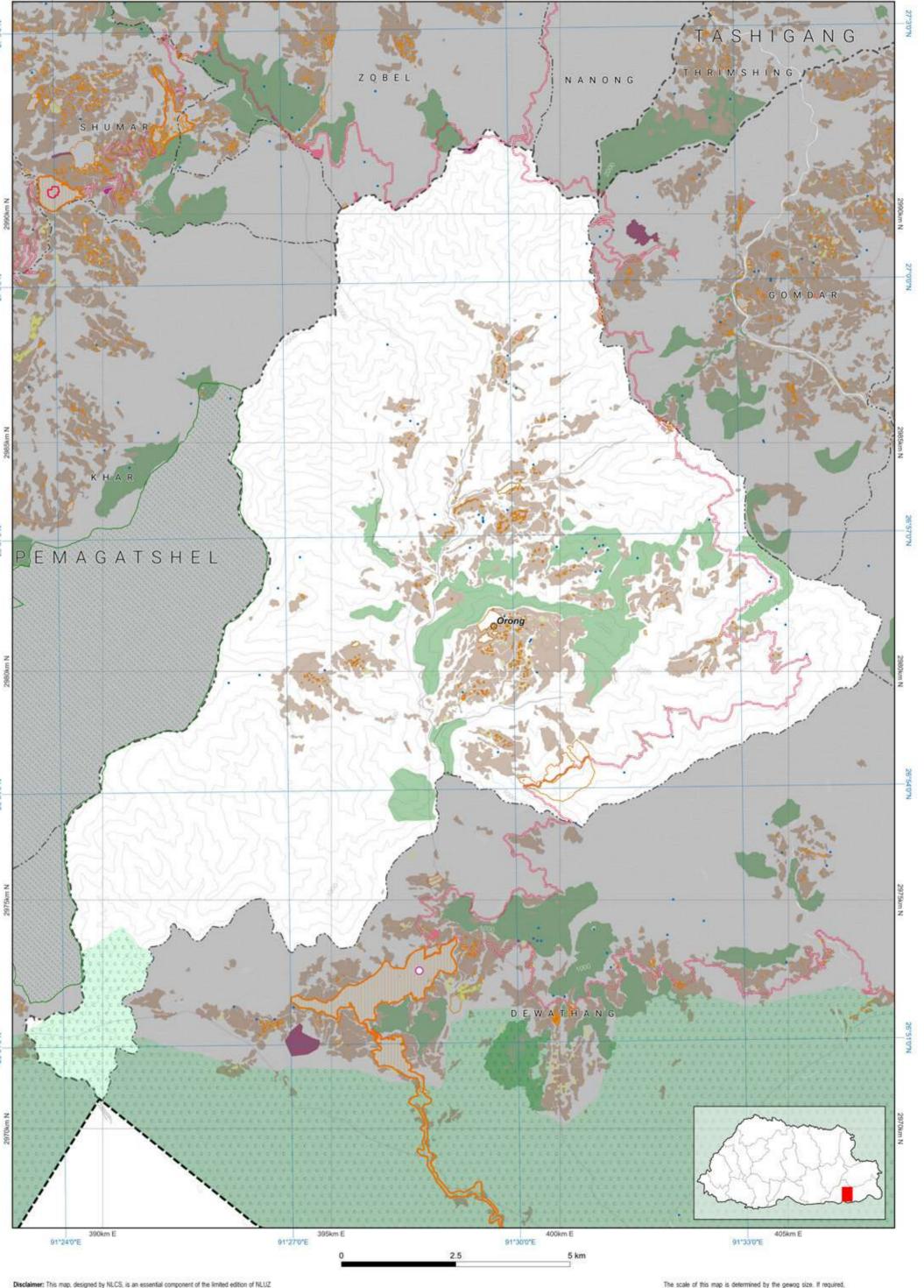
Dzongkhag 50k = Dzongkhag 25k =

# **Data Ownership**

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Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

**Demographic Table** 

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Tot	al Populatio	n	Sex ratio Aging Index	Aging Index	Number of household	Mean Household size			
Male	Female	Total							
1,428	1,387	2,815	103.0	40.0	624	3.8			
	Male	Total Populatio	Total Population  Male Female Total	Total Population Sex ratio  Male Female Total	Total Population Sex ratio Aging Index  Male Female Total	Total Population Sex ratio Aging Index Number of household  Male Female Total			



one mea	
Gewog	Pemathang
Gewog code	1108
Gewog area	19007.964
Zone	Area
Agriculture	1385.574
Cultural Heritage	6.549
Industrial	0.351
NCA	8283.03
Rangeland	0
Rural Settlement	736.267
SFMA	1561.437
Urban	0

# **Zone Conflict**

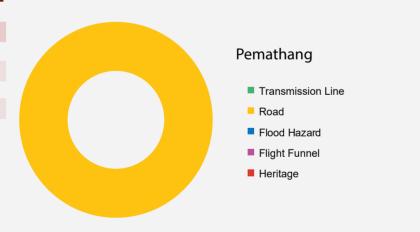
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	3.601	0	0	0	0	0	0
NCA	3.601	0	56.66	0	0	0.25	0	0
Agriculture	0	56.66	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0.25	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0
•								

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0.917	0	5.050	0	0	0	0.115	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	14.436
Flood Hazard	0
Flight Funnel	0
Heritage	0



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	Department of Water Ministry of Energy and Natural Resources
	Department of Surface Transport Ministry of Infrastructure and Transport
	National Land Commission Secretariat

# **Map Legend**

All areas are in Acres.

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Residential Land Institutional Land

Lease Land

**Cultural Heritage** 

Management Area
Forest Management Unit Community Forest

Religious Sites
Heritage Village
Heritage Conservation Zone
Urban
Urban Zone

Nature Conservation Area
Protected Area
Core Zone
Transistion Zone
Buffer Zone

Multi Use Zone
Biological Corridor /
Botanical Park

Wetland
Ramsar Site

Hazard and Risk
Rain Induced Flood
Glacier Lake
Outburst Flood
Right Of Way / Buffer
Heritage
Road
Powerlines

Key Biodiversity Area
High Conservation Value
Rangeland

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services

Water Sources

Industrial

Manufacturing and Production

Service

Existing mines

Airport Helipad OHydro Power Plants

Hydro Power Waterways — Basemap

Boundaries
International — —
Dzongkhag — —
Gewog — —
Rivers
Main river
Perennial — —

Terrain
Contour

Roads for different

Highway 300k Thromde 50k
Highway 50k Thromde 25k
Highway 25k Thromde 5k
Highway 5k Access 5k
Dzongkhag 50k Industrial 5k
Dzongkhag 25k Farm 5k
Dzongkhag 5k

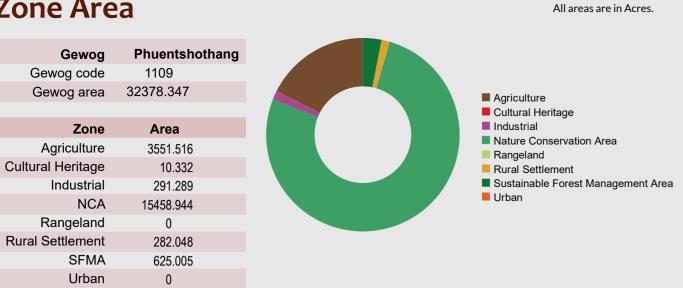
# Data Owne

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population				Aging Index	Mean Household size				
Male	Female	Total							
718	750	1,468	95.7	29.1	380	3.8			
	Male	Total Populatio Male Female	Total Population  Male Female Total	Total Population Sex ratio  Male Female Total	Total Population Sex ratio Aging Index  Male Female Total	Total Population Sex ratio Aging Index Number of household  Male Female Total			

# National Land Use Zoning 2023 Samdrup Jongkhar: Pemathang 91°48'0°E SAMRANG Pemathang

#### Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	39.43	0	0	0	0	0
Agriculture	0	39.43	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

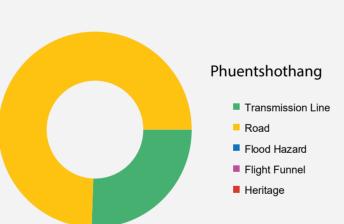
# RoW / Buffer Conflict

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

**Demographic Table** 

Buffer Zone	Area
Transmission Line	78.305
Road	228.201
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

nal Land Use Zoning							
Agricultural Land							
Kamzhing							
Protected Chhuzhing							
Regulated Chhuzhing							
Lease Land							

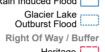
#### **Rural Settlement** Residential Land Institutional Land

# Community Forest









Heritage \_\_\_\_

Rangeland

# Significant Watershed

Industrial Manufacturing and Production

> Airport Helipad O

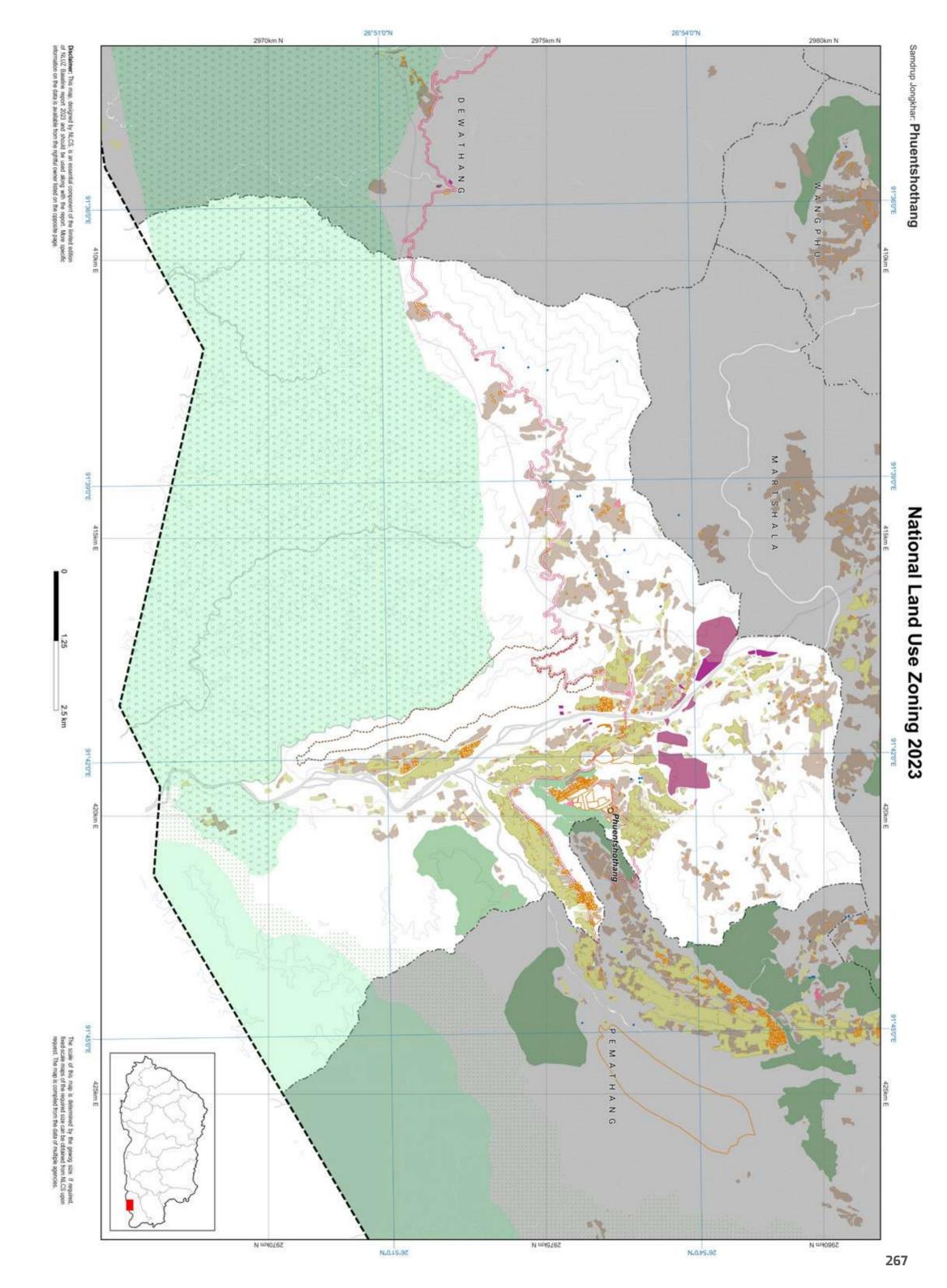
# Basemap

Gewog ---Perennial

Contour

#### Forest Management Unit **Cultural Heritage** Religious Sites Heritage Conservation Zone Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park Hazard and Risk Rain Induced Flood Powerlines Flight Funnel Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value Tsamdro Potential Recharge Area Payment for Ecosystem Services Water Sources • Existing mines Hydro Power Plants A Hydro Power Waterways -Boundaries International --Dzongkhag -Terrain Roads for different Highway 300k ==== Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k Dzongkhag 50k === Industrial 5k Dzongkhag 25k ==== Farm 5k ==== **Data Ownership** Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Mean Household size Department of Surface Transport Ministry of Infrastructure and Transport 701 4.2 National Land Commission Secretariat 335 4.0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017) **Total Population** Phuentshothang 1,557 1,471 3,028 29.2 Samdrupcholing Town 902 811 1,713 13.6



20116	Alea	
	Gewog	Samrang
G	Sewog code	1110
G	Sewog area	73076.767
	Zone	Area
	Agriculture	237.994
Cultur	ral Heritage	0
	Industrial	178.938
	NCA	10130.178
	Rangeland	0
Rural	Settlement	797.974
	SFMA	0
	Urban	0

# **Zone Conflict**

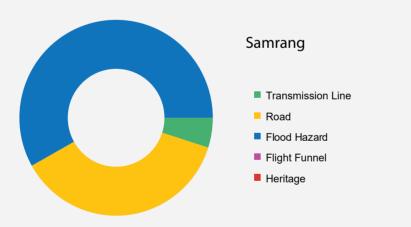
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	237.80	0	0	0.7	797.32	0
Agriculture	0	237.80	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0.7	0	0	0	0	0	0
Rural Settlement	0	797.32	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	5.024	0	0	0	0.299	0
Road	0	0	19.813	0	0	0.156	4.704	0
Flood Hazard	4.065	0	48.334	2.668	0	0	0.943	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	9.051
Road	67.789
Flood Hazard	106.713
Flight Funnel	0
Heritage	0



#### Data Ownership

# Data Owner of the Map Content Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Water
Ministry of Energy and Natural Resources

Department of Geology and Mines
Ministry of Energy and Natural Resources

National Land Commission Secretariat

# **Map Legend**

All areas are in Acres.

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Lease Land

Samdrup Jongkhar: Samrang

Residential Land Institutional Land

Sustainable Forest Management Area
Forest Management Unit Community Forest

Cultural Heritage

Religious Sites

Heritage Village

Heritage Conservation Zone

Urban Zone \_\_\_\_\_

Nature Conservation Area

Protected Area

Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone
Biological Corridor /
Botanical Park

Wetland
Ramsar Site
Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage

Powerlines
Flight Funnel

Other Effective Area-based Conservation Measures
Key Biodiversity Area
High Conservation Value

Rangeland
Tsamdro

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services

Water Sources
Industrial
Manufacturing and Production
Service

Existing mines

Airport

Helipad

Hydro Power Plants 
Hydro Power Waterways 

Basemap

Boundaries
International — —
Dzongkhag — —
Gewog — —

Rivers
Main river
Perennial
Terrain

Contour

Roads for different

Highway 300k Thromde 50k Thromde 25k Thromde 5k Access 5k

Dzongkhag 50k Industrial 5k Dzongkhag 25k Farm 5k Dzongkhag 5k

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Total Population				Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Samrang	209	101	310	206.9	52.6	55	3.5			

# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner lated on the opposite page.

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

5 km

SERTHI



National Land Use Zoning 2023

MARTSHALA

one Area	
<b>Gewog</b> Gewog code Gewog area	<b>Serthi</b> 1111 75794.027
Zone	Area
Agriculture Cultural Heritage	2690.915 42.598
Industrial	0.1
NCA	29822.769
Rangeland	0
Rural Settlement	118.767
SFMA	1692.322
Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# RoW / Buffer Conflict

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	16.718	0	0	0	0.37	0
Road	0	0	14.676	0	0	0	0.958	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone Area	
mission Line 27.44	
Road 79.773	
ood Hazard 0	
light Funnel 0	
Heritage 0	
Serthi  Transmission Line Road Flood Hazard	Highway 300k Highway 50k Highway 25k Highway 5k Dzongkhag 50k Dzongkhag 25k Dzongkhag 5k
■ Flight Funnel	
■ Heritage	

# Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Serthi	1099	991	2.090	110.9	25.6	439	3.2			

# **Map Legend**

#### National Land Use Zoning Kamzhing Protected Chhuzhing Regulated Chhuzhing

#### Lease Land Residential Land Institutional Land

# Forest Management Unit Community Forest

#### **Cultural Heritage** Religious Sites Heritage Village



Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

#### Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

#### Tsamdro Significant Watershed

Rangeland

Potential Recharge Area Payment for Ecosystem Services Water Sources •

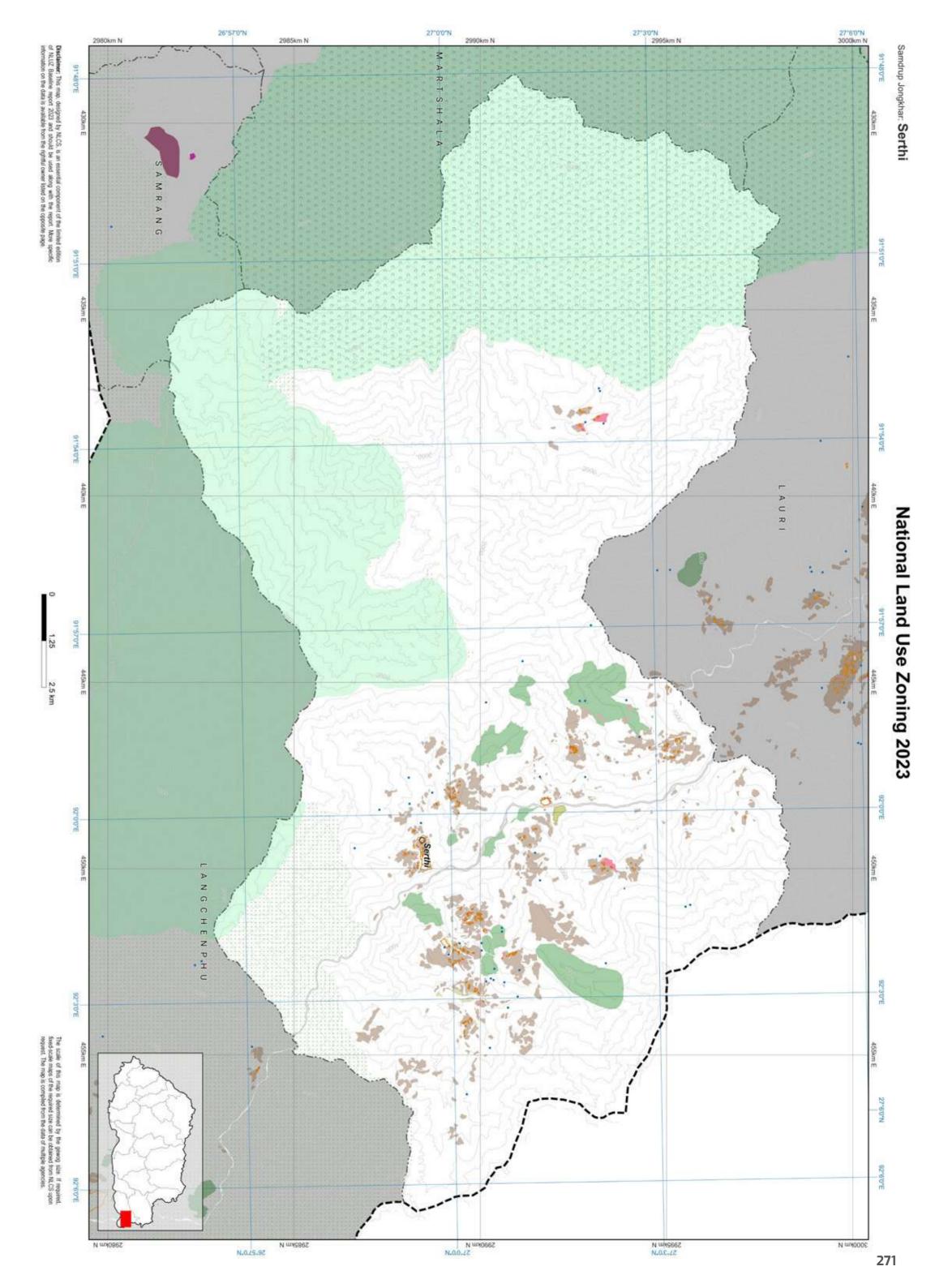
#### Industrial Manufacturing and Production Existing mines

Helipad O Hydro Power Plants A Hydro Power Waterways -

Airport •

# **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources National Land Commission Secretariat



# MANGPHU

# SAMDRUP JONGKHAR

# Zone Area Gewog Wangphu Gewog code 1113

Gewog	Wangphu
Gewog code	1113
Gewog area	19619.35
Zone	Area
Agriculture	3776.4
Cultural Heritage	3.804
Industrial	0.05
NCA	0
Rangeland	0
Rural Settlement	93.496
SFMA	2081.118
Urban	0

# **Zone Conflict**

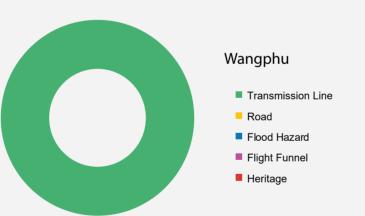
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	6.386	0	18.469	0	0	0	0.087	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area	
Transmission Line	50.099	
Road	0	
Flood Hazard	0	
Flight Funnel	0	
Heritage	0	



#### Data Ownership

Data Owner of the Map Content
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

# **Map Legend**

All areas are in Acres.

Samdrup Jongkhar: Wangphu

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Rural Settlement
Residential Land
Institutional Land

Lease Land

Management Area
Forest Management Unit Community Forest

Cultural Heritage

Religious Sites
Heritage Village
Heritage Conservation Zone
Urban
Urban Zone

Protected Area
Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone

**Nature Conservation Area** 

Biological Corridor /
Botanical Park

Wetland

Ramsar Site

Hazard and Risk

Rain Induced Flood

Glacier Lake
Outburst Flood

Right Of Way / Buffer

Heritage

Road

Powerlines
Flight Funnel
Other Effective Area-based
Conservation Measures

Key Biodiversity Area
High Conservation Value

Rangeland Tsamdro

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services
Water Sources
•

Industrial
Manufacturing and Production
Service
Existing mines
Airport

Helipad O
Hydro Power Plants 
Hydro Power Waterways —

Basemap

Boundaries
International — —
Dzongkhag — —
Gewog — —
Rivers
Main river
Perennial — —

Perennial

Terrain

Contour

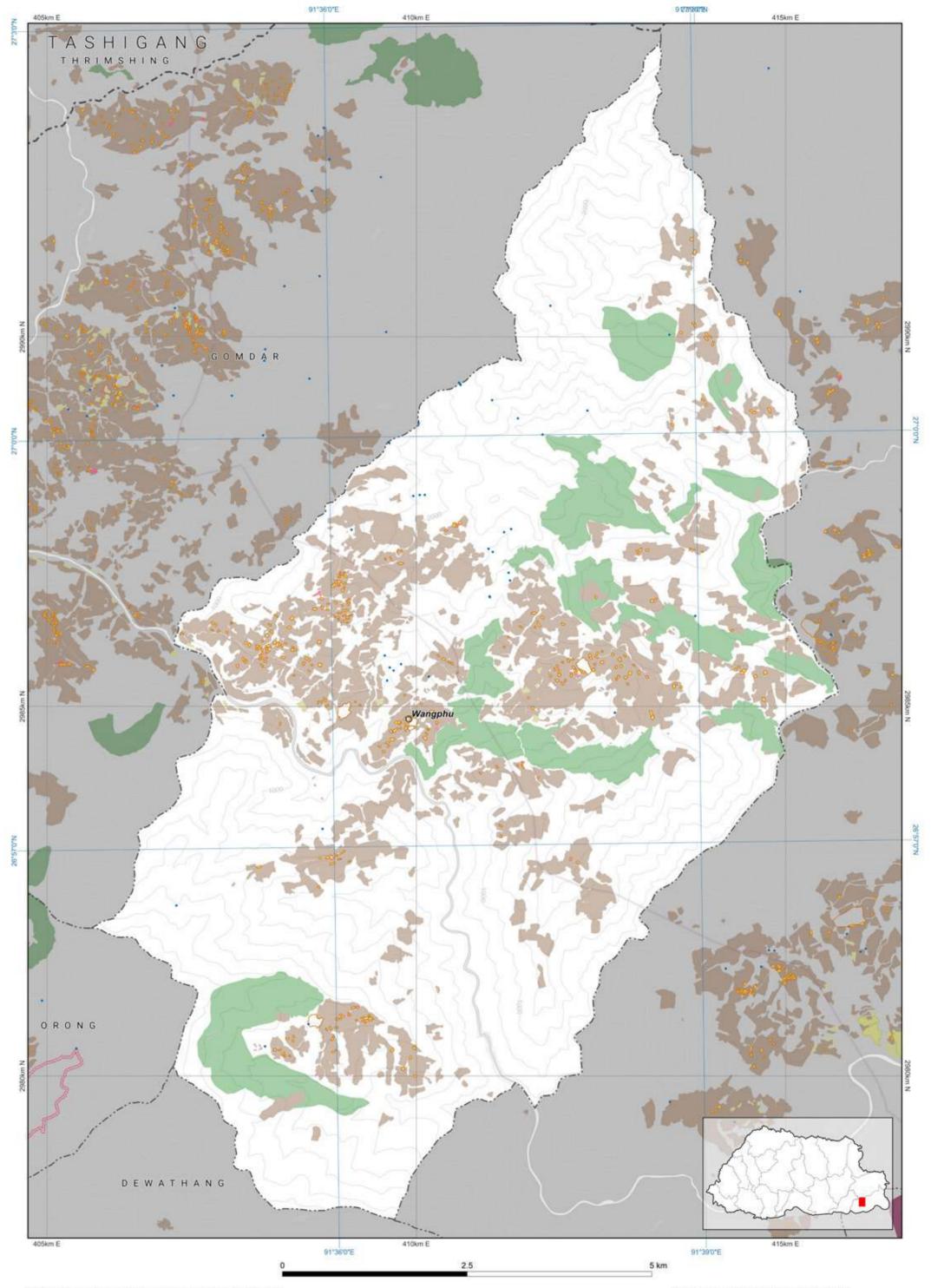
Roads for different

Highway 300k Thromde 50k Highway 50k Thromde 25k Thromde 55k Highway 25k Access 5k Dzongkhag 50k Industrial 5k Dzongkhag 55k Dzongkhag 55k Dzongkhag 56k

# Data C

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Wangphu	898	905	1,803	99.2	27.2	428	4.0		



**Zone Conflict** 

Culture

**RoW / Buffer Conflict** 

RoW / Buffer Area

**Buffer Zone** 

Transmission Line



# **Map Legend**

All areas are in Acres.

■ Agriculture

Culture

Urban

106.232

214.91

5.923

3.502

204.034

Industrial

Rangeland Rural Settlement

■ Nature Conservation Area

3.164 0.001

22.653

5.923

Rural

24.596

1.049

■ Sustainable Forest Management Area







#### Forest Management Unit Community Forest Cultural Heritage





#### Protected Area Core Zone Transistion Zone Buffer Zone

# Multi Use Zone Biological Corridor / Botanical Park

#### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

# Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

#### Key Biodiversity Area High Conservation Value

# Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

#### Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

#### Basemap Boundaries

International --Dzongkhag - -

Perennial Terrain

# Roads for different

ignway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ==
ongkhag 25k ===	Farm 5k =

#### Flood Hazard 924.981 Flight Funnel Road Heritage Flood Hazard Flight Funnel Heritage

214.91

22.653

92.604

0.001

185.643

67.913

0.000

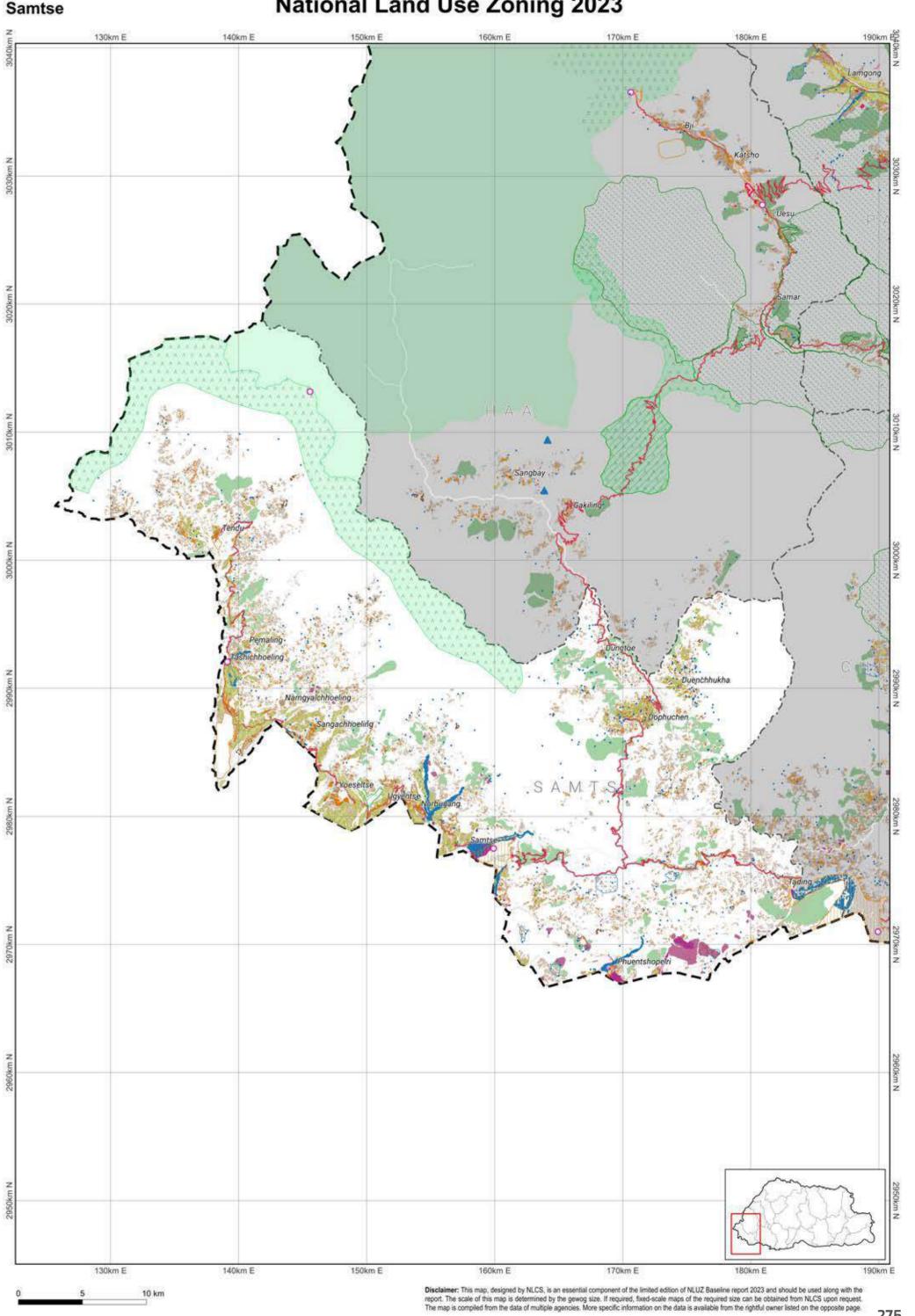
Area

643.586

1286.021

# Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Population	on	Sex ratio	Aging Index	Number of household	Mean Household size
Dzongkhag	Male	Female	Total				
Samtse	32,022	30,568	62,590	104.8	23.9	14,537	4.1



Z	one Area	
	Gewog	Dophuchen 1206
	Gewog code Gewog area	25591.324
	Zone	Area
	Agriculture	3886.99
	Cultural Heritage	4.768
	Industrial	1.37
	NCA	0
	Rangeland	0
	Rural Settlement	174.771
	SFMA	2436.654
	Lirban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

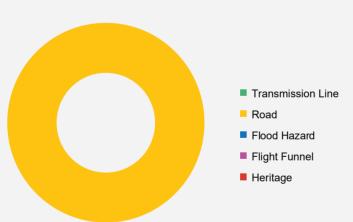
# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	6.355	0	39.007	0	0.053	0.115	1.824	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	236.256
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

26°57'0"N

National Land Use Zoning 2023

277

#### Residential Land Institutional Land

Forest Management Unit Community Forest

#### **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

#### **Nature Conservation Area** Protected Area

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Core Zone

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

# Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

#### High Conservation Value Tsamdro

Significant Watershed Potential Recharge Area

#### Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport •

# Helipad O

Hydro Power Waterways — Basemap

#### Boundaries International --

Dzongkhag - -Perennial

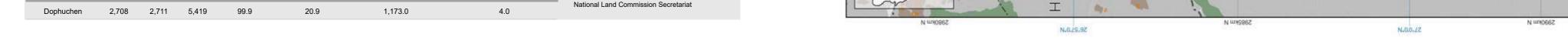
Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ====	Farm 5k
Dzongkhag 5k	

#### Data Ownership

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

Mean Household size

# 276



	1
Gewog	Duenchhukha
Gewog code	1205
Gewog area	25690.756
Zone	Area
Agriculture	2090.541
Cultural Heritage	10.952
Industrial	0.1
NCA	0
Rangeland	0
Rural Settlement	102.51
SFMA	1572.192
Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

Samtse: Duenchhukha

HAA









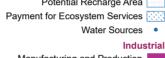
#### Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

#### Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

# Potential Recharge Area



Manufacturing and Production Existing mines Airport •

#### Helipad O Hydro Power Waterways —

Basemap

#### Boundaries International --Dzongkhag - -

Perennial

Thromde 50k	Highway 300k
Thromde 25k	Highway 50k
Thromde 5k	Highway 25k
Access 5k	Highway 5k
Industrial 5k	zongkhag 50k =
Farm 5k	zongkhag 25k
	D

#### Data Ownership

# Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources National Land Commission Secretariat

#### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Total Population				Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Duenchhukha	1,176	983	2,159	119.6	25.7	481.0	4.1		

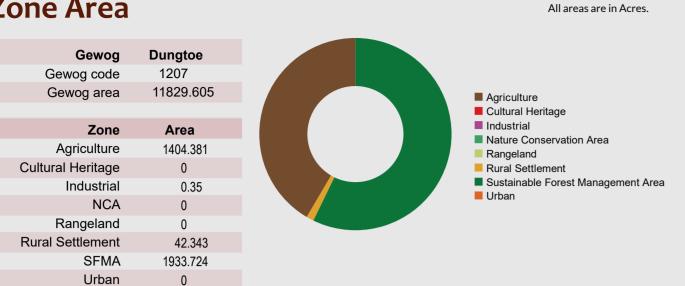
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# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

89\*18'0\*E

National Land Use Zoning 2023

CHHUKHA



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0.001	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0.001	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	5.936	0	13.387	0	0	0	0.005	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

**Demographic Table** 

_	
Buffer Zone	Area
Transmission Line	0
Road	112.38
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**

Samtse: Dungtoe



#### Urban Zone **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

#### Ramsar Site Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

> Existing mines Airport • Helipad O

#### Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries International --

Dzongkhag - -Perennial

#### Highway 300k = Highway 50k =

Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

# Data Ownership

## Data Owner of the Map Content Department of Forests and Park Services Ministry of Energy and Natural Resources

П	Department of Water Ministry of Energy and Natural Resources	
		Department of Surface Transport Ministry of Infrastructure and Transport

#### Mean Household size 677 1.433 111.7 24.7 341.0 4.1

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

# National Land Commission Secretariat Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

SAMTSE

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

# 

# **Zone Area**

Gewog	Namgyalchhoelin
Gewog code	1209
Gewog area	31374.199
Zone	Area
Agriculture	2600.646
Cultural Heritage	0.464
Industrial	44.819
NCA	0
Rangeland	0
Rural Settlement	120.796
SFMA	337.015
Urban	0

**Zone Conflict** 



■ Agriculture

Rangeland

Urban

Industrial

■ Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area



# Residential Land

# Institutional Land

#### Forest Management Unit Community Forest





# **Nature Conservation Area**

#### Protected Area Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park

#### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

#### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O

Hydro Power Plants A

#### Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -

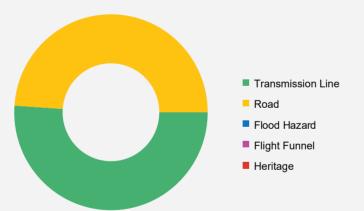
Perennial

Highway 300k ====	Thromde 50k =
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
Dzongkhag 50k ===	Industrial 5k =
Dzongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0.115	0
Road	0	0	1.309	0	0	0	0.006	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	15.828
Road	15.157
Flood Hazard	0
Flight Funnel	0
Heritage	0



#### **Data Ownership**

Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	

Department of Energy Ministry of Energy and Natural Resources

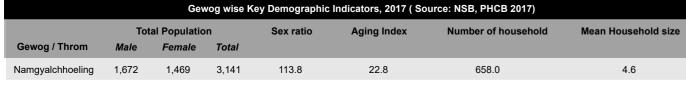
Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

Department of Geology and Mines Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

# Demographic Table





# National Land Use Zoning 2023 Samtse: Namgyalchhoeling NORBUGANG

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88°54'0"E

145km E 88°57'0\*E

283

one Area	
Gewog	Norbugang
Gewog code	1204
Gewog area	28769.877
Zone	Area
Agriculture	2974.501
Cultural Heritage	18.792
Industrial	120.593
NCA	0
Rangeland	0
Rural Settlement	104.728
SFMA	1036.585
Urban	0

### **Zone Conflict**

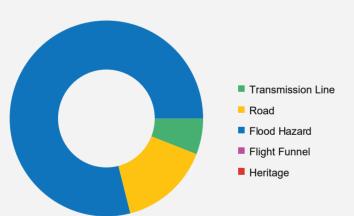
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	4.64	0	0	0	0	0
Agriculture	0	4.64	0	0	0	7.453	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	7.453	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0.561	0	10.260	0	0	0	0.041	0
Road	5.39	0	7.244	0	1.512	0	2.864	0
Flood Hazard	18.371	0	10.013	0	0	0	0.01	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	20.26
Road	51.537
Flood Hazard	269.588
Flight Funnel	0
Heritage	0



### Demographic Table

Gewog wise Key Demographic Indicators, 2617 ( Source: NSE, PHC								
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Norbugang	2,103	1,972	4,075	106.6	31.6	896.0	4.5	

### **Map Legend**

All areas are in Acres.

Samtse: Norbugang



### Residential Land Institutional Land

### Forest Management Unit Community Forest Religious Sites





### Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

### Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O

### Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

### International --Dzongkhag - -

Perennial Terrain

### Roads for different

ingilia joon	THIOHIUE JUK
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

### **Data Ownership**

Data Owner of the map content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resource

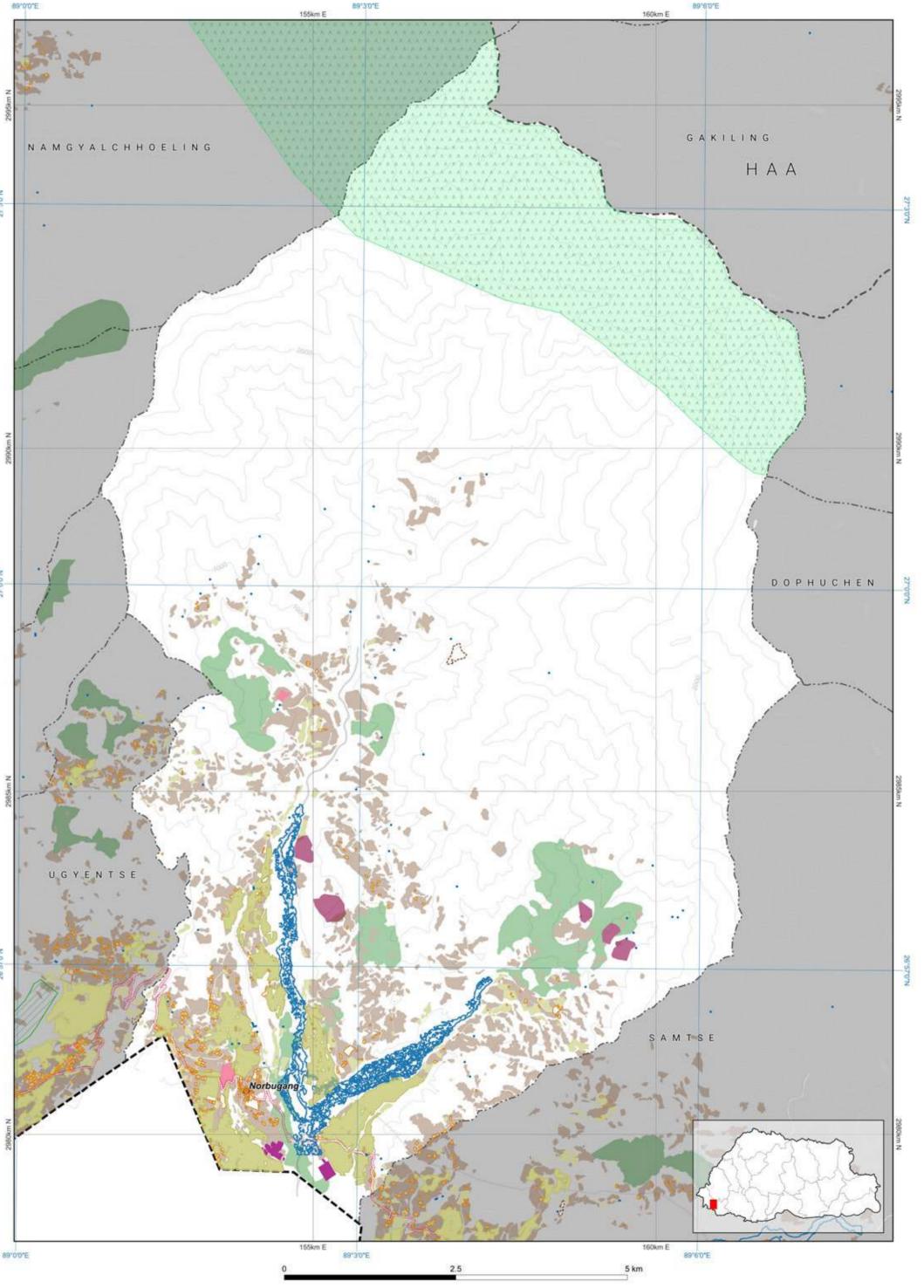
Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Geology and Mines Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport Department of Human Settlement Ministry of Infrastructure and Transport

National Land Commission Secretariat





## VORGAYGANG

## SAMTSE

### **5** Zone Area

Gewog	Norgaygang
Gewog code	1201
Gewog area	46355.797
Zone	Area
Agriculture	3256.872
Cultural Heritage	2.141
Industrial	0.05
NCA	7142.122
Rangeland	0
Rural Settlement	143.166
SFMA	119.669
Urban	0

### All areas are in Acres.

### **Zone Conflict**

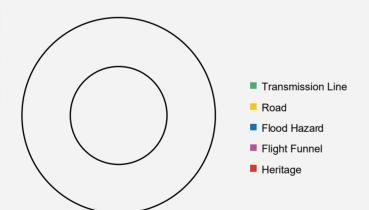
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### National Land Use Zoning Agricultural Land Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Samtse: Norgaygang



### Forest Management Unit Community Forest Cultural Heritage Religious Sites





Buffer Zone
Multi Use Zone
Biological Corridor /
Botanical Park

### Ramsar Site Hazard and Risk Rain Induced Flood

Outburst Flood
Right Of Way / Buffer
Heritage

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value Rangeland

### Tsamdro Significant Watershed

Potential Recharge Area
Payment for Ecosystem Services
Water Sources

### Manufacturing and Production Service

Existing mines

Airport

Helipad

### Hydro Power Waterways — Basemap

### Boundaries International - -

Dzongkhag — Gewog — Rivers

Main river
Perennial

Terrain

### Roads for different map scales

_
_
_

### Data Ownership

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Air Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm Male Female Total										
Norgaygang	1,940	1,803	3,743	107.6	27.8	847.0	4.2			

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**National Land Use Zoning 2023** 

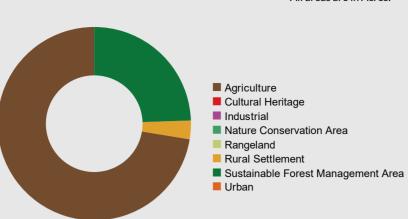
### The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

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SANGBAY

(5	Zone Area	
	Gewog	Pemaling
	Gewog code	1202
	Gewog area	12610.304
	Zone	Area
	Agriculture	2818.101
	Cultural Heritage	0.342
	Industrial	0.15
	NCA	0
	Rangeland	0
-	Rural Settlement	121.163
	SFMA	951.906
	Urban	0
	<b>Zone Conf</b>	lict

### All areas are in Acres.



### **Zone Conflict**

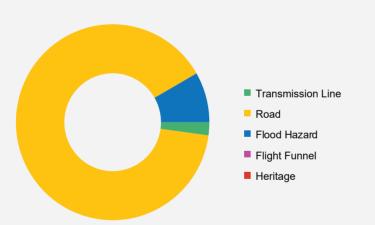
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0.519	0	0	0	0	0
Road	10.104	0	11.897	0	0	0	11.897	0
Flood Hazard	0	0	1.547	0	0	0	0.013	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	1.754
Road	72.656
Flood Hazard	6.739
Flight Funnel	0
Heritage	0



### **Map Legend**

Samtse: Pemaling

### National Land Use Zoning Kamzhing Protected Chhuzhing Regulated Chhuzhing

### Residential Land

### Forest Management Unit Community Forest Religious Sites





### Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

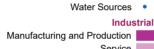
Outbuist 1 100u
Right Of Way / Buffe
Heritage
Road

### Flight Funnel

Other Effective Area-ba Conservation Measo			
Key Biodiversity Area	1		

High Conservation Value

Potential Recharge Area	
ayment for Ecosystem Services	E



### Existing mines Helipad O

### Hydro Power Waterways -

### Basemap Boundaries

### International --Dzongkhag - -

Thromde 50k	Highway 300k
Thromde 25k	Highway 50k
Thromde 5k	Highway 25k
Access 5k	Highway 5k
Industrial 5k	zongkhag 50k

### Data Ownership

	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Surface Transport Ministry of Infrastructure and Transport

Department of Human Settlement Ministry of Infrastructure and Transport National Land Commission Secretariat

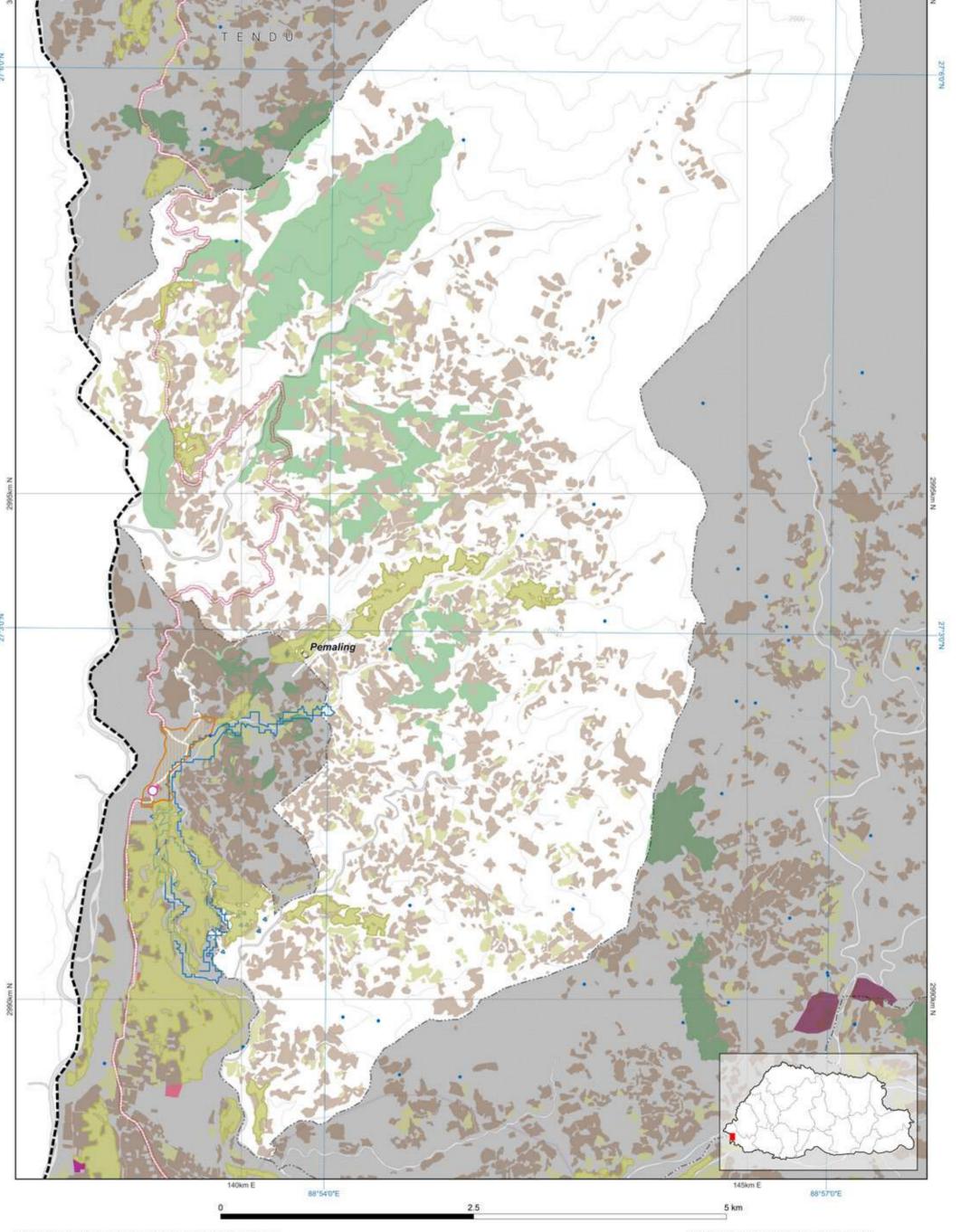
### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Tot	al Populatio	n	Sex ratio Agir	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Pemaling	1,692	1,570	3,262	107.8	36.6	724.0	4.5			

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### The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

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one Area	a
Gewog	Phuentshopelri
Gewog code	1212
Gewog area	25357.946
Zone	Area
Agriculture	2870.729
Cultural Heritage	0.535
Industrial	1718.442
NCA	901.3
Rangeland	0
Rural Settlement	142.554
SFMA	999.82
Urban	0

### **Zone Conflict**

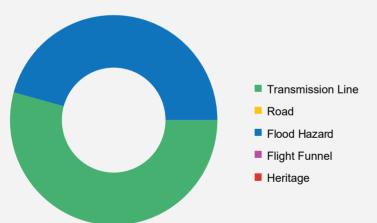
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	57.503	0	0	0	0	0	0
NCA	57.503	0	154.53	0	0	0	1.658	0
Agriculture	0	154.53	0	0	0	77.856	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	77.856	0	0	0	5.923	0
Rural Settlement	0	1.658	0	0	0	5.923	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	6.664	2.58	15.896	0	0	7.286	2.401	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	29.28	0.082	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	102.808
Road	0
Flood Hazard	86.659
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land Institutional Land

Forest Management Unit

### Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

### Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area

### High Conservation Value

Significant Watershed

### Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

Existing mines Airport •

### Hydro Power Plants A Hydro Power Waterways —

### Basemap

Boundaries International --

Helipad O

Dzongkhag - -

### Contour

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	map scal
ghway 300k ——	Thromde 50k
lighway 50k ===	Thromde 25k
lighway 25k ===	Thromde 5k =
Highway 5k	Access 5k =

### Dzongkhag 50k = Dzongkhag 25k =

### **Data Ownership**

Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock

Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Geology and Mines Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources

Department of Human Settlement Ministry of Infrastructure and Transport National Land Commission Secretariat

### **Demographic Table**

Gewog wise key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Phuentshopelri	2,096	1,978	4,074	106.0	22.7	1,006.0	4.0	
Gomtu Town	1,847	1,814	3,661	101.8	10.4	1,034.0	3.5	

## 26"48"0"N 26°51'0"N 26°54'0"N National Land Use Zoning 2023

Se,21.0.M

Zone Area	
Gewog	Samtse
Gewog code	1213
Gewog area	28710.113
Zone	Area
Agriculture	3018.576
Cultural Heritage	4.761
Industrial	398.078
NCA	7.034
Rangeland	0
Rural Settlement	117.134
SFMA	1266.286
Urban	1200 088

### **Zone Conflict**

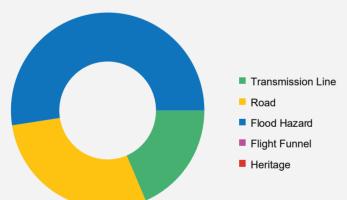
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0.10	0	0	0	0	0
Agriculture	0	0.10	0	18.128	0	0	0	0
Urban	0	0	18.128	0	0	194.32	0.234	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	194.32	0	0	0	0
Rural Settlement	0	0	0	0.234	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	17.852	0	21.946	5.255	0	0	0.258	0
Road	50.513	0.022	13.248	0	0.043	3.227	0.492	0
Flood Hazard	0	0	8.020	89.935	0	174.754	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zon	e Area
Transmission Lin	e 161.239
Roa	d 251.883
Flood Hazar	d 455.281
Flight Funne	el 0
Heritag	e 0



### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Total Population			Total Population Sex ratio		Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Samtse	1,819	1,787	3,606	101.8	31.9	846.0	4.2	
Samtse Town	2,656	2,740	5,396	96.9	11.8	1,227.0	3.8	

### **Map Legend**



Residential Land

Lease Land

Forest Management Unit Community Forest

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

> Nature Conservation Area Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Potential Recharge Area

Payment for Ecosystem Services Manufacturing and Production

Existing mines Airport • Helipad O

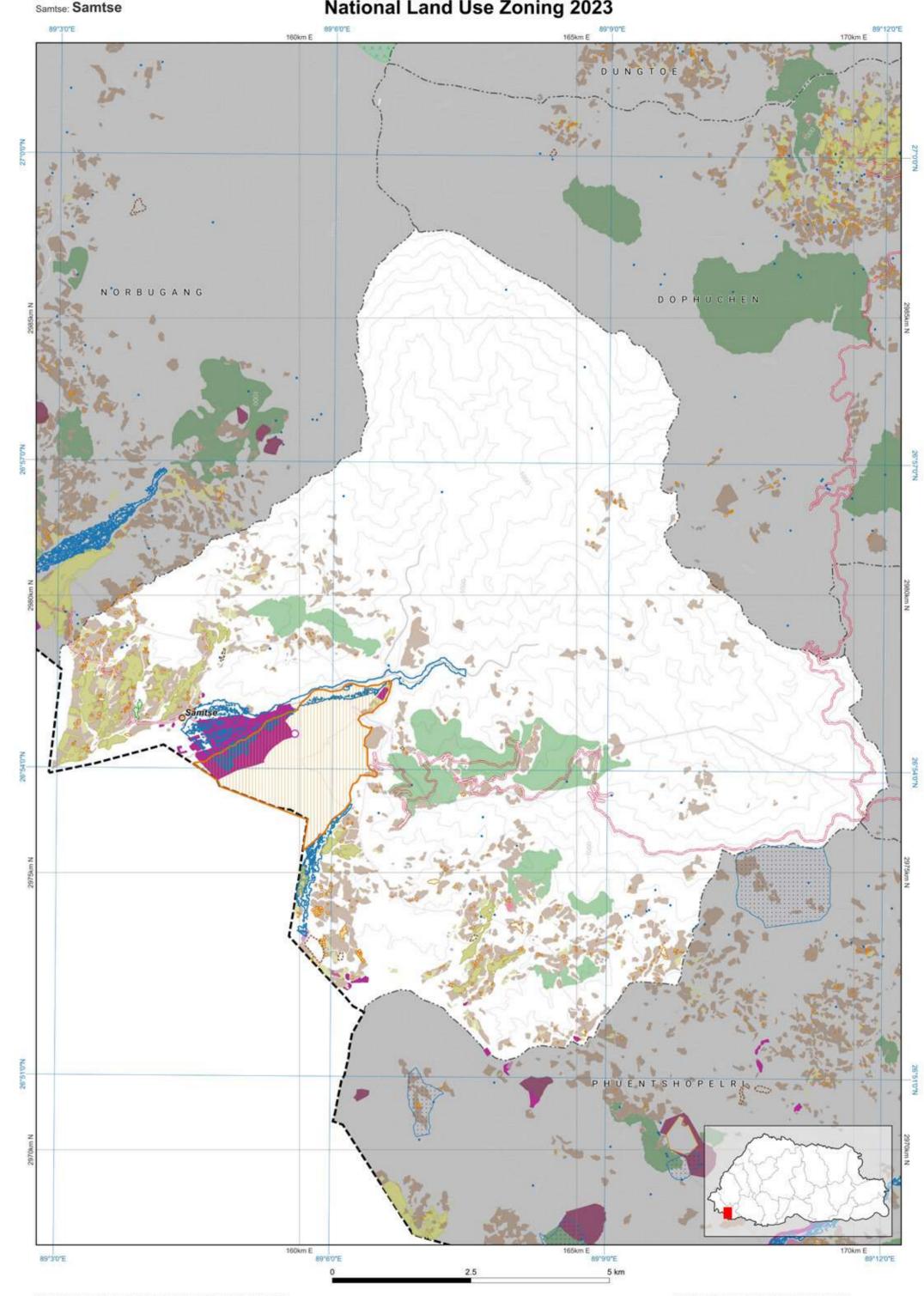
Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -Perennial

Highway 300k = Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

### **Data Ownership**

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Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
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Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
Department of Industry Ministry of Industry, Commerce and Employment
National Land Commission Secretariat



Zone Are	a
Gewog	Sangachhoeling
Gewog code	1203
Gewog area	9521.505
Zone	Area
Agriculture	2841.994
Cultural Heritage	4.029
Industrial	15.831
NCA	0
Rangeland	0
Rural Settlement	110.874
SFMA	622.45
Urban	0

### **Zone Conflict**

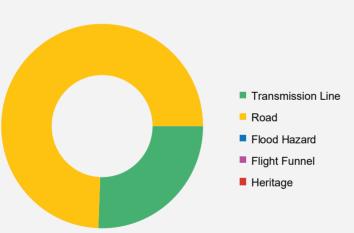
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0		0	0	0	0	0
Agriculture	0		0	0	0	2.482	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	2.482	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	16.718	0	0	0	0.37	0
Road	0	0	14.676	0	0	0	0.958	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	27.44
Road	79.773
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

### Lease Land

### **Cultural Heritage** Religious Sites



### Core Zone Transistion Zone Buffer Zone

Heritage \_\_\_\_

### Flight Funnel

Key Biodiversity Area

### Potential Recharge Area

### Helipad O

### Boundaries

	map oou
Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k <sup>≡</sup>
Highway 25k Highway 5k zongkhag 50k	Thromde 5k = Access 5k = Industrial 5k =

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Demographic Table

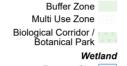
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Sangachhoeling	1,579	1,482	3,061	106.5	43.7	722.0	4.1

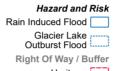












### Other Effective Area-based Conservation Measures

High Conservation Value

### Significant Watershed

Payment for Ecosystem Services Water Sources • Manufacturing and Production

### Existing mines Airport •

Hydro Power Plants A Hydro Power Waterways —

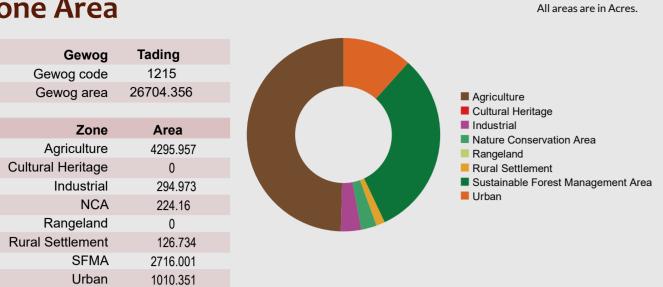
### Basemap

International --Dzongkhag - -

### **Data Ownership**

Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# 27°0'0'N



### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	12.659	2.71	49.308	0	0	0	0
NCA	12.659	0	61.07	0	0	64.663	1.506	0
Agriculture	2.71	61.07	0	0.002	0	6.167	0	0
Urban	49.308	0	0.002	0	0	20.548	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	64.663	6.167	20.548	0	0	0	0
Rural Settlement	0	1.506	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	17.802	7.171	85.739	1.153	0	4.218	3.732	0
Road	15.265	4.696	33.580	0	0	0.004	3.539	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	282.572
Road	209.098
Flood Hazard	0
Flight Funnel	0
Heritage	0

### Transmission Line Road Flood Hazard Flight Funnel

Heritage

### Demographic Table

		Gev	vog wise Ke	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)		
	Tota	al Populatio	n	Sex ratio Aging Index Number of household Mean Ho				
Gewog / Throm	Male	Female	Total					
Tading	2,425	2,294	4,719	105.7	21.8	1,120.0	4.2	
Phuentsholing Thror	nde15,052	12,606	27,658	119.4	12.2	6,817	3.6	

The demographic statistics provided in the table above for Phuentsholing thromde encompass not only the area falling under the Tading gewog but also include the demographic statistics of the town area falling under the Phuentsholing and Sampheling gewog. The same statistics for Phuentsholing thromde can be found under the Phuentsholing and Sampheling gewog.

### **Map Legend**





### Forest Management Unit Community Forest **Cultural Heritage**





Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value Tsamdro

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

### Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A

### Hydro Power Waterways —

Basemap Boundaries

International --Dzongkhag - -

Perennial Terrain

Thromde 50k	Highway 300k
Thromde 25k	Highway 50k
Thromde 5k	Highway 25k
Access 5k	Highway 5k
Industrial 5k	zongkhag 50k
Farm 5k	zongkhag 25k

### **Data Ownership**

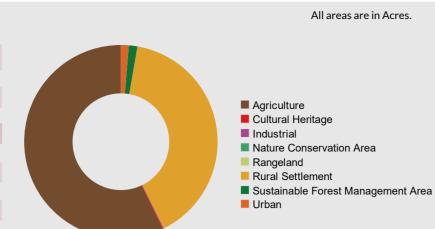
Data Owner of the Map Content
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
National Centre for Hydrology and Meteorology
National Land Commission Secretariat

26°51'0"N 26"54"0"N

National Land Use Zoning 2023

### N.0.19.9Z N.0.19.97 296 297

Gewog	Tashichhoeling
Gewog code	1214
Gewog area	6367.202
Zone	Area
Agriculture	2306.227
Cultural Heritage	5.815
Industrial	3.237
NCA	0
Rangeland	0
Rural Settlement	1613.47
SFMA	57.249
Urban	53.059



### **Zone Conflict**

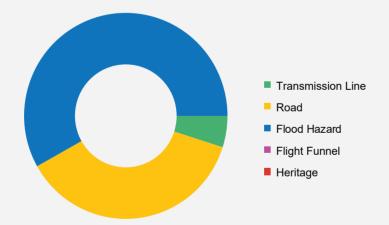
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	5.562	0	0	0	0
Urban	0	0	5.56	0	0.693	0	22.412	0
Culture	0	0	0.	0.693	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	22.412	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	5.024	0	0	0	0.299	0
Road	0	0	19.813	0	0	0.156	4.704	0
Flood Hazard	4.065	0	48.334	2.668	0	0	0.943	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	9.051
Road	67.789
Flood Hazard	106.713
Flight Funnel	0
Heritage	0



### **Map Legend**

Samtse: Tashichhoeling

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Lease Land Residential Land Institutional Land

Forest Management Unit Community Forest

Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

Religious Sites

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Hazard and Risk Rain Induced Flood

> Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap

Boundaries International --Dzongkhag - -Perennial

Highway 300k = Highway 50k === Highway 5k Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k

### Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources

Department of Air Transport Ministry of Infrastructure and Transport

Department of Human Settlement Ministry of Infrastructure and Transport

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

**Data Ownership** 

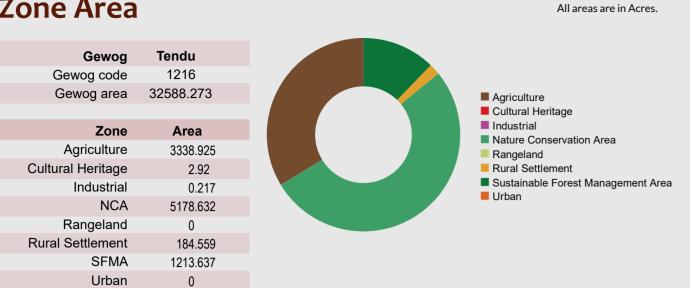
### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population Sex ratio Aging Index Number of household Mean Hou									
Gewog / Throm	Male	Female	Total						
Tashichhoeling	2,018	1,942	3,960	103.9	20.8	980.0	3.9		
Sipsu Town	300	317	617	94.6	14.4	169.0	3.5		

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88°51'0"E

## The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.



### **Zone Conflict**

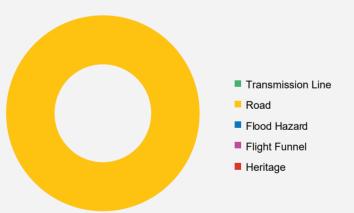
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	7.344	0	11.003	0	0.173	0	4.219	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	91.588
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

Samtse: Tendu

NORGAYGANG

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land

> Community Forest **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

Forest Management Unit

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

**Nature Conservation Area** 

Hazard and Risk Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -Basemap Boundaries

International --Dzongkhag - -Perennial Terrain Roads for different

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

### **Data Ownership**

Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
Department of Surface Transport Ministry of Infrastructure and Transport	
National Land Commission Secretariat	

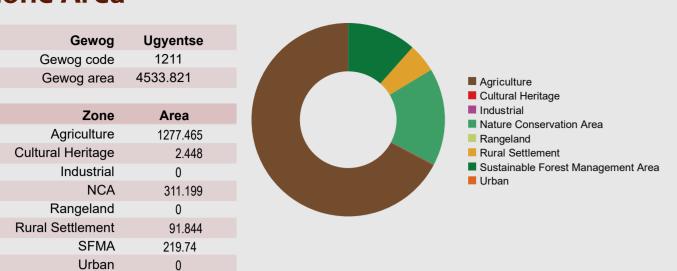
### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Tot	tal Populatio	n	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total						
Tendu	3,216	3,026	6,242	106.3	17.4	1,347.0	4.1		

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## NAMGYALCHHOELING 88'57'0"E The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

HAA



### **Zone Conflict**

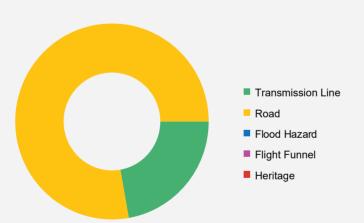
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	8.75	0	0	0	0	0
Agriculture	0.00	8.75	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0.794	8.037	0	0	0	0.462	0
Road	0	0	9.447	0	0	0	4.436	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	15.153
Road	53.059
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

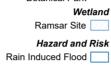
All areas are in Acres.

Samtse: Ugyentse

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest **Cultural Heritage** Religious Sites Heritage Village







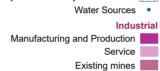
Outburst Flood	
Right Of Way / Buf	fe
Heritage [	
Road	

### Flight Funnel

Conservation Measu	
Key Biodiversity Area	1
igh Conservation Value	

### Rangeland Tsamdro

### Significant Watershed Potential Recharge Area Payment for Ecosystem Services



### Airport • Helipad O

### Hydro Power Plants A Hydro Power Waterways —

### Basemap Boundaries

International	
Dzongkhag	
Gewog	
Rivers	
Main river	
Perennial ——	
Terrain	
Contour	

Highway 300k ===	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k ==
zongkhag 25k ===	Farm 5k =

### **Data Ownership**

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

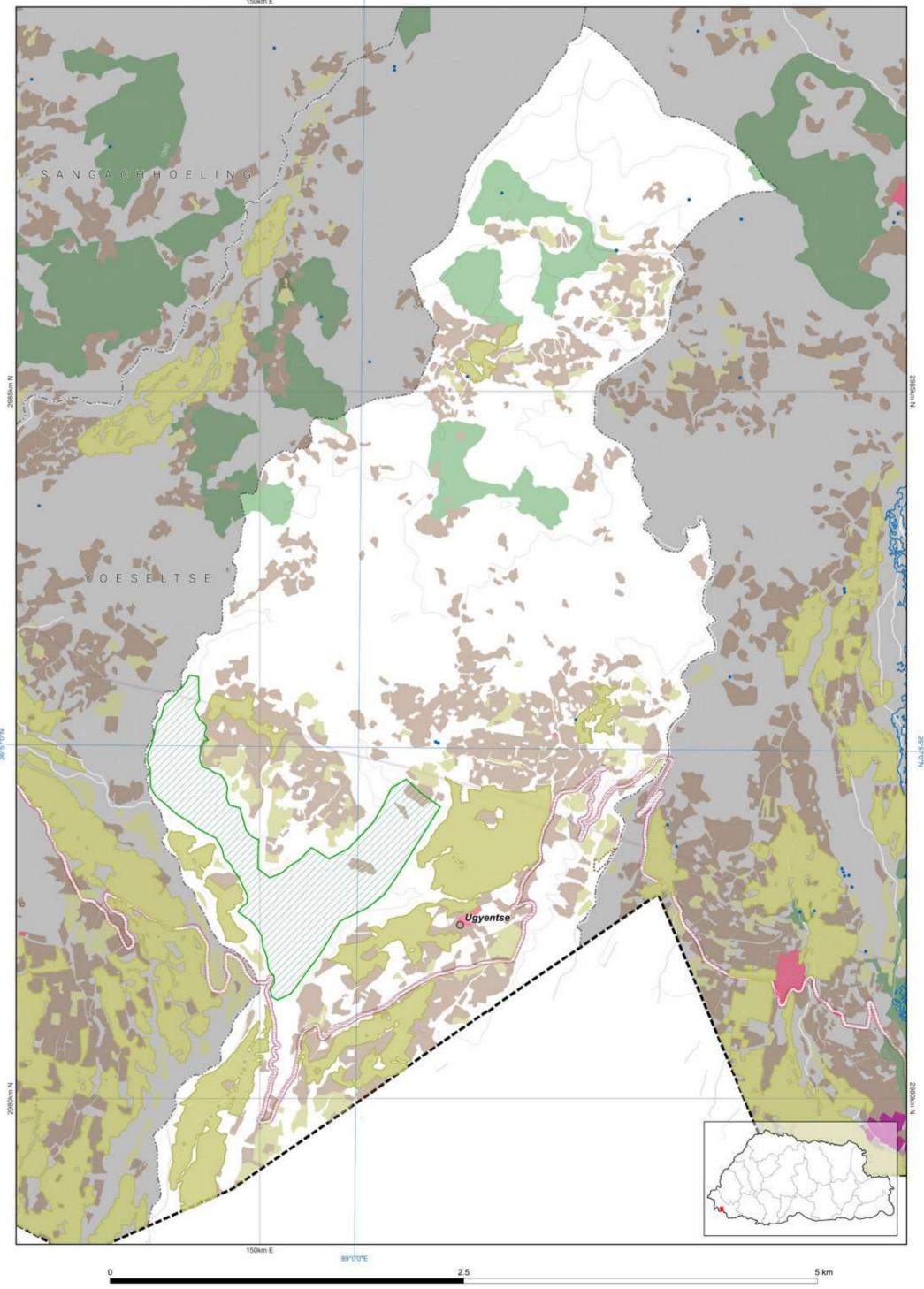
Department of Water Ministry of Energy and Natural Resources

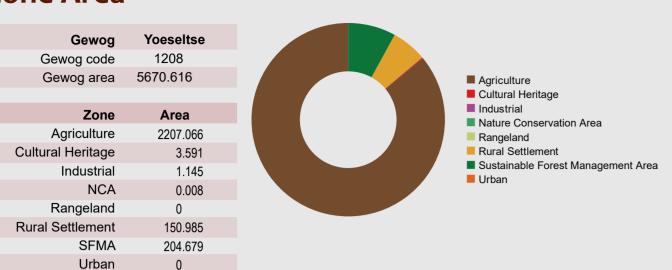
Department of Surface Transport Ministry of Infrastructure and Transport

Demographic Table

			.09	o, somograpino			
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Ugyentse	699	691	1,390	101.2	45.5	342.0	3.9

National Land Commission Secretariat Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.





### **Zone Conflict**

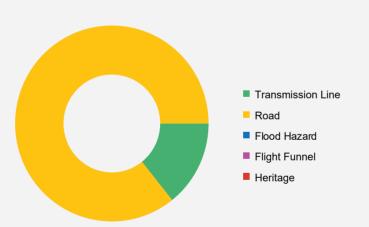
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	2.03	0	0	0	0	0
NCA	0	0	0.00	0	0	0	0	0
Agriculture	2.03	0.00	0	0	0	0.015	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0.015	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	3.568	0	0	0	0.067	0
Road	0	0	11.031	0	0	0	0.352	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	7.48
Road	44.845
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

All areas are in Acres.



### **Nature Conservation Area** Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

### Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

### Hydro Power Waterways -Basemap

Boundaries International --

Dzongkhag -Perennial

### Roads for different

ighway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ongkhag 25k ===	Farm 5k

### Data Ownership

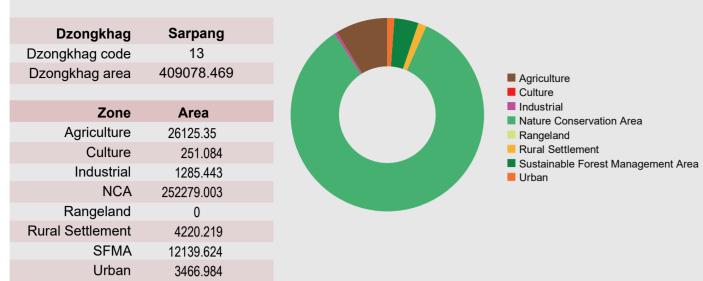
### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population Sex ratio Aging Index Number of household Mean Household size										
Gewog / Throm	Male	Female	Total							
Yoeseltse	1320	1312	2,632	100.6	30.0	624.0	4.1			

## **National Land Use Zoning 2023** Samtse: Yoeseltse 89°0'0"E 88°57'0"E 89'00'E

### **Zone Area** All areas are in Acres. Dzongkhag Sarpang



### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	2088.72	0.00	0	0	0	0.322	0
NCA	2088.72	0	4,207.20	0	1.352	0.112	115.108	0
Agriculture	0.00	4,207.20	0	7.251	0	0	0	0
Urban	0	0	7.251	0	9.928	78.4	9.612	0
Culture	0	1.352	0	9.928	0	0	0	0
Industrial	0	0.112	0	78.4	0	0	0	0
Rural Settlement	0.322	115.108	0	9.612	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

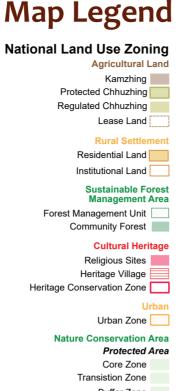
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	130.032	636.288	120.344	20.333	2.535	11.495	13.412	0
Road	50.886	305.242	32.822	0	0.557	0	9.475	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

•	
Buffer Zone	Area
Transmission Line	1567.087
Road	879.751
Flood Hazard	0
Flight Funnel	0
Heritage	0

### **Map Legend**



### Buffer Zone Multi Use Zone

Hazard and Risk Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

### Potential Recharge Area

Payment for Ecosystem Services

### Manufacturing and Production Existing mines Airport •

Helipad O Hydro Power Waterways -

### Basemap Boundaries

International --Dzongkhag -

Perennial

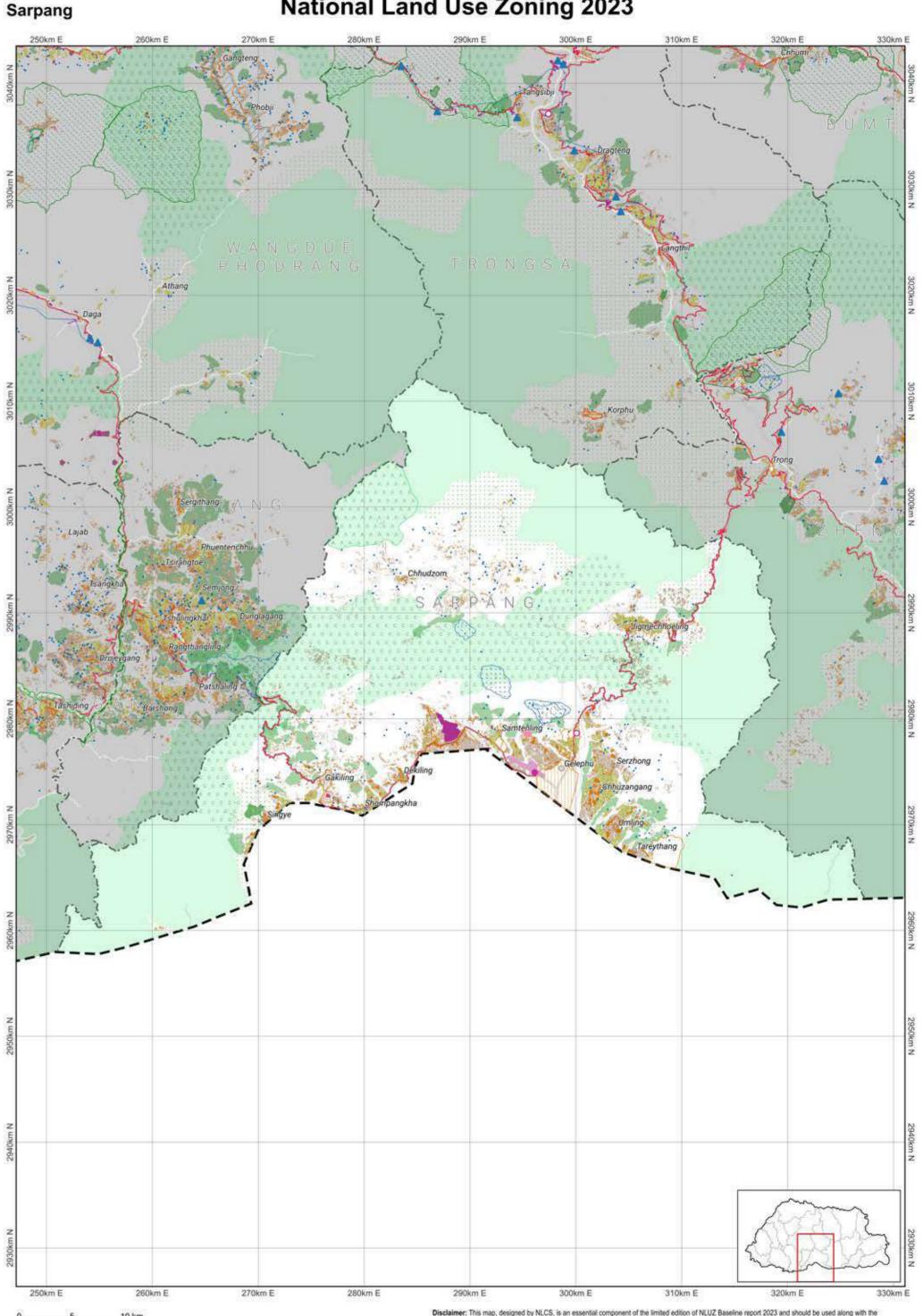
### Roads for different

Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ==
ongkhag 25k ===	Farm 5k =
zonakhaa 5k	

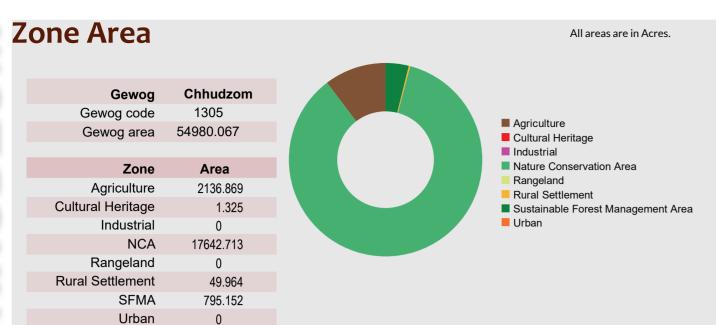
### Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population Sex ratio Aging Index Number of household Mean Household size										
Dzongkhag	Male	Male Female Total								
Sarpang	24,018	21,986	46,004	109.2	23.3	10,369	4			

### **National Land Use Zoning 2023**



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### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	166.066	0	0	0	0	0	0
NCA	166.066	0	110.734	0	0	0	0.004	0
Agriculture	0	110.734	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.004	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

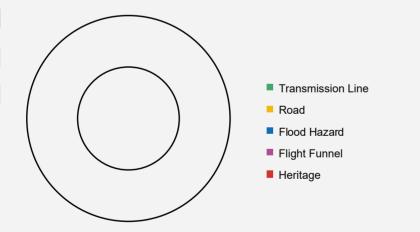
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table

1,460 1,204



595

4.4

### **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Residential Land Institutional Land

Lease Land

Forest Management Unit Community Forest

Religious Sites Heritage Village Heritage Conservation Zone

**Cultural Heritage** 

Urban Zone **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial Manufacturing and Production

Existing mines Airport

Helipad O Hydro Power Waterways -

> Basemap Boundaries

International --Dzongkhag - -Perennial Terrain

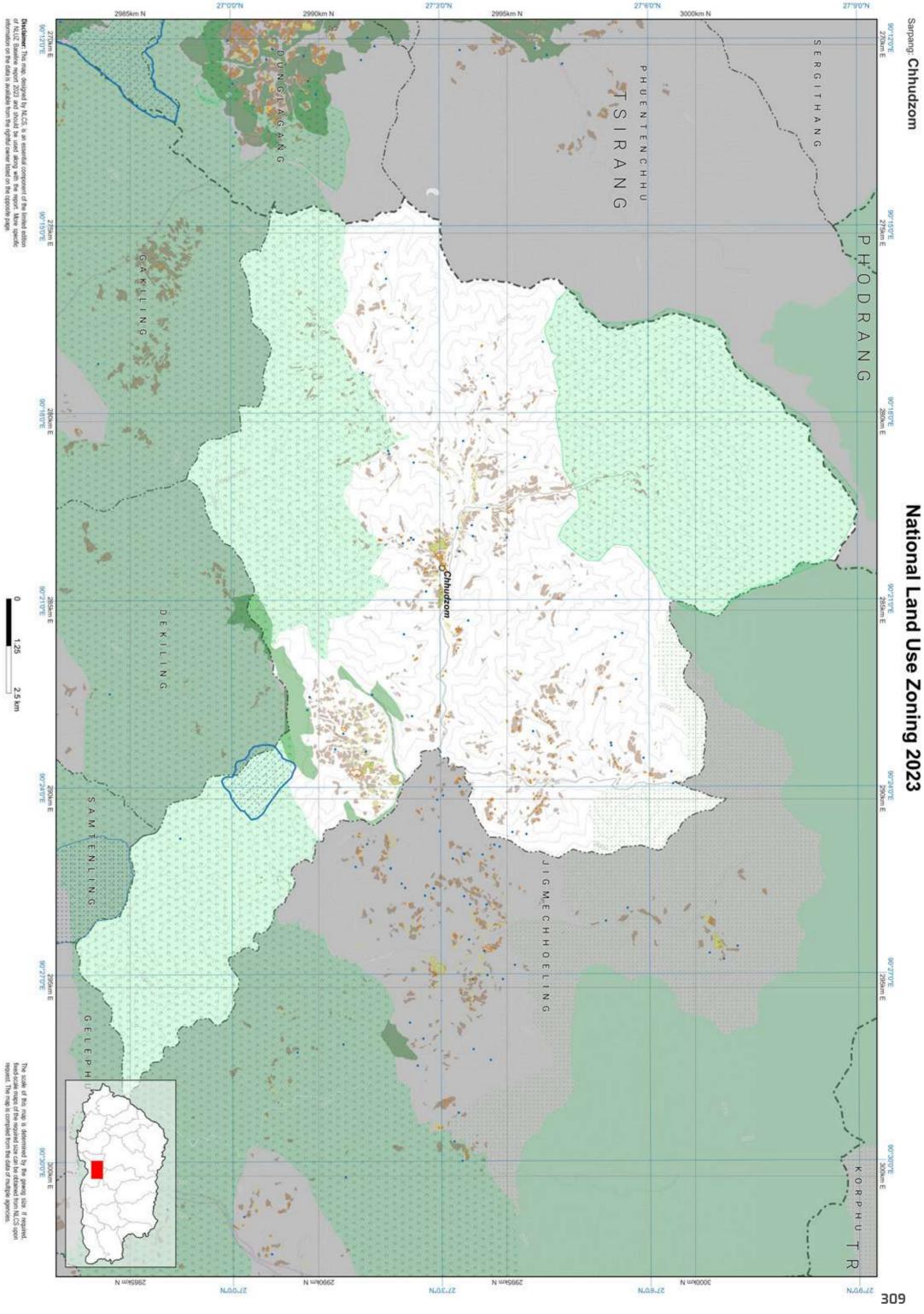
Roads for different Highway 300k —— Thromde 5k

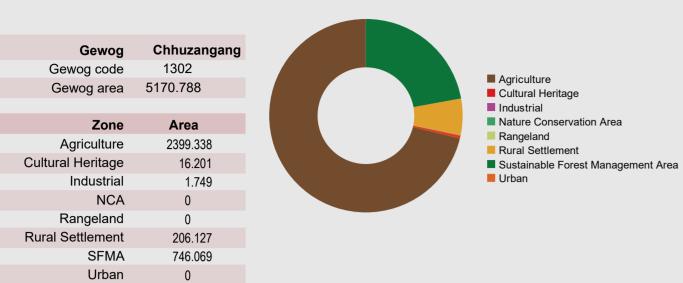
Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k Dzongkhag 5k

### Data Ownership

Data Owner of the Map Content

epartment of Agriculture linistry of Agriculture and Livestock	
Pepartment of Forests and Park Services linistry of Energy and Natural Resources	
lepartment of Water linistry of Energy and Natural Resources	
lational Land Commission Secretariat	





### **Zone Conflict**

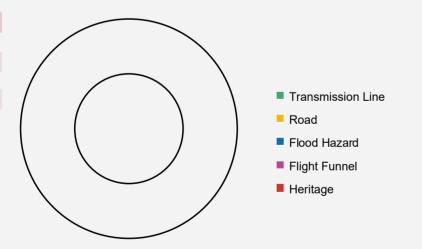
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



All areas are in Acres.



Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Gewog ---Perennial Terrain

Contour Roads for different Thromde 50k

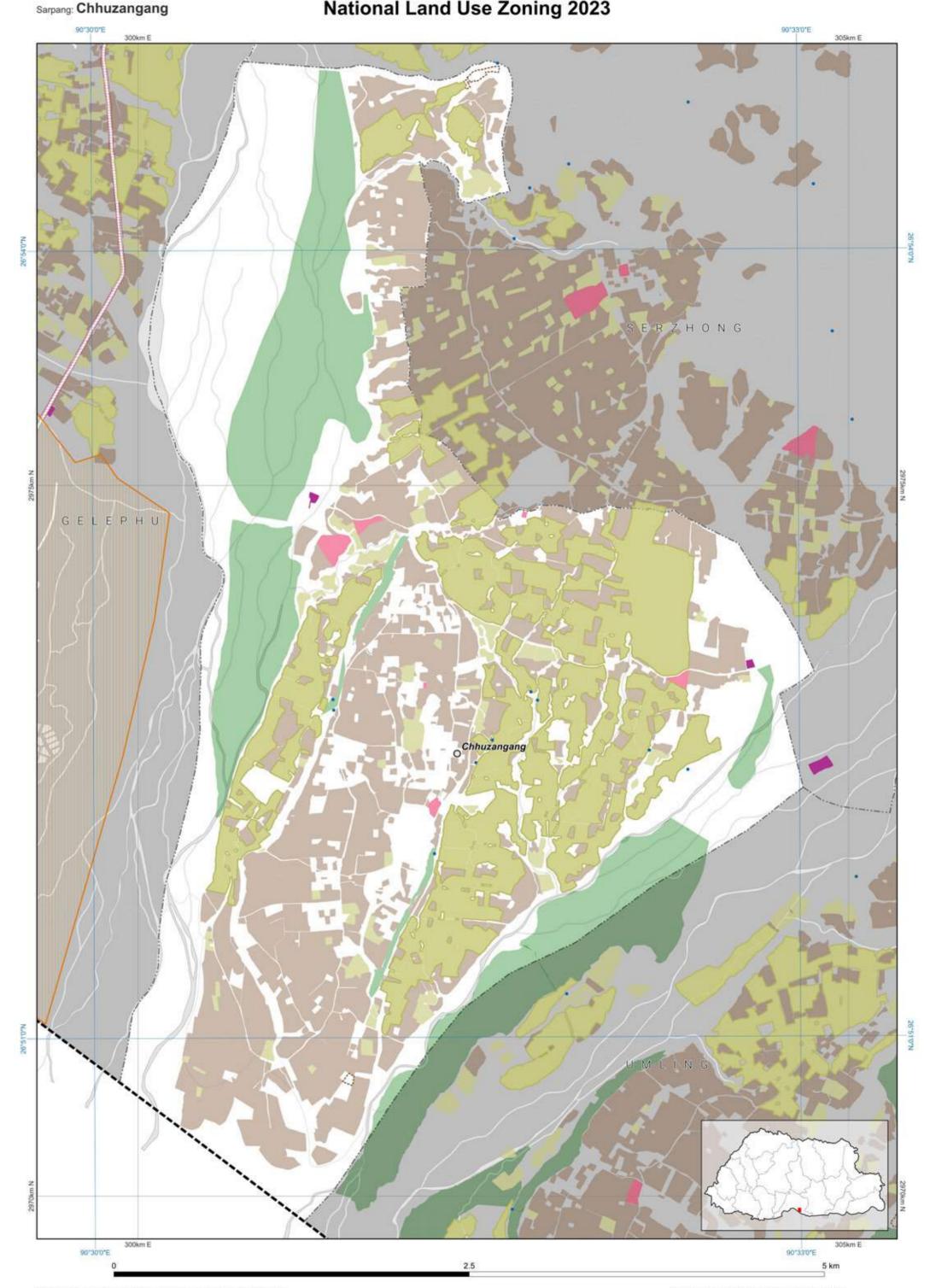
Highway 300k ---Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k Farm 5k ====

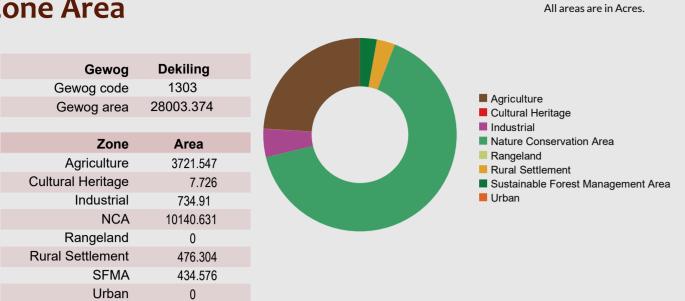
### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Chhuzangang	1,262	1,237	2,499	102.0	28.8	586	4.2			

### **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat





### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	127.418	0.00	0	0	0	0	0
NCA	127.418	0	132.58	0	0	0	0	0
Agriculture	0.00	132.58	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	11.115	0	0	11.495	0.791	0
Road	0	0	5.432	0	0.07	0	2.53	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	208.228
Road	98.68
Flood Hazard	0
Flight Funnel	0
Heritage	0
ŭ	

### **Map Legend**

Sarpang: Dekiling



### Forest Management Unit Community Forest **Cultural Heritage**

Religious Sites	
Heritage Village	
Heritage Conservation Zone	
Ui	rba
Urban Zone	



Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

### Manufacturing and Production Existing mines

Airport • Helipad O

### Hydro Power Waterways -

Basemap Boundaries International --

Dzongkhag - -Perennial

### Roads for different

nigriway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k ==
zongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

### Data Ownership

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources

Department of Industry Ministry of Industry, Commerce and Employment

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### **Demographic Table**

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Dekiling	3,290	2,690	5,980	122.3	23.7	1,339	3.9			

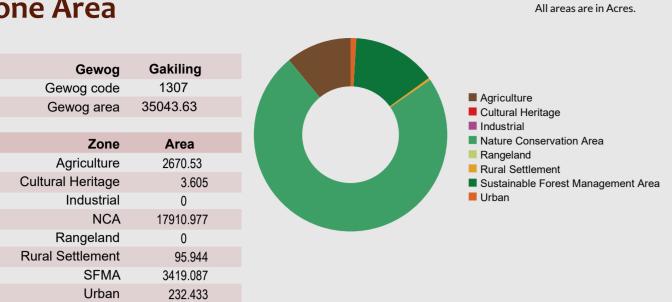
## The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

90°24'0°E 290km E

SAMTENLING

National Land Use Zoning 2023

### Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.



### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	581.666	0	0	0	0	0	0
NCA	581.666	0	799.562	0	0	0	4.205	0
Agriculture	0	799.562	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	4.205	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

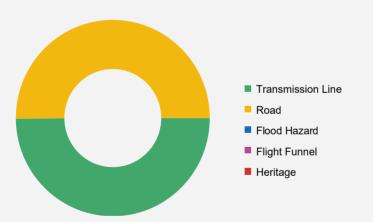
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	12.916	100.242	21.316	0	0	0	0.398	0
Road	38.702	117.673	1.088	0	0	0	0.413	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	224.386
Road	225.201
Flood Hazard	0
Flight Funnel	0
Heritage	0

the Shompangkha gewog.



### **Map Legend**

### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Sarpang: Gakiling

### Residential Land Institutional Land

### Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village

Heritage Conservation Zone

### Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone

### Multi Use Zone Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production

Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

### Basemap

Boundaries

International --Dzongkhag - -

Perennial

	iliap sca
ighway 300k ===	Thromde 50k =
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k

### Dzongkhag 50k =

### Dzongkhag 25k =

### Demographic Table

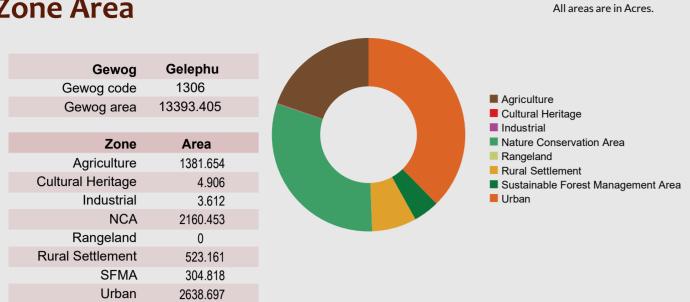
	Total Population		Sex ratio	Aging Index	Number of household	Mean Household siz	
Gewog / Throm	Male	Female	Total				
Gakiling	1,105	1,020	2,125	108.3	33.9	501	4.2
Sarpang Town	1,652	1,500	3,152	110.1	16.3	687	3.6
Disclaimer:							



National Land Use Zoning 2023

90°18'0°E 280km E

CHHUDZOM



### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	5.545	0	0	0	0	0	0
NCA	5.545	0	0.022	0	0	0	0	0
Agriculture	0	0.022	0	0.968	0	0	0	0
Urban	0	0	0.968	0	0	0.11	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0.11	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	47.751	18.669	20.333	0.097	0	9.198	0
Road	0	0	2.911	0	0	0	0.642	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	178.865
Road	52.006
Flood Hazard	0
Flight Funnel	0
Heritage	0

### **Map Legend**

Sarpang: Gelephu

HHUDZOM

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land

> Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources • Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A Hydro Power Waterways ----

> > Basemap Boundaries

Airport •

International --Dzongkhag - -Gewog — Perennial Terrain

Farm 5k ====

Roads for different Highway 300k ---Thromde 50k Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k

**Data Ownership** 

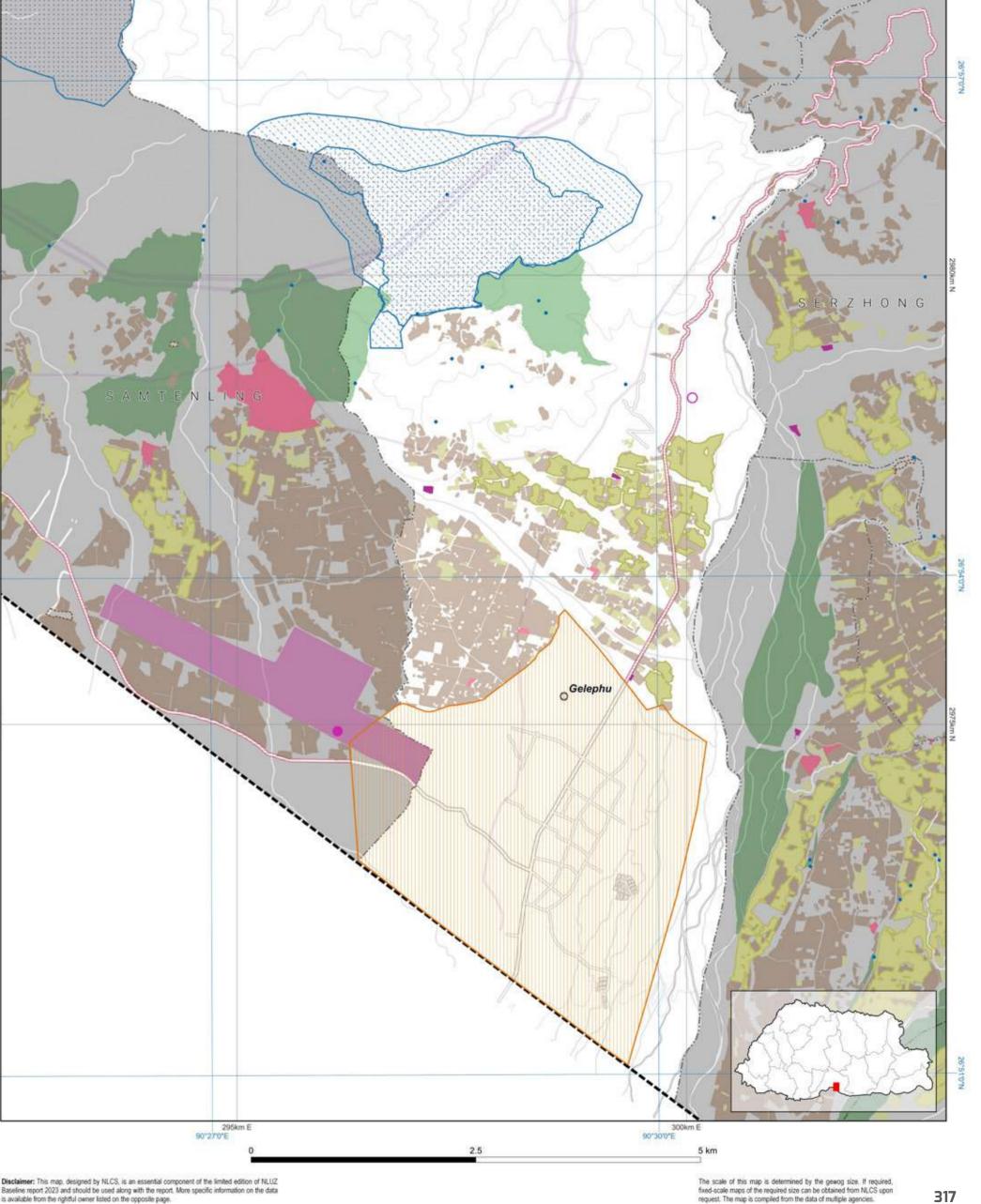
Dzongkhag 25k

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Air Transport Ministry of Infrastructure and Transport Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Gelephu	3,314	3,143	6,457	105.4	14.4	1,387	4.1		
Gelephu Thromde	5,146	4,712	9858	109.2	17.5	2,320	3.8		
Disalaimarı									

The demographic statistics provided in the table above for Gelephu thromde encompass not only the area falling under the Gelephu gewog but also include the demographic statistics of the thromde area falling under the Samtenling gewog. The same statistics for Gelephu thromde can be found under the Samtenling gewog.



**National Land Use Zoning 2023** 

JIGMECHHOELING

## ECHHOELIN

### Zone Area

Jigmechhoeling
1308
123454.715
Area
4272.535
18.751
0.214
103347.296
0
140.995
1021.528
0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	281.767	0	0	0	0	0	0
NCA	281.767	0	1649.105	0	0	0.112	8.575	0
Agriculture	0	1649.105	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0.112	0	0	0	0	0	0
Rural Settlement	0	8.575	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	9.571	461.412	55.494	0	0		0.561	0
Road	12.184	150.967	12.553	0	0.487	0	2.7	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

-	
Buffer Zone	Area
Transmission Line	664.546
Road	281.95
Flood Hazard	0
Flight Funnel	0
Heritage	0
	Transmission Line Road Flood Hazard Flight Funnel

### **Map Legend**

All areas are in Acres.

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Institutional Land Forest Management Unit

Community Forest

Residential Land

### Religious Sites Heritage Village Heritage Conservation Zone



### Core Zone Transistion Zone Buffer Zone Multi Use Zone



### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

### Payment for Ecosystem Services Manufacturing and Production

Existing mines Airport •

### Helipad O

Hydro Power Waterways -

### Basemap Boundaries

International --Dzongkhag - -Perennial

Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ===	Farm 5k
Dzongkhag 5k	

### **Data Ownership**

ı	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock

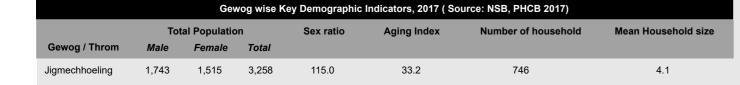
Department of Energy Ministry of Energy and Natural Resources

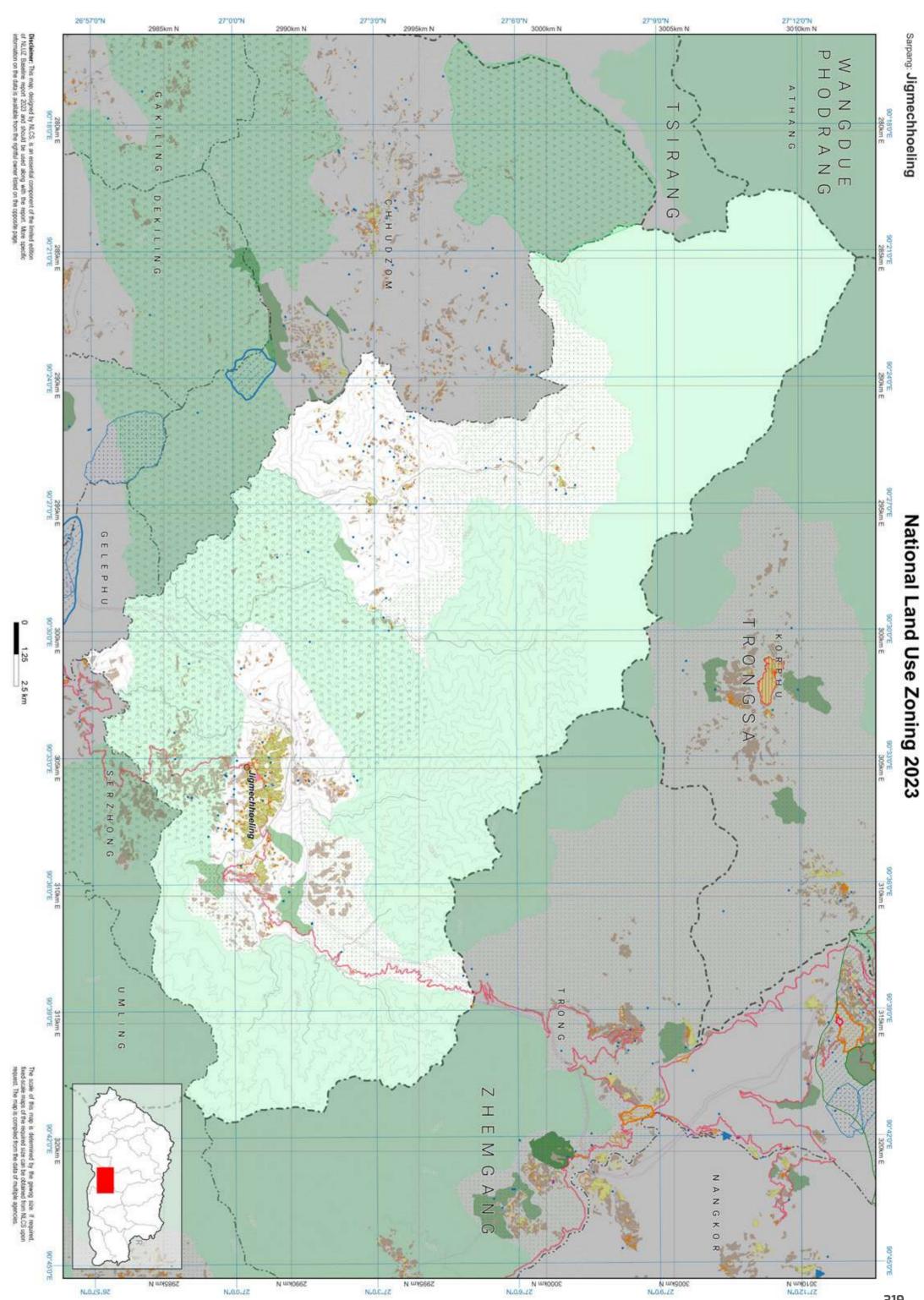
Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

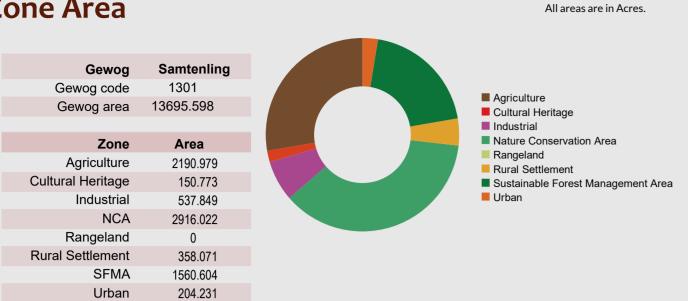
Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### Demographic Table







### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0.008	0	0	0	0
Urban	0	0	0.008	0	0	78.287	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	78.287	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	107.546	6.642	5.700	0	2.438	0	2.19	0
Road	0	0	3.377	0	0	0	1.216	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Demographic Table

•	
Buffer Zone	Area
Transmission Line	245.342
Road	66.66
Flood Hazard	0
Flight Funnel	0
Heritage	0

### **Map Legend**

Sarpang: Samtenling

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Residential Land Institutional Land

Lease Land

Forest Management Unit Community Forest

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area

**Cultural Heritage** 

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Wetland Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A

Hydro Power Waterways ----Basemap

> Boundaries International --Dzongkhag - -Gewog ---Rivers

Perennial Terrain Contour

Roads for different Thromde 50k

Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k Dzongkhag 50k === Industrial 5k Dzongkhag 25k ==== Farm 5k ====

### Data Ownership

Department of Air Transport Ministry of Infrastructure and Transport Department of Human Settlement

Ministry of Infrastructure and Transport

Ministry of Infrastructure and Transport

Department of Surface Transport

Data Owner of the Map Content

Highway 300k ——

Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources

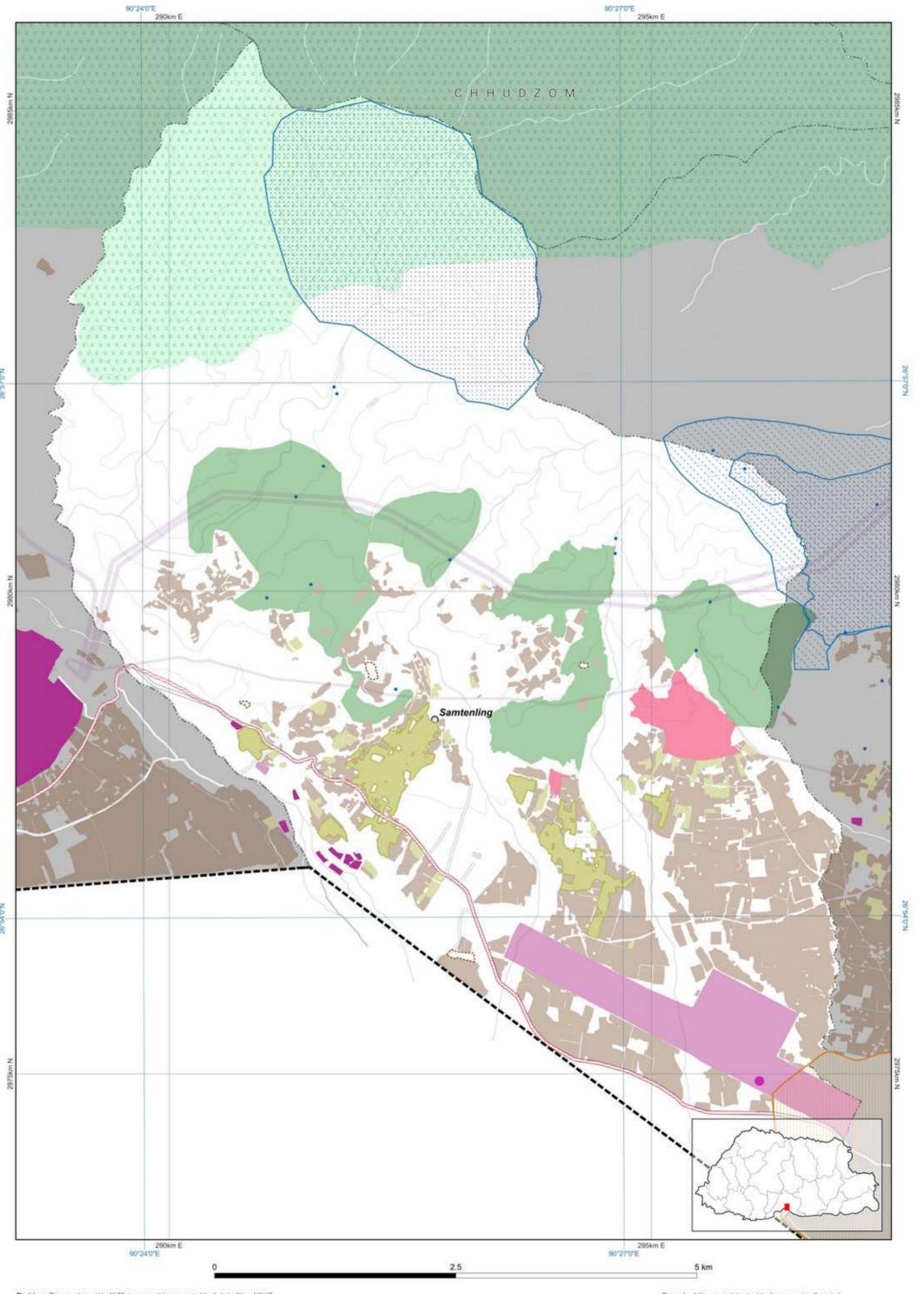
Mean Household size 1,345 2,801 22.9 622 4.3 Gelegphu Thromde 5,146 4,712 17.5 2,320 3.8

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

The demographic statistics provided in the table above for Gelephu thromde encompass not only the area falling under the Samtenling gewog but also include the demographic statistics of the thromde area falling under the Gelephu gewog. The same statistics for Gelephu thromde can be found under

### National Land Commission Secretariat

### National Land Use Zoning 2023



Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

.0	ne Area	
	<b>Gewog</b> Gewog code Gewog area	Serzhong 1312 19572.288
	Ocwog area	10072.200
	Zone	Area
	Agriculture	2662.978
	Cultural Heritage	31.735
	Industrial	6.8
	NCA	8791.953
	Rangeland	0
	Rural Settlement	151.344
	SFMA	0
	Urban	0

### **Zone Conflict**

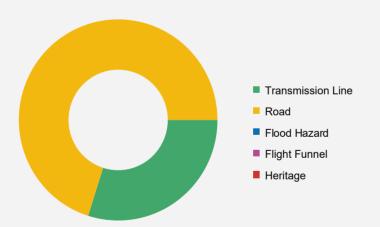
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	569.463	0	0	0	0	0
Agriculture	0	569.463	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	20.241	8.051	0	0		0.274	0
Road	0	36.603	2.235	0	0	0	0.469	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Z	one Area	i
Transmission I	Line 45	.719
R	toad 107	.247
Flood Haz	zard 0	
Flight Fur	nnel 0	
Herit	age 0	



### **Map Legend**

### National Land Use Zoning

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Sarpang: Serzhong

Residential Land Institutional Land

Forest Management Unit Community Forest

Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Potential Recharge Area

Payment for Ecosystem Services

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Waterways —

Basemap

Boundaries International --

Dzongkhag - -Perennial

Highway 300k = Highway 50k = Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k

### Data Ownership

Dzongkhag 25k =

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

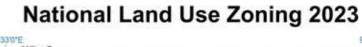
Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

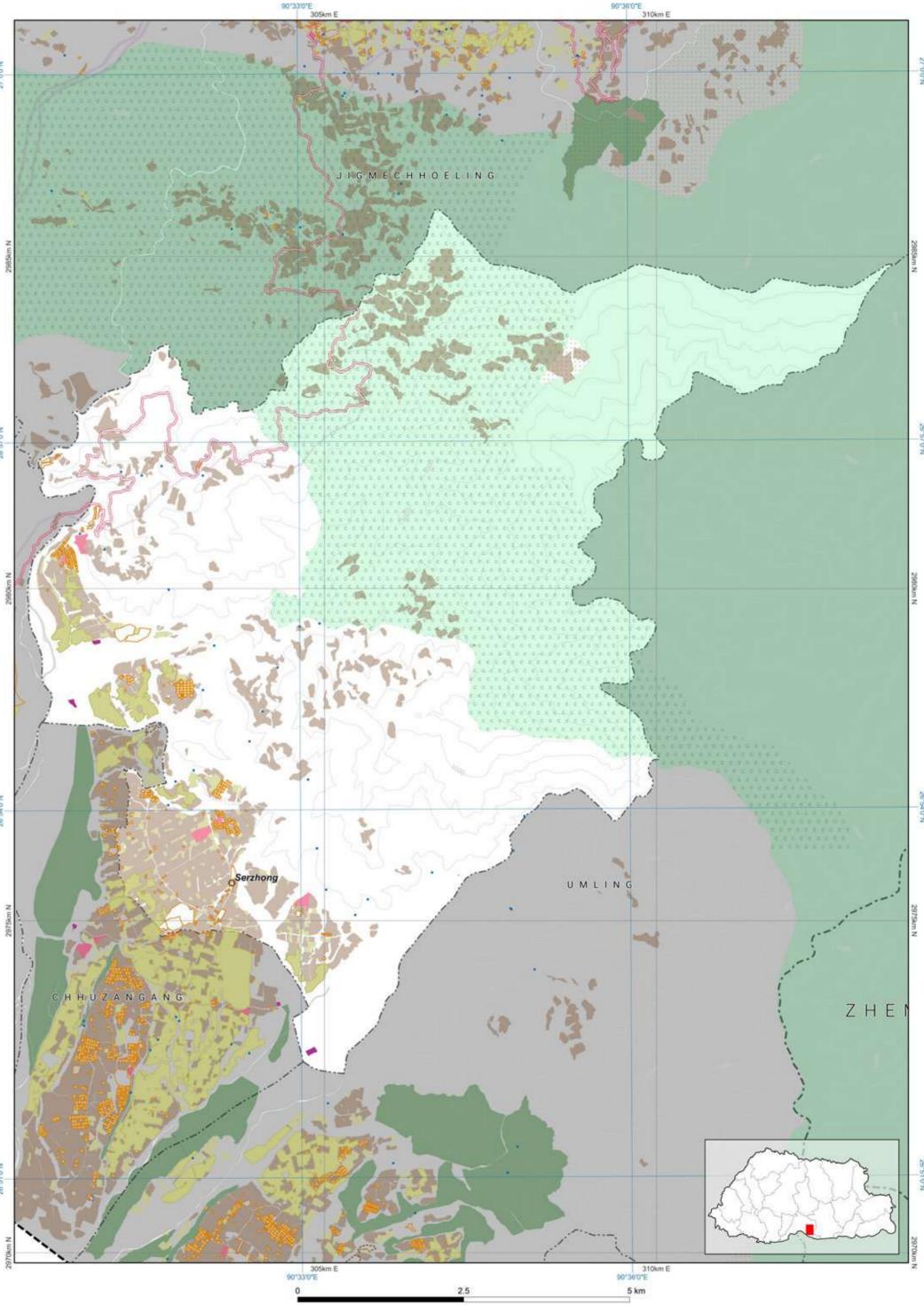
Department of Water Ministry of Energy and Natural Resources Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population Sex ratio Aging Index Number of household Mean Household size							
Gewog / Throm	Male	Female	Total				
Serzhong	1,285	1,422	2,707	90.4	33.5	481	4.1







### **Map Legend**

All areas are in Acres.

Agriculture

Industrial

Rangeland

Urban

■ Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area

### **National Land Use Zoning**



Sarpang: Shompangkha

### Forest Management Unit Community Forest

### **Cultural Heritage** Religious Sites Heritage Village

### Urban Zone

Transistion Zone Buffer Zone

### Hazard and Risk Rain Induced Flood

### Powerlines

High Conservation Value

### Significant Watershed

Manufacturing and Production

Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

### Basemap

Dzongkhag -

gnway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
051	

### **Zone Conflict**

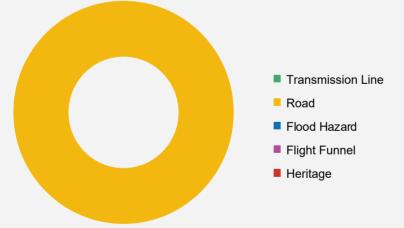
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	6.274	0	0	0	0
Urban	0	0	6.274	0	9.927	0	9.612	0
Culture	0	0	0	9.927	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	9.612	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area	
Transmission Line	0	
Road	2.18	
Flood Hazard	0	
Flight Funnel	0	
Heritage	0	



### **Demographic Table**

	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Shompangkha	757	729	1,486	103.8	38.3	357	4.1	
Sarpang Town	1,652	1,500	3,152	110.1	16.3	687	3.6	
Disclaimer:	1,002	1,000	0,102	110.1	10.0	001	0.0	

### Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



### Heritage Conservation Zone



Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Existing mines

Boundaries International --

Perennial Terrain

### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development

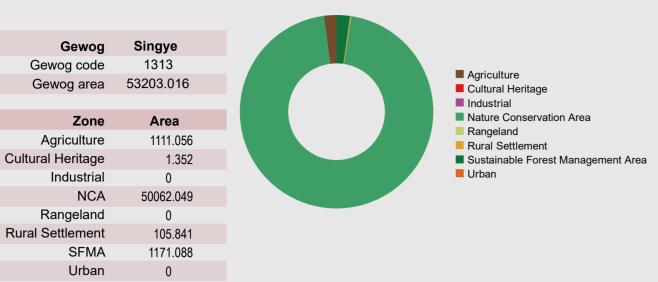
Ministry of Home Affairs Department of Human Settlement Ministry of Infrastructure and Transport

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

( I L I N G

### SINGYE

### **Zone Area**



### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	926.214	0	0	0	0	0	0
NCA	926.214	0	945.542	0	1.352	0	101.777	0
Agriculture	0	945.542	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	1.352	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	101.777	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	5.227	0	0	0	1.505	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

•	
Buffer Zone	Area
Transmission Line	0
Road	45.826
Flood Hazard	0
Flight Funnel	0
Heritage	0

### **Map Legend**

All areas are in Acres.



### Urban Zone Nature Conservation Area Protected Area Core Zone

Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone
Biological Corridor /
Botanical Park

### Wetland Ramsar Site

Hazard and Risk
Rain Induced Flood
Glacier Lake
Outburst Flood
Right Of Way / Buffer
Heritage

### Road Powerlines Flight Funnel

Other Effective Area-based Conservation Measures
Key Biodiversity Area

High Conservation Value Rangeland

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources 

Industrial

Manufacturing and Production

Manufacturing and Production
Service
Existing mines
Airport

### Helipad O Hydro Power Plants

Hydro Power Plants Hydro Power Waterways —

### Basemap Boundaries

International — Dzongkhag — Gewog — Rivers

Main river
Perennial — Terrain

### Roads for different map scales

Highway 300k ===	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

### Data Ownership

Data Owner of the map content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
	To	tal Populatio	n	Sex ratio A	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Singye	569	511	1,080	111.4	26.0	255	3.9				

### National Land Use Zoning 2023 Sarpang: Singye TSIRANG PATSHALING NICHULA 5 km

### **Zone Area** All areas are in Acres. Tareythang Gewog 1314 Gewog code Agriculture 26797.904 Gewog area ■ Cultural Heritage Industrial Nature Conservation Area Zone Area Rangeland 490.197 Agriculture Rural Settlement Cultural Heritage 1.276 ■ Sustainable Forest Management Area Industrial 0.107 22908.509 Rangeland 1847.41 Rural Settlement 493.911 SFMA

### **Zone Conflict**

Urban

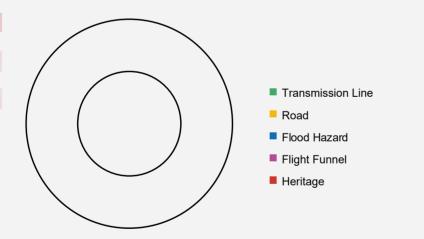
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0.322	0
NCA	0	0	0	0	0	0	0.546	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0.322	0.546	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Residential Land Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone Nature Conservation Area Protected Area

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Core Zone

Wetland Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial Manufacturing and Production

> Airport Helipad O Hydro Power Plants A

Hydro Power Waterways ----Basemap

Existing mines

Boundaries International --Dzongkhag - -Gewog ---

Perennial Terrain

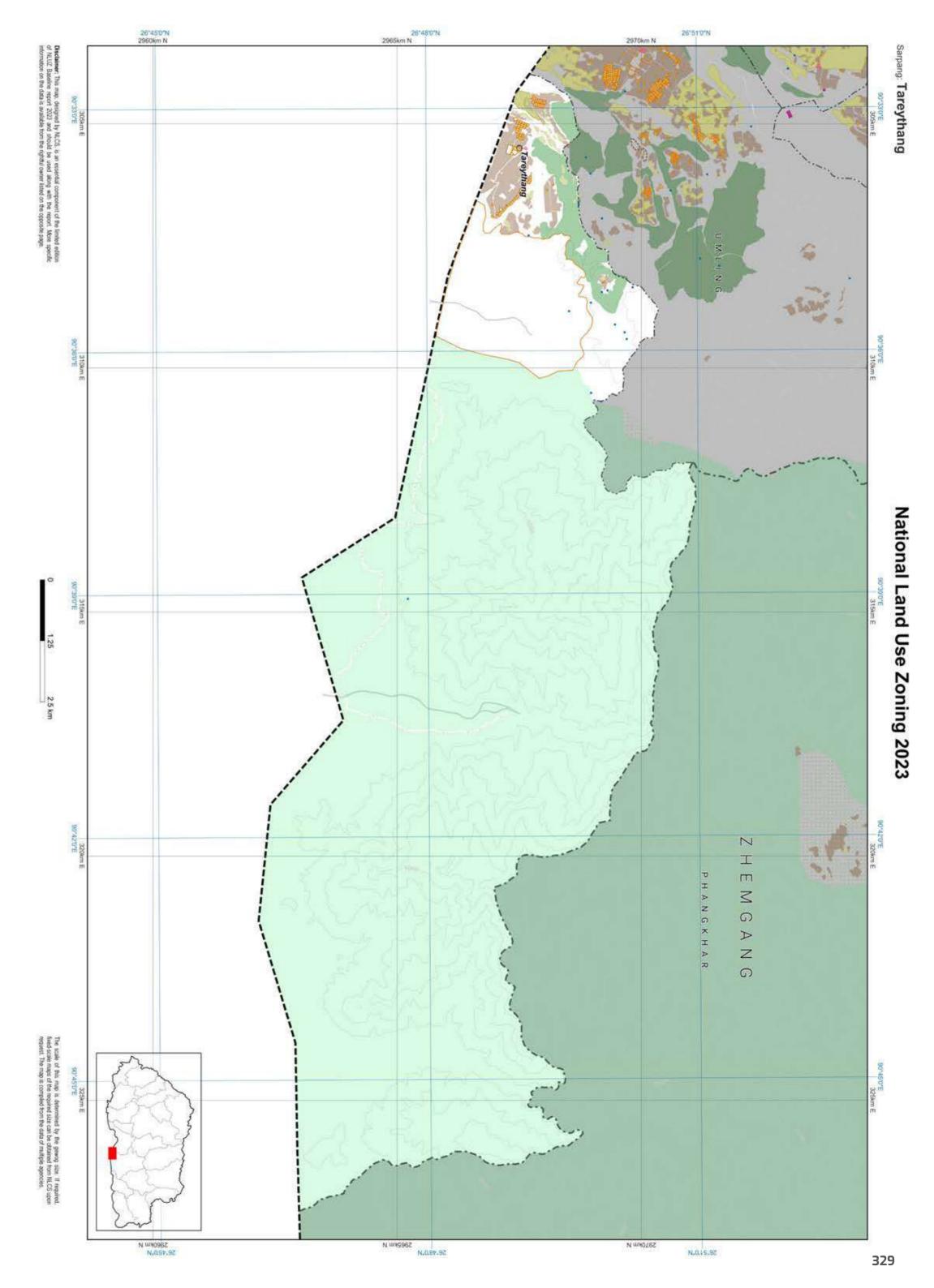
Roads for different Thromde 50k

Highway 300k —— Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k Dzongkhag 50k === Industrial 5k Dzongkhag 25k ==== Farm 5k ====

### Data Ownership

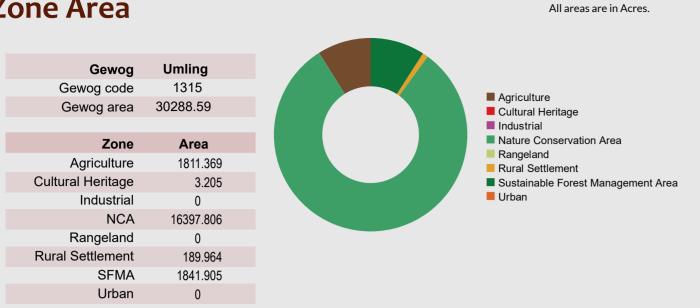
### Data Owner of the Map Content

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Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat



### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
		To	tal Population	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewo	og / Throm	Male	Female	Total					
Tarey	/thang	225	126	351	178.6	21.8	82	3.4	



### **Zone Conflict**

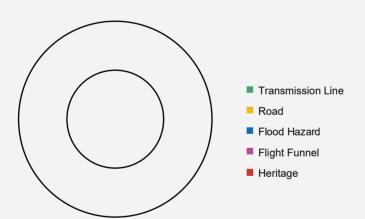
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**



### **Nature Conservation Area** Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

### Basemap

Boundaries International --Dzongkhag - -

Perennial Terrain

### Contour

	map sca
Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k ≡

### **Data Ownership**

### Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

### National Land Use Zoning 2023 Sarpang: Umling 90°39′0°E 315km E PHANGKHAR ZHEMGANG TAREYTHANG

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	Tot	al Population	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Umling	754	832	1 586	90.6	28.2	/11	3.7		

### **Zone Area** All areas are in Acres. Tashi Yangtse Dzongkhag Dzongkhag code Dzongkhag area 358432.323 Agriculture Culture Industrial Zone Area Nature Conservation Area 18836.474 Agriculture Rangeland Rural Settlement Culture 117.806 ■ Sustainable Forest Management Area Industrial 369.369 Urban NCA 234701.148 Rangeland 0 Rural Settlement 940.928 SFMA 24223.665 Urban 922.201

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	2230.687	172.53	0	0	0	4.489	0
NCA	2230.687	2735.048	0.00	0	7.119	0.19	183.525	0
Agriculture	172.53	2,735.05	0	0.657	7.135	0	0	0
Urban	0	0	0.657	0	43.815	0	0	0
Culture	0	7.119	7.135	43.815	0	0	0	0
Industrial	0	0.19	0	0	0	0	0	0
Rural Settlement	4.489	183.525	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	8.497	0	7.558	0	0	1.25	0.248	0
Road	0.052	0	28.412	0	0.69	6.924	2.348	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Duffer Zene	A	
Buffer Zone	Area	
Transmission Line	31.528	
Road	254.5	
Flood Hazard	0.000	■ Transmission Line
Flight Funnel	0	Road
Heritage	0	■ Flood Hazard
		■ Flight Funnel
		■ Heritage



### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

### Water Sources • Industrial Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

### Hydro Power Waterways -Basemap

Boundaries International --

### Dzongkhag - -Gewog —

Perennial Terrain

### Roads for different

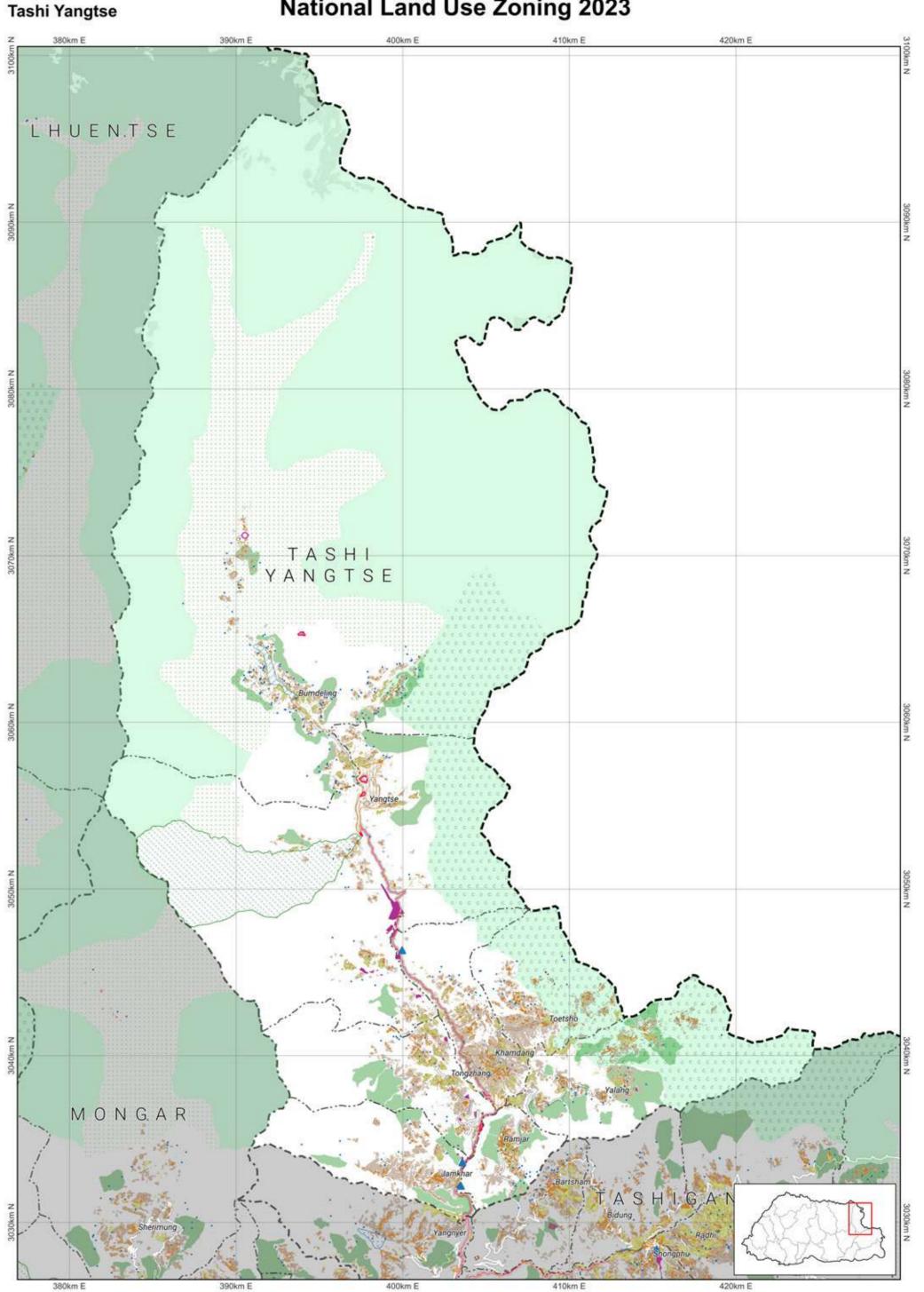
Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k === Industrial 5k Dzongkhag 25k ==== Farm 5k ====

Highway 300k ——

### Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Dzongkhag	Male	Female	Total				
Tashi Yangtse	8,719	8,581	17,300	101.6	21.9	3,982	3.7

### **National Land Use Zoning 2023**



Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies. More specific information on the data is available from the rightful owner listed on the opposite page.

Gewog	Bumdeling
Gewog code	1601
Gewog area	211423.395
Zone	Area
Agriculture	2665.65
Cultural Heritage	21.744
Industrial	0.141
NCA	195104.821
Rangeland	0
Rural Settlement	185.359
SFMA	2495.955
Urban	0.743
Zone Confli	ct

### All areas are in Acres.

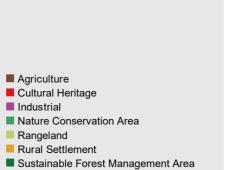
Agriculture ■ Cultural Heritage

Industrial

Rangeland

Rural Settlement

■ Nature Conservation Area



### Institutional Land

### Community Forest







Core Zone Transistion Zone Buffer Zone Multi Use Zone

### Wetland Ramsar Site

### Glacier Lake Outburst Flood

Heritage \_\_\_\_

### Powerlines Flight Funnel

Key Biodiversity Area

### Rangeland

### Significant Watershed Potential Recharge Area

Water Sources •

### Manufacturing and Production

Helipad O Hydro Power Plants A

### Basemap

Perennial

giillay oook	THIOHIUE JUK
lighway 50k ===	Thromde 25k
lighway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ngkhag 50k ===	Industrial 5k =
ngkhag 25k ===	Farm 5k ≡

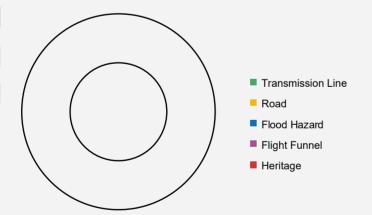
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	974.351	0.00	0	0	0	0	0
NCA	974.351	0	1,118.89	0	4.265	0.091	111.104	0
Agriculture	0	1118.893	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	4.265	0	0	0	0	0	0
Industrial	0	0.091	0	0	0	0	0	0
Rural Settlement	0	111.104	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Area
0
0
0
0
0



### **Data Ownership**

### Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources

### Data Owner of the Map Content



### Map Legend



Tashi Yangtse: Bumdeling

KHOMA

LHUENTSE

Residential Land

Forest Management Unit

### **Cultural Heritage** Religious Sites





Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer

Other Effective Area-based Conservation Measures

High Conservation Value

### Tsamdro

Payment for Ecosystem Services Industrial

Existing mines Airport

### Hydro Power Waterways ----

Boundaries International --Dzongkhag - -Gewog ---Rivers

### Terrain Contour

	Roads for different map scales
Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Household size									
3.9									



91°24'0"E

91°270°E

MONGAR

91°210°E

91°33'0°E

91°36'0'E

one Ar	ea	
<b>G</b> ewog	ewog	Jamkhar 1602
Gewog		12694.646
	Zone	Area
	ulture	2079.802
Cultural He	_	12.495
Indu	ustrial	12.763
	NCA	16.326
Rang	eland	0
Rural Settle	ement	80.632
5	SFMA	1348.308
l	Jrban	0

### **Zone Conflict**

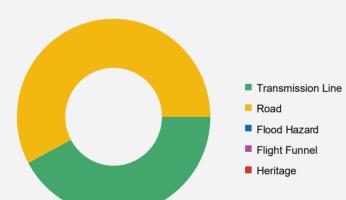
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	8.497	0	7.558	0	0	0.717	0.248	0
Road	0.052	0	3.781	0	0	1.335	0.135	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	29.243
Road	40.066
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land **Rural Settlement**



Residential Land







### Wetland Ramsar Site Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

### Key Biodiversity Area High Conservation Value Rangeland

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

### Industrial Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A

### Hydro Power Waterways —

### Basemap Boundaries

International --Dzongkhag - -Gewog ---

### Perennial = Terrain

Roads for different

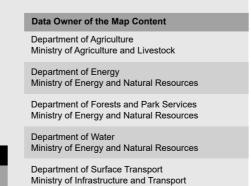
### Highway 300k —— Thromde 50k Highway 50k === Highway 25k =

Thromde 5k Highway 5k \_\_\_\_ Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k ==== Farm 5k ====

### **Data Ownership**

### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	То	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Jamkhar	516	483	999	106.8	45.3	302	3.3				



National Land Commission Secretariat

N A R A N G  Notchimer: This map, designed by M.CS, is an especial component of the lim of NLUZ Baseline report 2023 and should be used along with the report. Mr. of the data is available from the rightful cannot isseed on the opposite.	3035%	M O N G A R
A S I imited edition. More specific the page.		
J - G A N G N Y E R		National Land Use
1.25 2.5 km		and Use Zoning 2023  91'300'E  400tm E
STee scale of this map is determined by the gewog size. If required, fixed scale endpared size can be obtained from MLCS upon request from the data of making approves.	N.a.pz.zz	BY STATE STA

Gewog	Khamdang
Gewog code	1603
Gewog area	11148.508
_	
Zone	Area
Agriculture	3561.848
Cultural Heritage	3.744
Industrial	28.767
NCA	913.783
Rangeland	0
Rural Settlement	143.146
SFMA	21.445
Urban	103.578
Zone Confl	ict

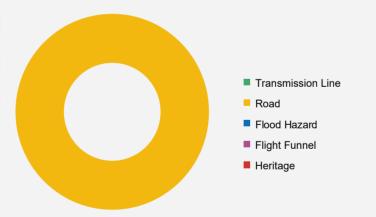
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	1890.826	0	0	0	0
Urban	0	0	1890.826	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	20.592	0	0	1.12	0.795	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Area
0
116.662
0
0
0



### **Map Legend**

All areas are in Acres.

Agriculture Cultural Heritage Industrial

Rangeland Rural Settlement

Nature Conservation Area

■ Sustainable Forest Management Area

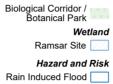
Tashi Yangtse: Khamdang

•	O	
National La	nd Use Zoni	Lan
	Agricultural L	.an
	Kamzhing	
Prot	ected Chhuzhing	
Regu	ulated Chhuzhing	
	Lease Land	
	Rural Settler	nen
	Residential Land	
1	Institutional Land	
	Sustainable Fo	

Forest Management Unit Community Forest









### Powerlines Flight Funnel

### Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value





### Helipad O Hydro Power Plants A Hydro Power Waterways —

### Basemap

Doundanco
International
Dzongkhag
Gewog
Rivers
Main river
Perennial
Terrain

<i>Terrain</i> Contour
Roads for differen

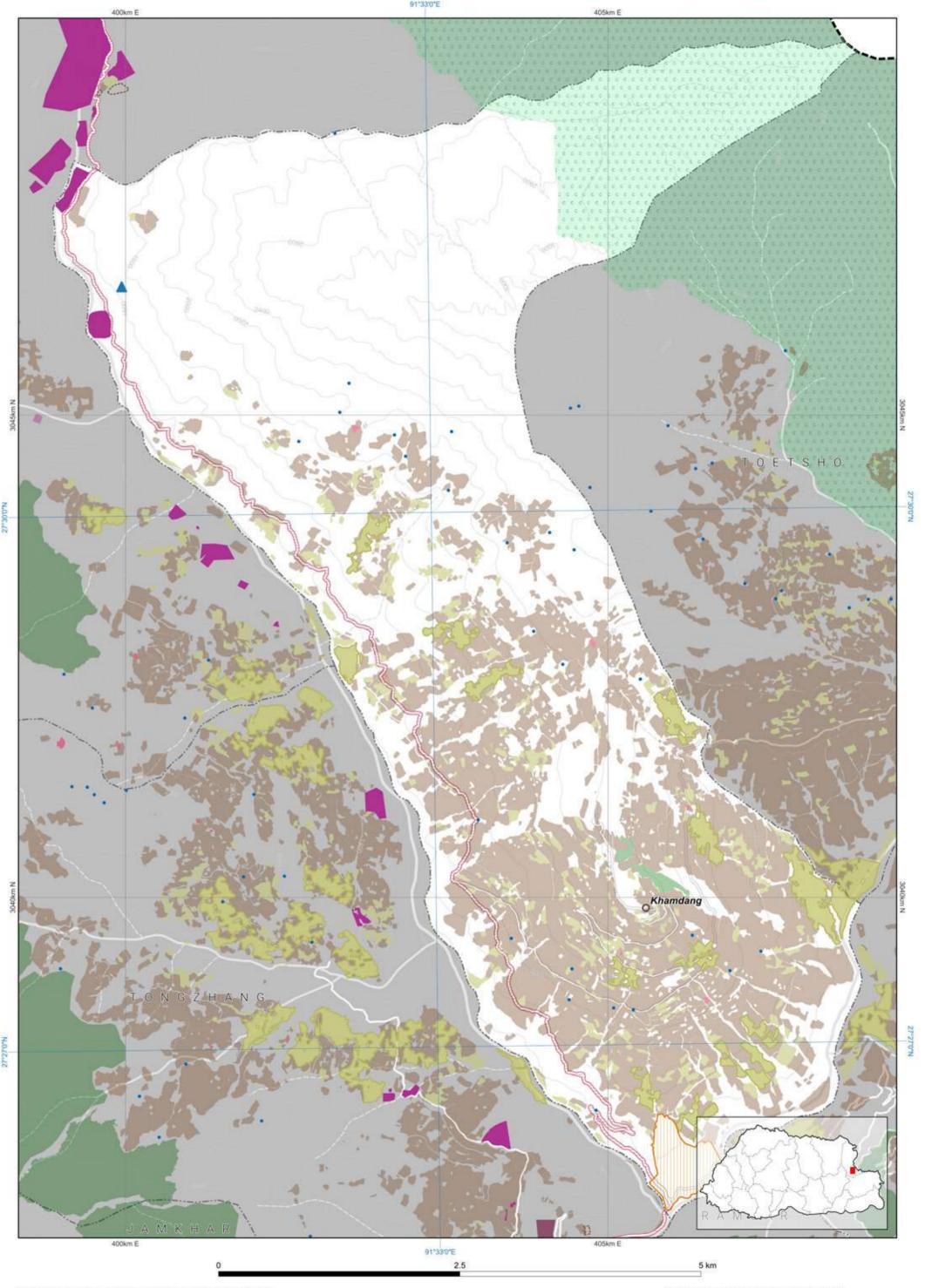
	<b>Terrain</b> Contour
	Roads for differer map scale
Highway 300k ——	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ====	Farm 5k
Dzongkhag 5k	

### Data Ownership Data Owner of the Map Content

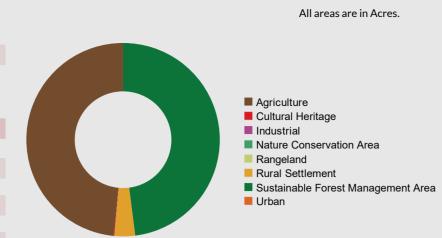
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Mean Household size								
Male	Female	Total						
1,644	1,668	3,312	98.6	17.7	719	3.9		
226	134	360	168.7	13.3	89	3.1		
	<b>Male</b> 1,644	Total Populatio Male Female  1,644 1,668	Total Population Male Female Total  1,644 1,668 3,312	Total Population         Sex ratio           Male         Female         Total           1,644         1,668         3,312         98.6	Total Population         Sex ratio         Aging Index           Male         Female         Total           1,644         1,668         3,312         98.6         17.7	Total Population Sex ratio Aging Index Number of household  Male Female Total  1,644 1,668 3,312 98.6 17.7 719		



	Zone Area	
	0	D
	Gewog	Ramjar
	Gewog code	1604
	Gewog area	5653.82
5	Zone	Area
	Agriculture	1132.235
	Cultural Heritage	2.752
	Industrial	0.167
	NCA	0
	Rangeland	0
_	Rural Settlement	80.724
_	SFMA	1121.557
	Urban	0



### **Zone Conflict**

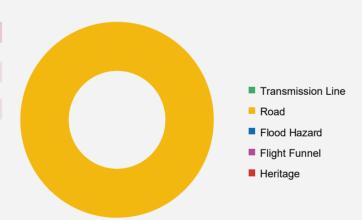
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.02	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0.02	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0.017	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Area
0
0.053
0
0
0



### **Map Legend**

**National Land Use Zoning** Regulated Chhuzhing Lease Land Residential Land

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Key Biodiversity Area High Conservation Value

Payment for Ecosystem Services Water Sources •

Existing mines Airport • Helipad O

Boundaries International --

Dzongkhag - -Perennial

Highway 300k ---Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Dzongkhag 25k

### **Data Ownership**

Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat



Tashi Yangtse: Ramjar

Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area

Ramsar Site Rain Induced Flood

Flight Funnel Other Effective Area-based Conservation Measures

Significant Watershed Potential Recharge Area

Manufacturing and Production

Hydro Power Plants A Hydro Power Waterways —

Basemap

Roads for different Thromde 50k

Industrial 5k

### Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Ramjar	624	589	1,213	105.9	23.7	303	3.1

### Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

91"33"0E

91°36'0"E

20	ne Area	
	<b>Gewog</b> Gewog code	Toetsho 1605
	Gewog area	12105.703
	Zone	Area
	Agriculture Cultural Heritage	2460.7 4.243
	Industrial	0
	NCA	7775.376
	Rangeland	0
	Rural Settlement	119.622
	SFMA	0
	Urban	0

### **Zone Conflict**

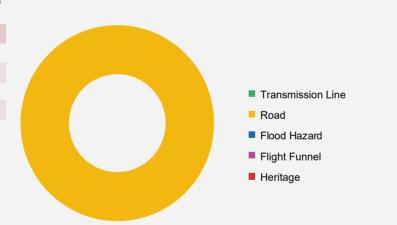
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	644.57	0	0.95	0	32.449	0
Agriculture	0	644.57	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.95	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	32.449	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0.917	0	5.050	0	0	0	0.115	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	14.436
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

Tashi Yangtse: Toetsho

YANGTSE

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land

> Institutional Land Forest Management Unit

Community Forest **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

> **Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Urban Zone

Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport • Helipad O

> Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries International --Dzongkhag - -Perennial

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

### **Data Ownership**

Data Owner of the Map Content

Highway 300k ---

Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport

### **Demographic Table**

1			Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)		Department of Human Settlement Ministry of Infrastructure and Transport
1	Gewog / Throm	To Male	tal Populatio Female	on <i>Total</i>	Sex ratio	Aging Index	Number of household	Mean Household size	Department of Surface Transport Ministry of Infrastructure and Transport
	Toetsho	744	836	1,580	89	22.8	426	3.5	National Land Commission Secretariat

### Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

## The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

O	ne Area	
	Gewog	Tongzhang
	Gewog code	1606
	Gewog area	16101.642
	Zone	Area
	Agriculture	2191.888
	Cultural Heritage	15.554
	Industrial	72.227
	NCA	20.105
	Rangeland	0
	Rural Settlement	120.213
	SFMA	1586.929
	Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	7.131	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	7.131	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

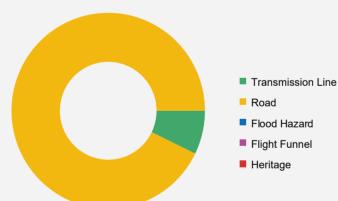
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0.532	0	0
Road	0	0	2.806	0	0.69	2.412	1.233	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	2.285
Road	29.418
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



### **Map Legend**



### Urban Zone **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

### Rangeland Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways —

### Basemap

Boundaries International --Dzongkhag - -Gewog --

Perennial Terrain

### Roads for different

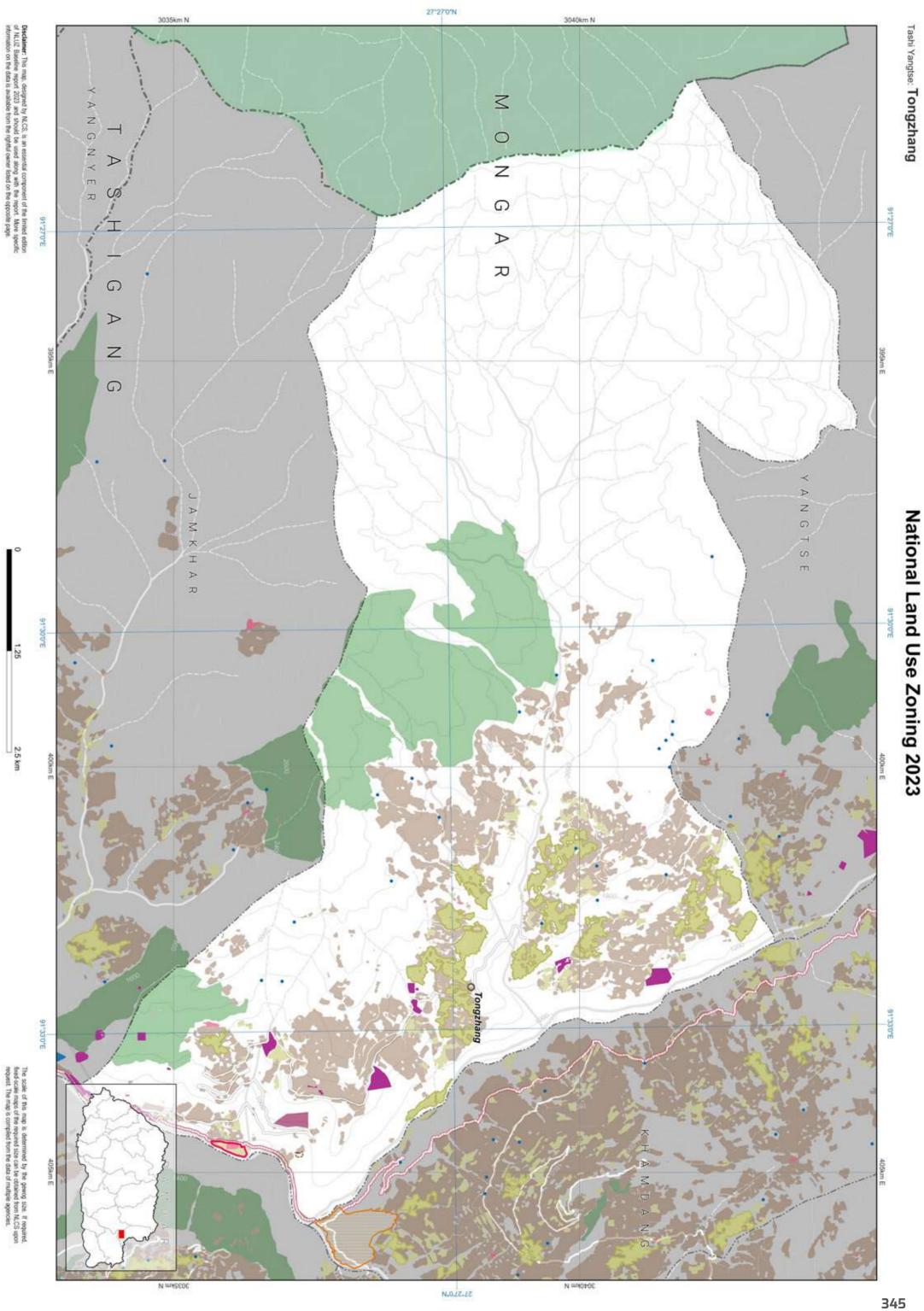
lighway 300k ===	Thromde 50k =
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k ≡
zongkhag 25k ===	Farm 5k ≡
zongkhag 5k	

### **Data Ownership**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSE, PHC⊞ 2017)								
0		tal Populatio		Sex ratio	Aging Index	Number of household	Mean Household size	De Mir
Gewog / Throm	Male	Female	Total					NI
Tongzhang	890	892	1,782	98.8	26.8	360	3.6	Na

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock





0	ne Area	
	<b>Gewog</b> Gewog code	<b>Yalang</b> 1607
	Gewog area	22288.734
	<b>Zone</b> Agriculture	<b>Area</b> 2493.983
	Cultural Heritage	5.124
	Industrial	0.15
	NCA	13463.506
	Rangeland	0
	Rural Settlement	97.226
	SFMA	3573.053
	Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1248.338	0.00	0	0	0	0	0
NCA	1248.338	0	969.96	0	1.9	0.099	0	0
Agriculture	0.00	969.96	0	0	0	0	39.858	0
Urban	0	0	0	0	0	0	0	0
Culture	0	1.9	0	0	0	0	0	0
Industrial	0	0.099	0	0	0	0	0	0
Rural Settlement	0	39.858	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

### Lease Land Residential Land

### Institutional Land Forest Management Unit

Community Forest

### **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone **Nature Conservation Area**

### Protected Area Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Tsamdro

Significant Watershed Potential Recharge Area

### Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport •

### Helipad O Hydro Power Plants A

Hydro Power Waterways —

### Basemap Boundaries

International --Dzongkhag - -

### Perennial Terrain

### Roads for different

THIOHIUE JUK	ngiliay oook
Thromde 25k	Highway 50k ===
Thromde 5k	Highway 25k ====
Access 5k =	Highway 5k
Industrial 5k =	zongkhag 50k ===
Farm 5k =	zongkhag 25k ===

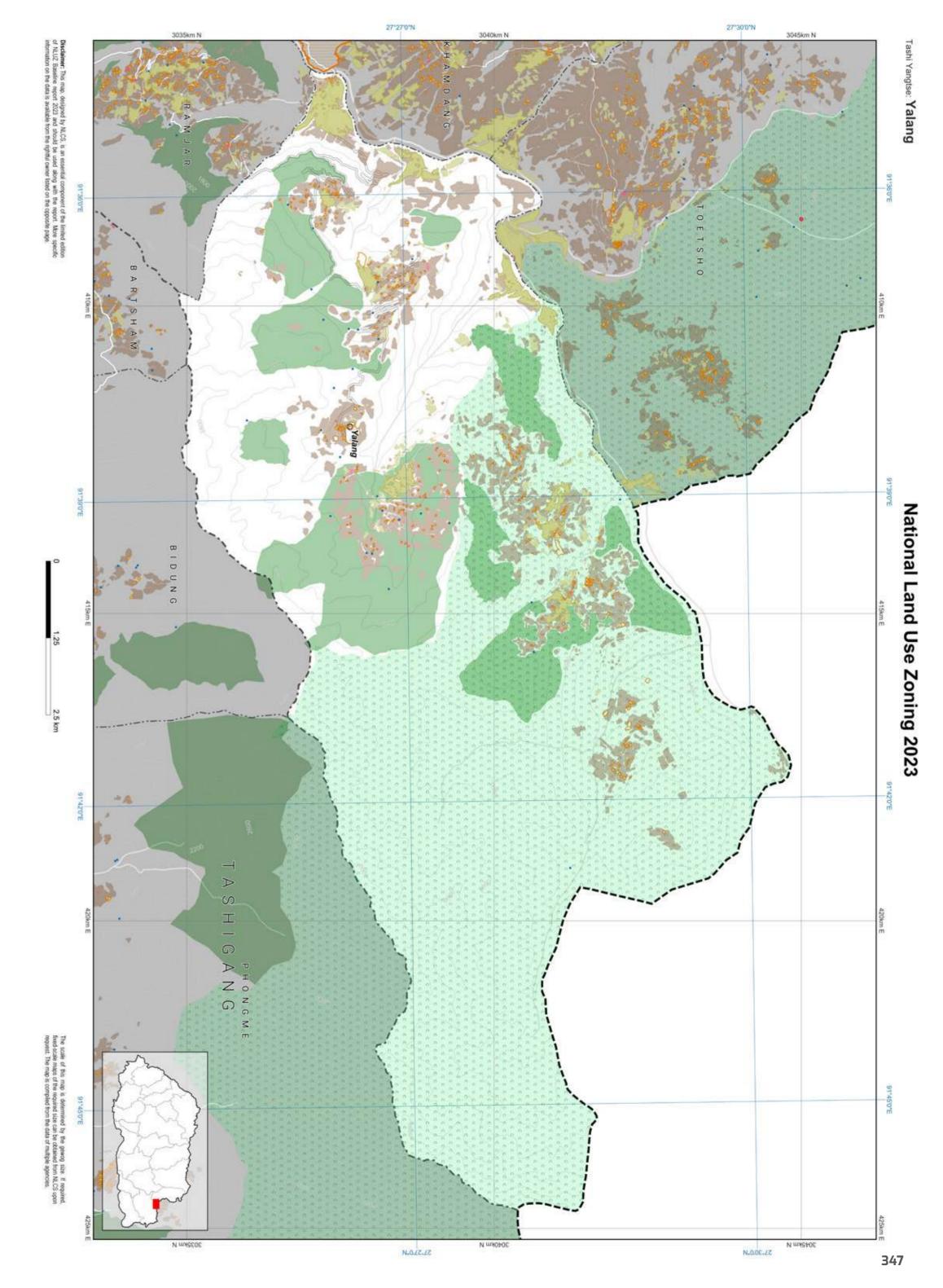
### **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Water

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population		on	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total					N	
Yalang	687	685	1,372	100.3	39.2	390	3.3	N	

Department of Culture and Dzongkha Development Ministry of Home Affairs Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



one Area	
Gewog	Yangtse
Gewog code Gewog area	1608 66821.479
Zone	Area
Agriculture	2250.369
Cultural Heritage	52.151
Industrial NCA	255.153 17397.979
Rangeland	0
Rural Settlement	114.006
SFMA	14076.42
Urban	817.88

### **Zone Conflict**

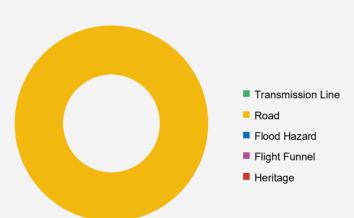
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	6.66	172.42	0	0	0	4.486	0
NCA	6.66	0	0.00	0	0	0	0.012	0
Agriculture	172.42	0.00	0	0.643	0	0	0	0
Urban	0	0	0.643	0	43.791	0	0	0
Culture	0	0	0	43.791	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	4.486	0.012	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	1.233	0	0	2.041	0.185	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	68.301
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing

Regulated Chhuzhing Lease Land

> Residential Land Institutional Land

Forest Management Unit Community Forest

**Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk

Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Waterways -

### Basemap

Boundaries International --Dzongkhag - -

Perennial Terrain

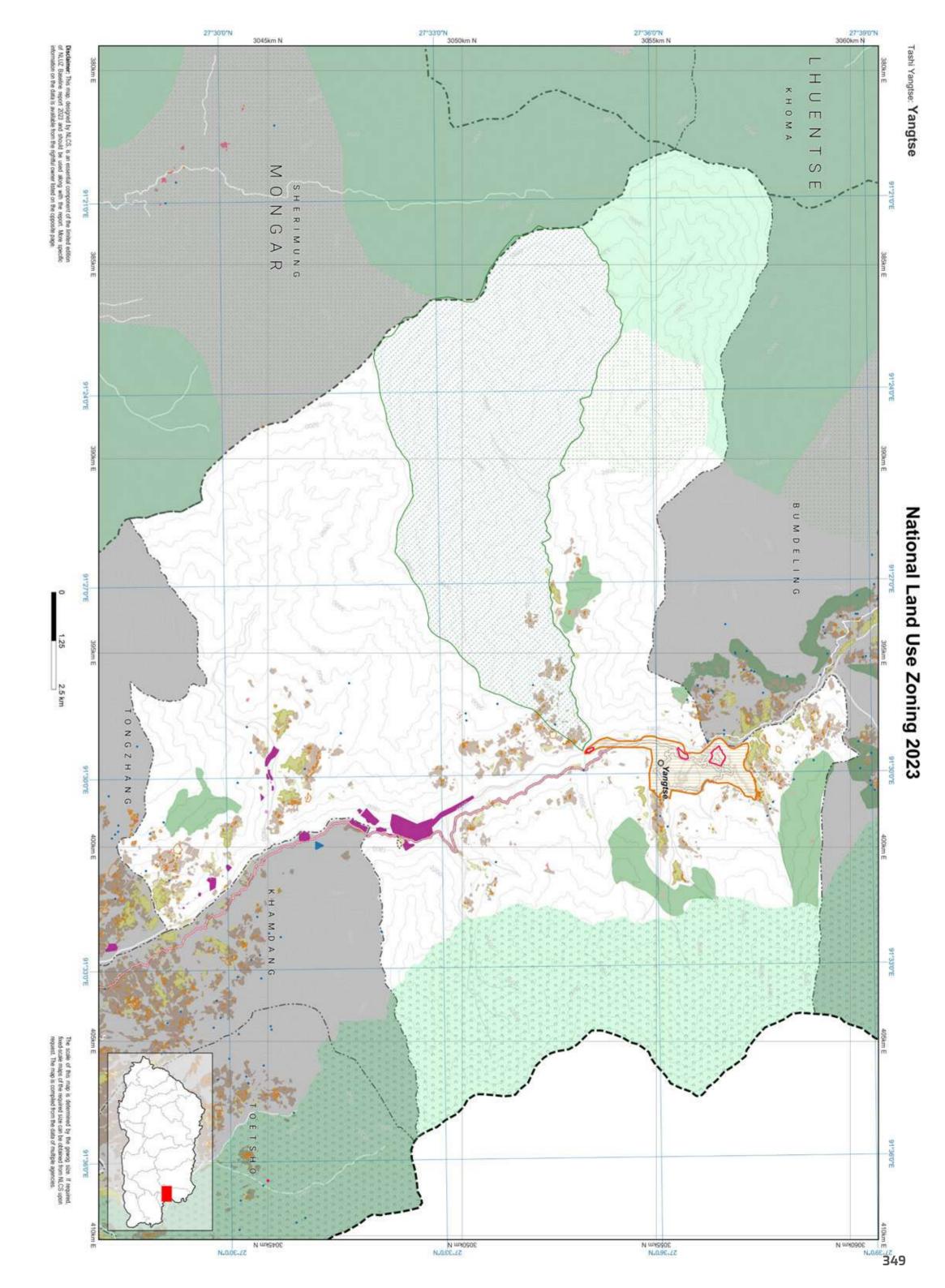
	map coun
Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

### **Data Ownership**

### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	То	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Yangtse	684	669	1,353	102.2	26.1	303	4.2			
Trashi Yangtse Town	1,661	1,526	3,187	108.8	11.3	630	3.9			

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs National Land Commission Secretariat



### **Zone Area** All areas are in Acres. **Tashigang** Dzongkhag Dzongkhag code 544770.782 Dzongkhag area Agriculture Culture Industrial Zone Area ■ Nature Conservation Area Agriculture 40833.164 Rangeland Rural Settlement Culture 220.713 ■ Sustainable Forest Management Area 258.765 Industrial Urban NCA 214843.607 78581.516 Rangeland **Rural Settlement** 2818.857 SFMA 47089.124 Urban 886.918

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	4827.813	2,657.76	0	5.714	0.4	362.86	0
NCA	4827.813	0	1,311.01	99.753	14.085	2.321	206.277	66821.229
Agriculture	2,657.76	1,311.01	0	302.264	0	0	0	1.366
Urban	0	99.753	302.264	0	20.013	9.312	80.737	0
Culture	5.714	14.085	0	20.013	0	0	0	0
Industrial	0.4	2.321	0	9.312	0	0	0	0
Rural Settlement	362.86	206.277	0	80.737	0	0	0	0
Rangeland	0	66821.229	1.366	0	0	0	0	0

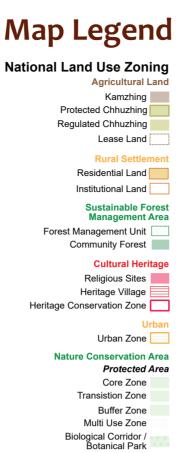
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	80.58	4.871	32.990	0	0	0	4.428	0
Road	231.634	28.397	64.111	0	0.43	0.599	32.807	0
Flood Hazard	0	0	0.705	14.125		0.016	2.17	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

	Buffer Zone	Area		
Trar	nsmission Line	333.08		
	Road	876.49		
	Flood Hazard	21.827		■ Transmission Line
	Flight Funnel	0		Road
	Heritage	0		■ Flood Hazard
				■ Flight Funnel
				Heritage

### **Map Legend**





Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines

> Airport • Helipad O

### Hydro Power Waterways — Basemap

Boundaries International --

Dzongkhag - -Perennial

### Roads for different

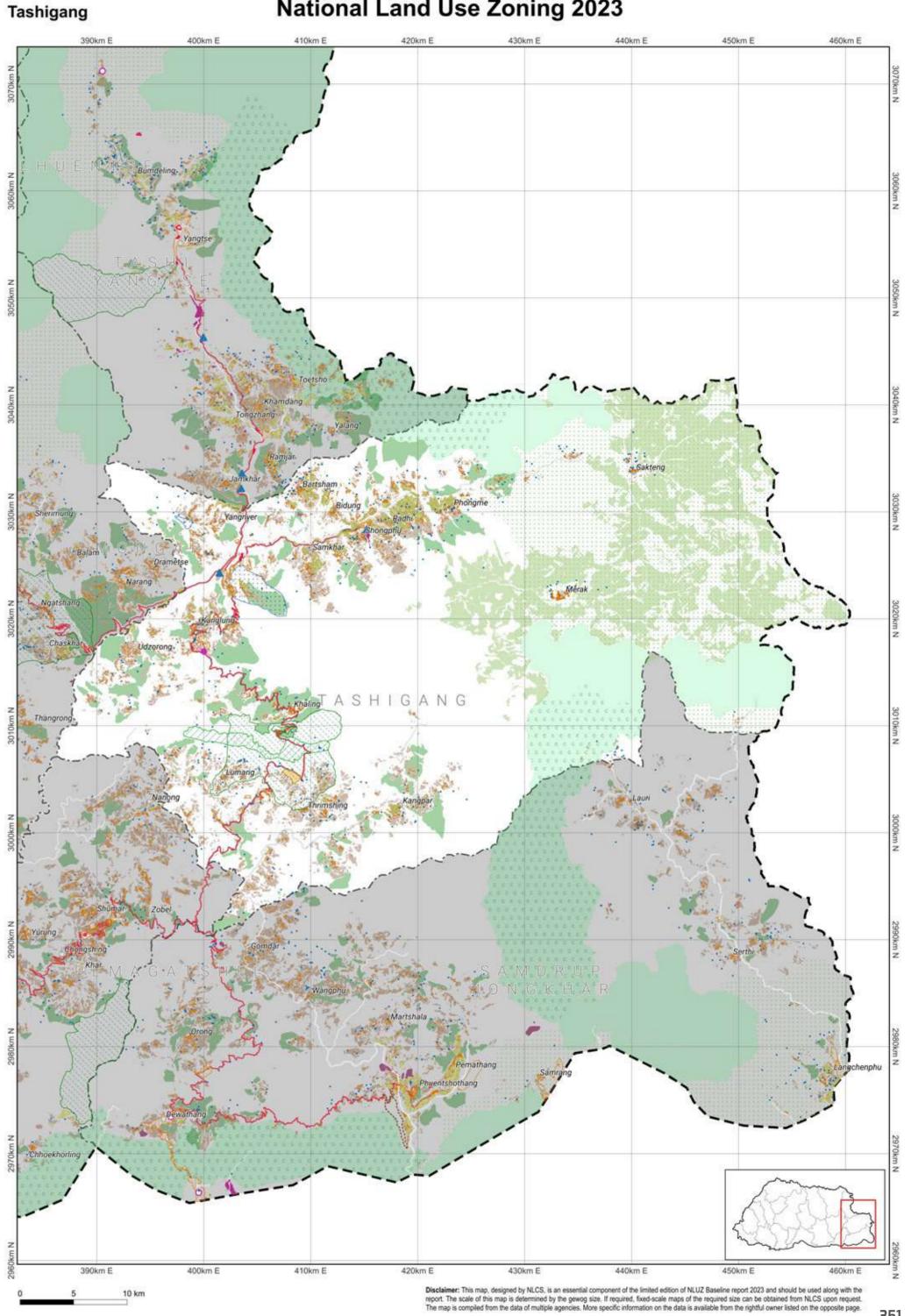
5 ,	TITIOTH GO CON
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =
ngkhag 25k ===	Farm 5k =

### Thromde 50k

	THIOTING ZOK	
	Thromde 5k	
_	Access 5k	
	=== Industrial 5k	
	Farm 5k	

### Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population			Sex ratio	Aging Index	Number of household	Mean Household size				
Dzongkhag	Male	Female	Total							
Tashigang	23,414	22,104	45,518	105.9	26.7	10,720	3.5			



## **PASHIGANG**

### **Zone Area** All areas are in Acres. Bartsham Gewog 1501 Gewog code Agriculture 8613.891 Gewog area ■ Cultural Heritage Industrial ■ Nature Conservation Area Zone Area Rangeland 1947.229 Agriculture Rural Settlement 12.412 Cultural Heritage ■ Sustainable Forest Management Area Urban Industrial 48.523 112.314 NCA Rangeland Rural Settlement

### **Zone Conflict**

SFMA

Urban

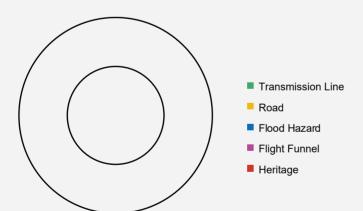
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA Agriculture Urban Culture Industrial Rural Settlement	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

Tashigang: Bartsham

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Lease Land

Rural Settlement

Residential Land

Sustainable Forest
Management Area
Forest Management Unit
Community Forest

**Cultural Heritage** 

Religious Sites
Heritage Village
Heritage Conservation Zone
Urban
Urban Zone

Protected Area
Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone
Biological Corridor /
Botanical Park

**Nature Conservation Area** 

Heritage Road Powerlines

Other Effective Area-based Conservation Measures
Key Biodiversity Area
High Conservation Value
Rangeland

Potential Recharge Area
Payment for Ecosystem Services
Water Sources

Industrial

Industrial

Manufacturing and Production
Service
Existing mines
Airport
Helipad

Industrial

Hydro Power Plants A
Hydro Power Waterways —

Basemap
Boundaries
International - Dzongkhag - Gewog - - Rivers
Main river
Perennial - Terrain

Contour

Roads for different map scales

Thromde 50k

Highway 300k Thromde 50k
Highway 50k Thromde 25k
Highway 25k Access 5k
Dzongkhag 50k Industrial 5k
Dzongkhag 25k Farm 5k
Dzongkhag 5k

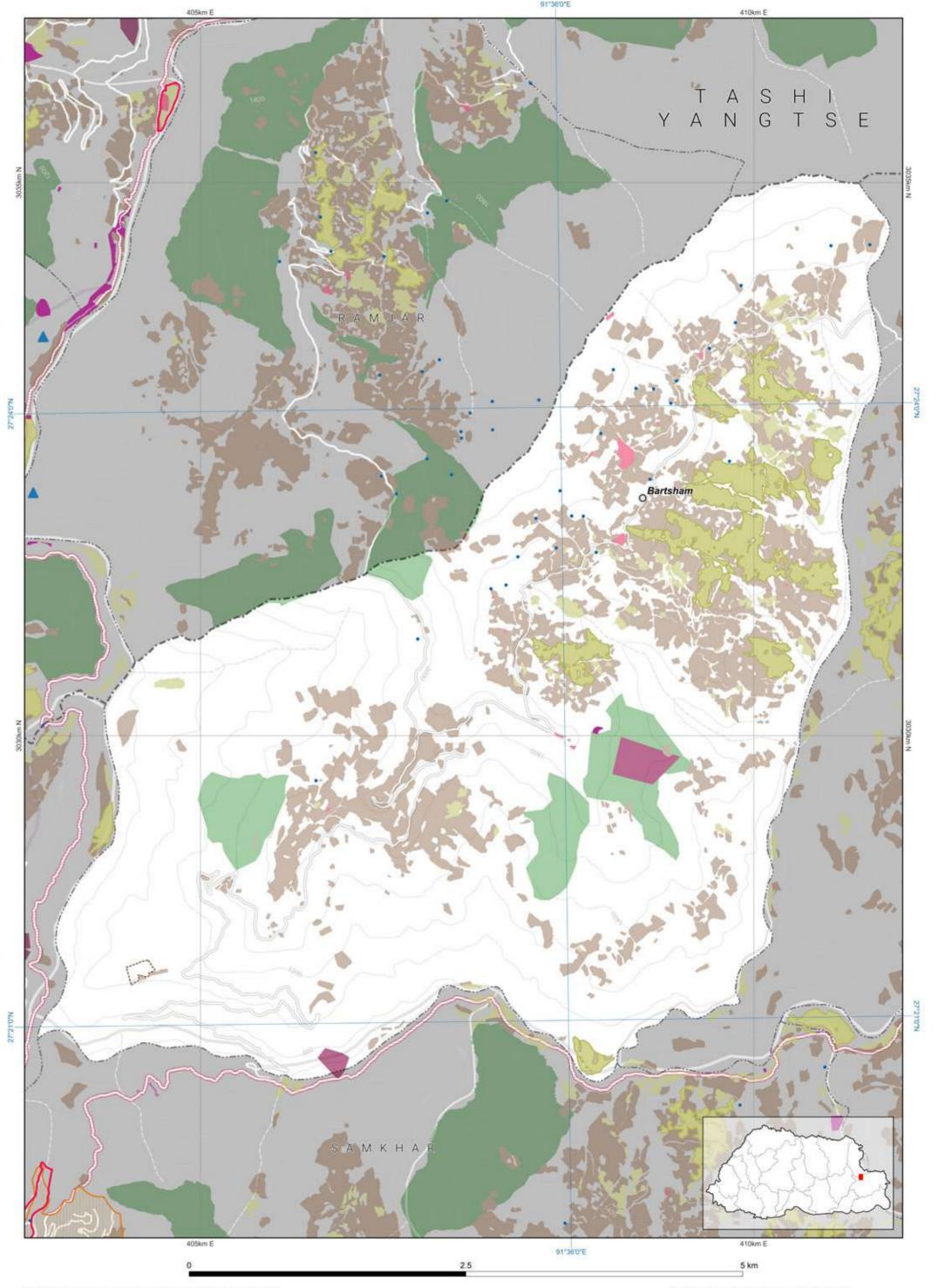
### Data Ownership

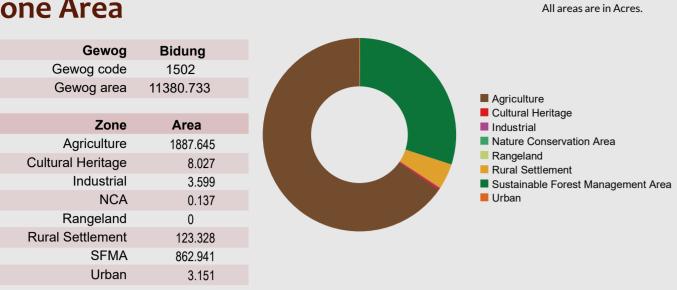
	Data Owner of the map content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Forests and Park Services Ministry of Energy and Natural Resources
ı	Department of Geology and Mines Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	National Land Commission Secretariat

### Data Owner

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size				
Male	Female	Total								
951	837	1,788	113.6	28.7	442	3.2				
	Male	Total Populatio	Total Population  Male Female Total	Total Population Sex ratio  Male Female Total	Total Population Sex ratio Aging Index  Male Female Total	Male Female Total				





### **Zone Conflict**

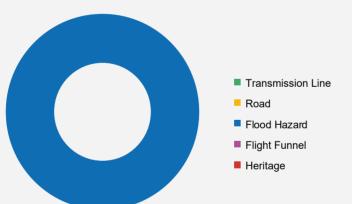
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA Agriculture	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0.159	0.643	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	5.592
Flight Funnel	0
Heritage	0



### **Map Legend**

Tashigang: Bidung

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land

> Forest Management Unit Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

> Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer

Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways — Basemap

Boundaries International --Dzongkhag - -Gewog ---Perennial Terrain

Roads for different Thromde 50k

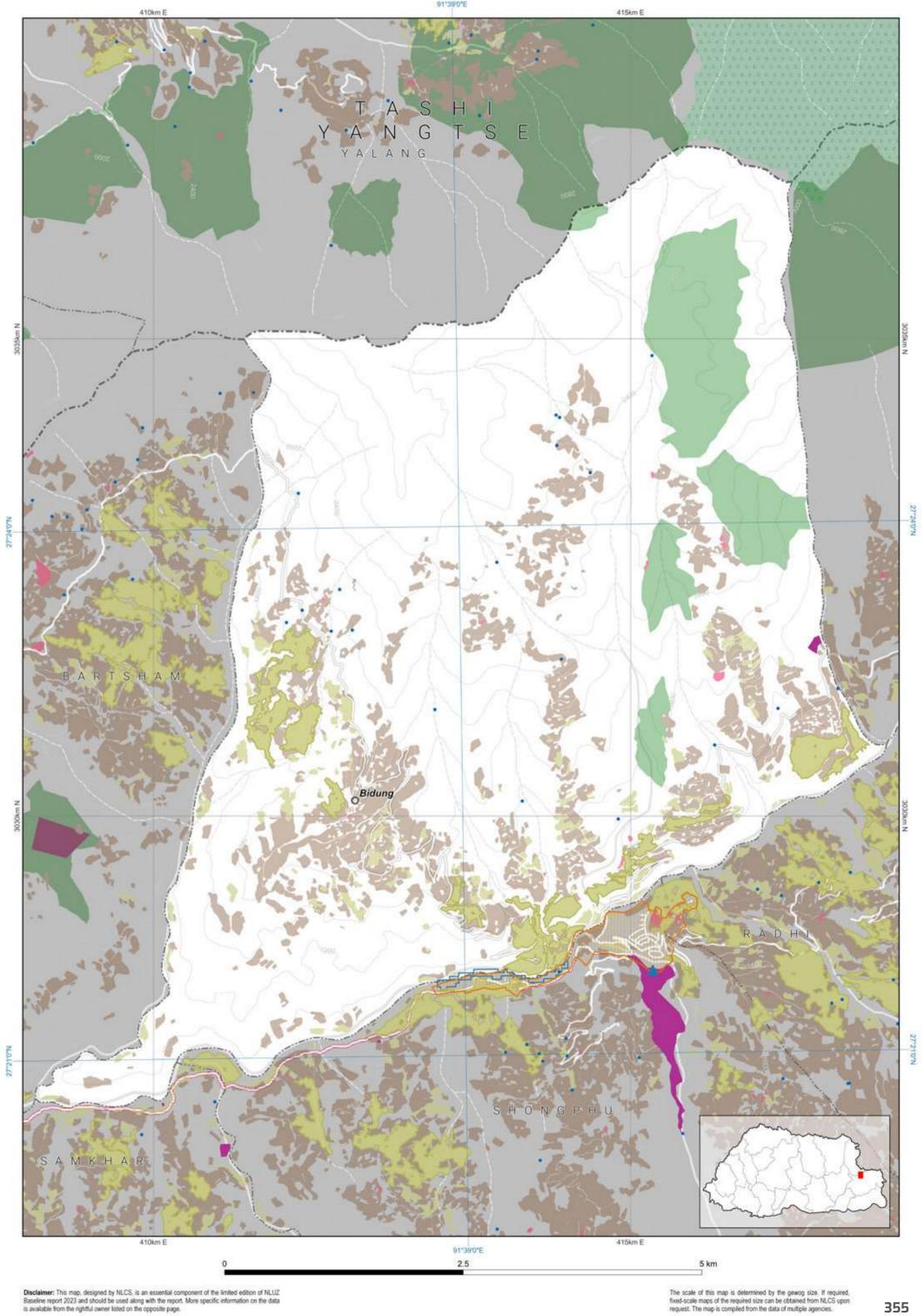
Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

### Data Ownership

Highway 300k ——

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
National Centre for Hydrology and Meteorology
National Land Commission Secretariat



	Gewog wise Key Demographic indicators, 2017 ( Source: NSB, FRCB 2017)										
	Mean Household size										
Gewog / Throm	Male	Female	Total								
Bidung	694	727	1,421	95.5	28.7	409	3.1				

Gewog Gewog code Gewog area	1503 16283.215	■ Agriculture
Zone	Area	■ Cultural Heritage ■ Industrial
Agriculture	2771.981	■ Nature Conservation Area
Cultural Heritage	24.45	Rangeland Rural Settlement
Industrial	96.233	■ Sustainable Forest Management Area
NCA	0	■ Urban
Rangeland	0	
Rural Settlement	446.905	
SFMA	2577.853	
Urban		
-		

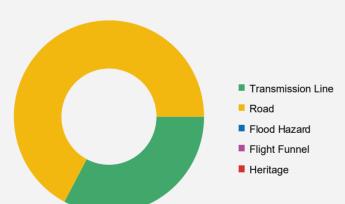
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	6.43	0	6.849	0	0	0	3.556	0
Road	0	0	27.973	0	0.429	0.233	15.175	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	93.749
Road	192.421
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land

Institutional Land

### Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone

**Nature Conservation Area** Protected Area Core Zone Transistion Zone

> Buffer Zone Multi Use Zone

### Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

> Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A

Hydro Power Waterways —

### Basemap Boundaries International --

Airport •

Dzongkhag - -Perennial

### Terrain Roads for different

Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ====	Farm 5k
Dzongkhag 5k	

### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources

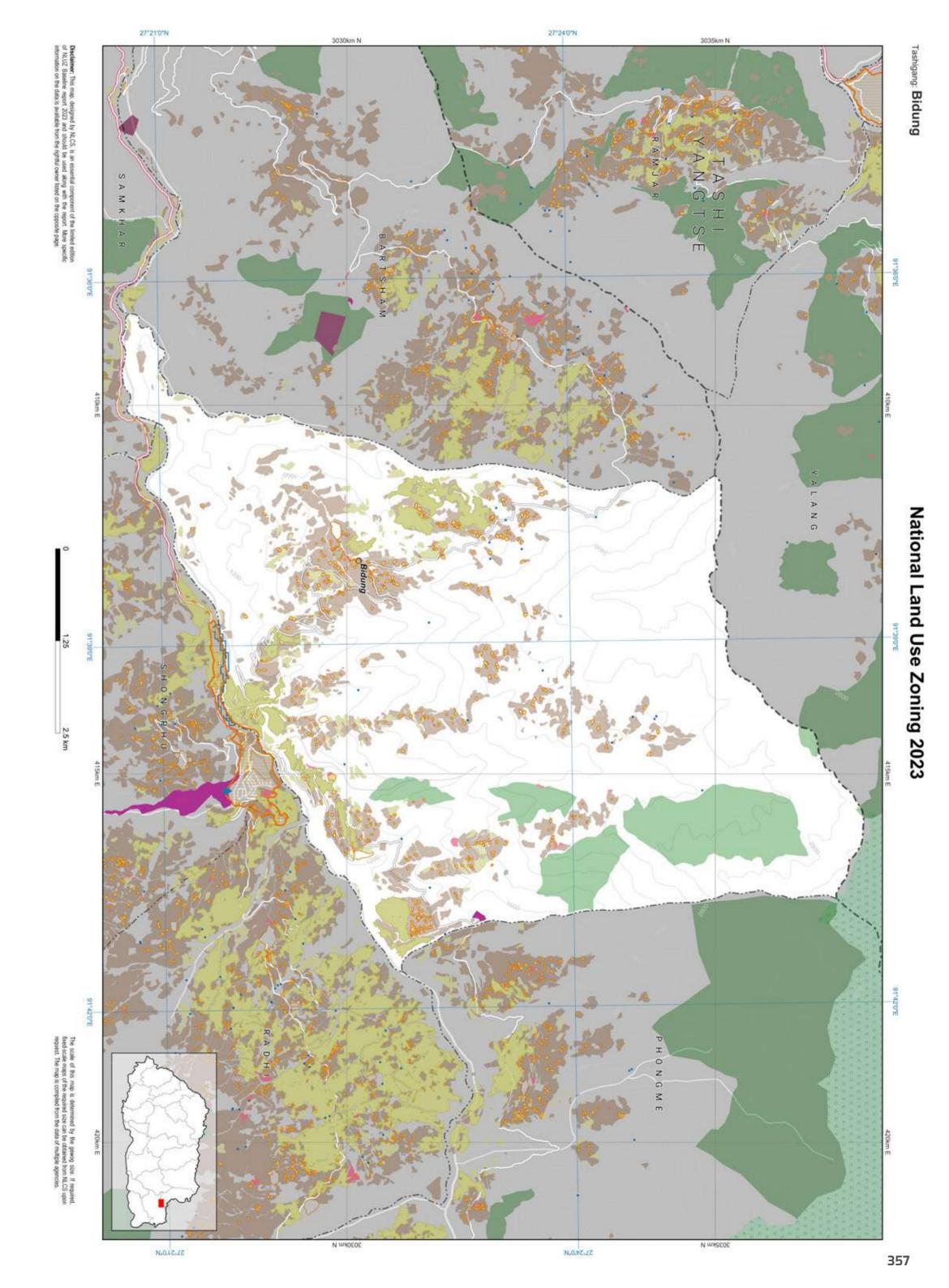
Department of Air Transport Ministry of Infrastructure and Transport

Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport

Ministry of Infrastructure and Transport National Land Commission Secretariat

### Demographic Table

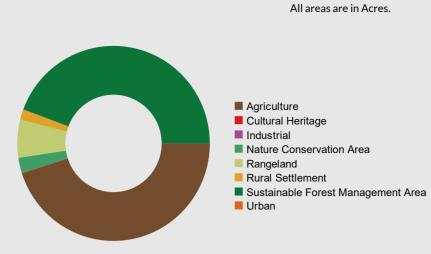
			rog moon	o,	( 30	Tarce: 1105, 1 1105 2011)	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Kanglung	2,166	1,927	4,093	112.4	18.5	967	3.7
Kanglung Town	1,778	1,445	3,223	123.0	17.8	436	3.5



# KANGPAR

### **Zone Area**

Gewog	Kangpar
Gewog code	1504
Gewog area	85146.548
Zone	Area
Agriculture	4251.086
Cultural Heritage	8.625
Industrial	0.1
NCA	240.7
Rangeland	595.455
Rural Settlement	165.609
SFMA	4186.701
Urban	0



### **Zone Conflict**

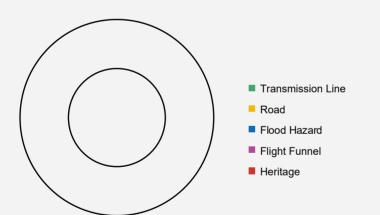
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### Map Legend

National Land Use Zoning

Agricultural Land

Kamzhing

Protected Chhuzhing

Regulated Chhuzhing

Residential Land
Institutional Land
Sustainable Forest

Lease Land

Management Area
Forest Management Unit
Community Forest

Cultural Heritage
Religious Sites

Heritage Village Heritage Conservation Zone Urban
Urban Zone Nature Conservation Area

Protected Area
Core Zone
Transistion Zone
Buffer Zone
Multi Use Zone
Biological Corridor /
Botanical Park

Wetland

Key Biodiversity Area
High Conservation Value

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services

Water Sources
Industrial
Manufacturing and Production
Service
Existing mines
Airport

Helipad O
Hydro Power Plants A
Hydro Power Waterways —

Basemap Boundaries

Boundaries
International — —
Dzongkhag — —
Gewog — —
Rivers
Main river
Perennial —
Terrain
Contour

Roads for different map scales

Highway 300k Thromde 50k

Highway 50k Thromde 25k

Highway 50k Thromde 25k
Highway 25k Thromde 5k
Highway 5k Access 5k

Dzongkhag 50k Industrial 5k

Dzongkhag 25k Farm 5k

### Data Ownership

Data Owner of the Map Content

Department of Agriculture
Ministry of Agriculture and Livestock

Department of Forests and Park Services
Ministry of Energy and Natural Resources

Department of Water
Ministry of Energy and Natural Resources

National Land Commission Secretariat

### **Demographic Table**

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Kangpar	772	819	1,591	94.3	48.7	475	3

### **National Land Use Zoning 2023** Tashigang: Kangpar 91°39'0"E SAMKHAR SHONGPHU MERAK KHALING LAUR MARTSHALA SAMDRUP JONGKHAR 91°36'0'E 91°39'0"E 91'42'0'E 91"49"0"E 91°48'0"E

Gewog         Khaling           Gewog code         1505           Gewog area         38562.134           Zone         Area           Agriculture         2986.778           Cultural Heritage         13.306           Industrial         0.951           NCA         2950.406           Rangeland         0           Rural Settlement         470.119           SFMA         19080.296           Urban         0
Zone         Area           Agriculture         2986.778           Cultural Heritage         13.306           Industrial         0.951           NCA         2950.406           Rangeland         0           Rural Settlement         470.119           SFMA         19080.296
Zone         Area           Agriculture         2986.778           Cultural Heritage         13.306           Industrial         0.951           NCA         2950.406           Rangeland         0           Rural Settlement         470.119           SFMA         19080.296
Agriculture 2986.778  Cultural Heritage 13.306  Industrial 0.951  NCA 2950.406  Rangeland 0  Rural Settlement 470.119  SFMA 19080.296
Agriculture 2986.778  Cultural Heritage 13.306  Industrial 0.951  NCA 2950.406  Rangeland 0  Rural Settlement 470.119  SFMA 19080.296
Cultural Heritage       13.306         Industrial       0.951         NCA       2950.406         Rangeland       0         Rural Settlement       470.119         SFMA       19080.296
Industrial 0.951  NCA 2950.406  Rangeland 0  Rural Settlement 470.119  SFMA 19080.296
NCA         2950.406           Rangeland         0           Rural Settlement         470.119           SFMA         19080.296
Rangeland 0 Rural Settlement 470.119 SFMA 19080.296
Rural Settlement 470.119 SFMA 19080.296
SFMA 19080.296
Urban 0

### **Zone Conflict**

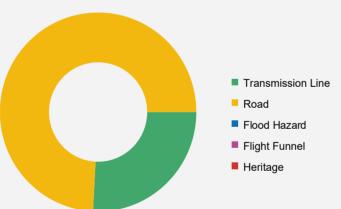
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	2340.405	1802.401	0	5.145	0.4	319.96	0
NCA	2340.405	0	0	0	0	0.25	0	0
Agriculture	1802.401	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	5.145	0	0	0	0	0	0	0
Industrial	0.4	0.25	0	0	0	0	0	0
Rural Settlement	319.96	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	63.669	4.146	7.681	0	0	0	0.178	0
Road	223.523	28.188	6.772	0	0	0	7.169	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	111.87
Road	321.424
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Residential Land Institutional Land

### Forest Management Unit Community Forest

**Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

### Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A Hydro Power Waterways —

### Basemap

Boundaries International --Dzongkhag - -

Perennial

Highway 300k ====	Thromde 50k =
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k =
Ozongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

### Data Ownership

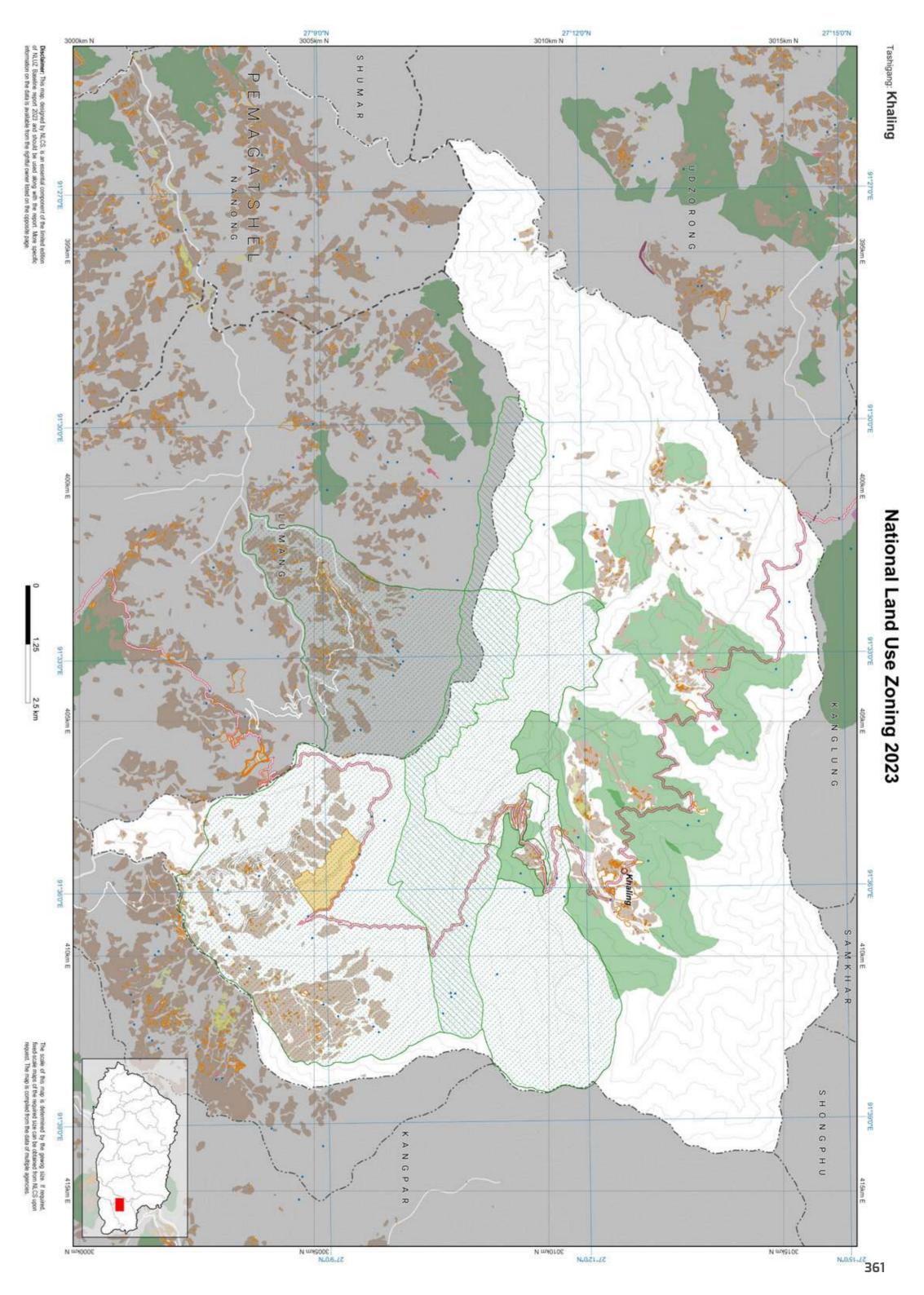
Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources

Department of Forests and Park Services Ministry of Energy and Natural Resources

Gewog wise Key Demographic Indicators, 2017 (Source: NSB, PHCB 2017) Mean Household size

Department of Water Ministry of Energy and Natural Resources

### Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat



### **Demographic Table**



or	ne Area	
	<b>Gewog</b> Gewog code	Lumang 1506
	Gewog area	26162.87
	<b>Zone</b> Agriculture	<b>Area</b> 4795.691
	Cultural Heritage	11.759
	Industrial	0.872
	NCA	598.573
	Rangeland	0
	Rural Settlement	252.662
	SFMA	5218.7
	Urban	27.489

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	218.183	853.531	0	0.565	0	42.677	0
NCA	218.183	0	0	0	0	0	0	0
Agriculture	853.531	0	0	0.686	0	0	0	0
Urban	0	0	0.686	0	0	0	15.925	0
Culture	0.565	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	42.677	0	0	15.925	0	0	0	0
Rangeland	0	0	0		0	0	0	0

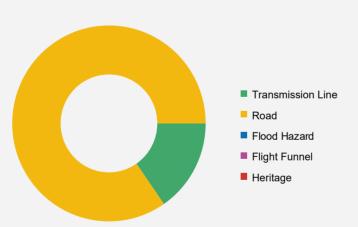
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	6.482	0.722	0.165	0	0	0	0.039	0
Road	7.377	0	11.983	0	0	0.083	9.234	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	25.47
Road	140.207
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing

### Residential Land Institutional Land

Regulated Chhuzhing Lease Land

### Forest Management Unit Community Forest **Cultural Heritage**

### Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

### **Nature Conservation Area** Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk

Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

### Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production

Existing mines Airport • Helipad O

### Hydro Power Plants A Hydro Power Waterways —

Basemap Boundaries

International --Dzongkhag - -

Perennial

	map scale
ighway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k

### Data Ownership

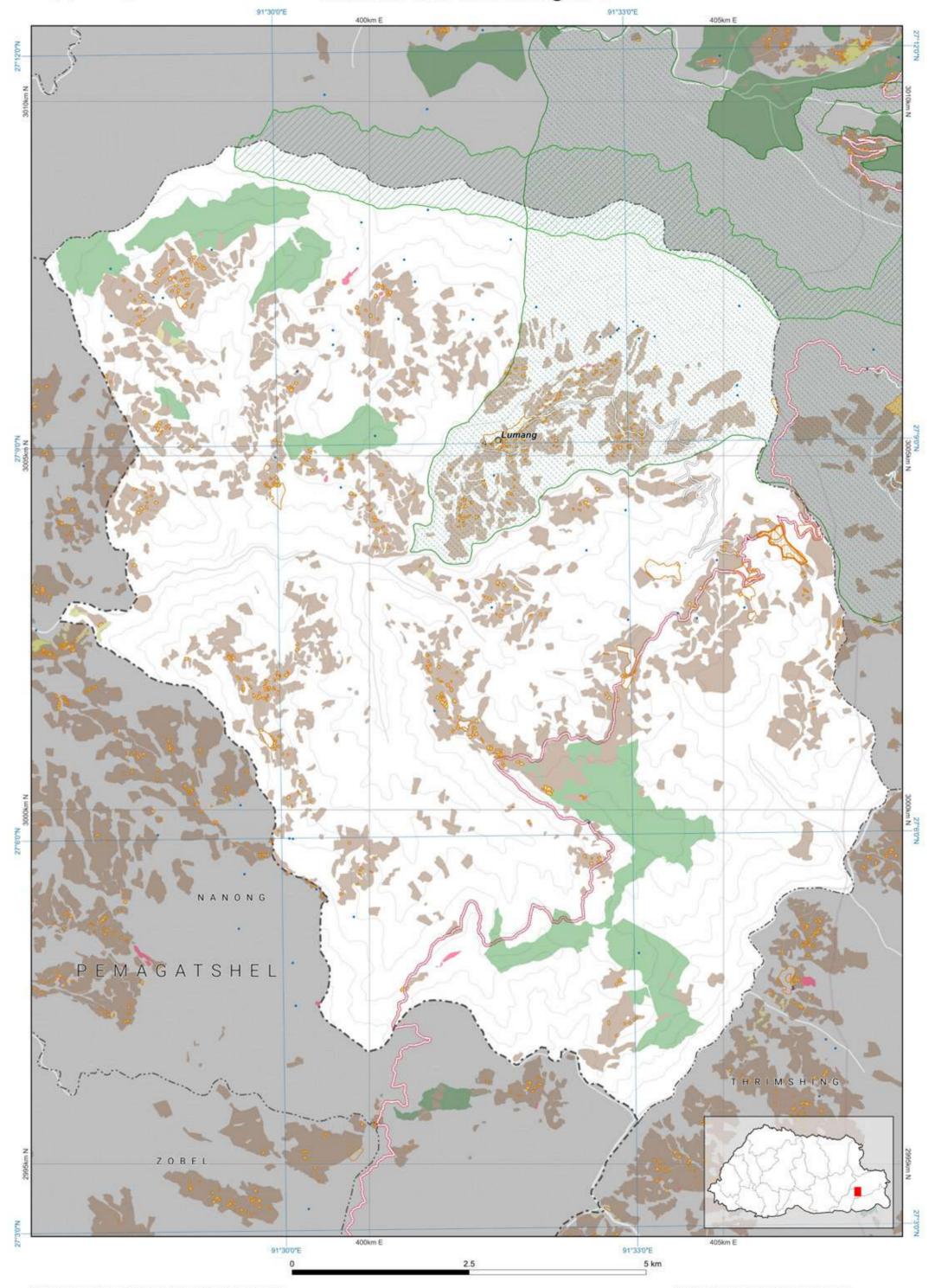
3.7

Data Owner of the Map Content
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
Total Population Sex ratio Aging Index Number of household Mean Household size											
Gewog / Throm	Male	Female	Total								
Lumang	1795	1803	3,598	99.6	33.8	883	3.3				
Reserbu Town	116	95	211	122.1	26.7	57	3.3				

### Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

### National Land Use Zoning 2023 Tashigang: Lumang





one Area	
Gewog	Merak
Gewog code	1507
Gewog area	113074.29
Zone	Area
Agriculture	236.316
Cultural Heritage	7.832
Industrial	1.449
NCA	86674
Rangeland	32212.261
Rural Settlement	95.448
SFMA	36.707
Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	170.887	0	7.825	1.448	93.595	0
Agriculture	0	170.887	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	7.825	0	0	0	0	0	0
Industrial	0	1.448	0	0	0	0	0	0
Rural Settlement	0	93.595	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

### Lease Land Residential Land Institutional Land

### Forest Management Unit Community Forest

**Cultural Heritage** 

### Religious Sites Heritage Village Heritage Conservation Zone



Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

### Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

### Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

### Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

### Hydro Power Waterways —

### Basemap Boundaries International --

Dzongkhag - -Perennial Terrain

### Roads for different

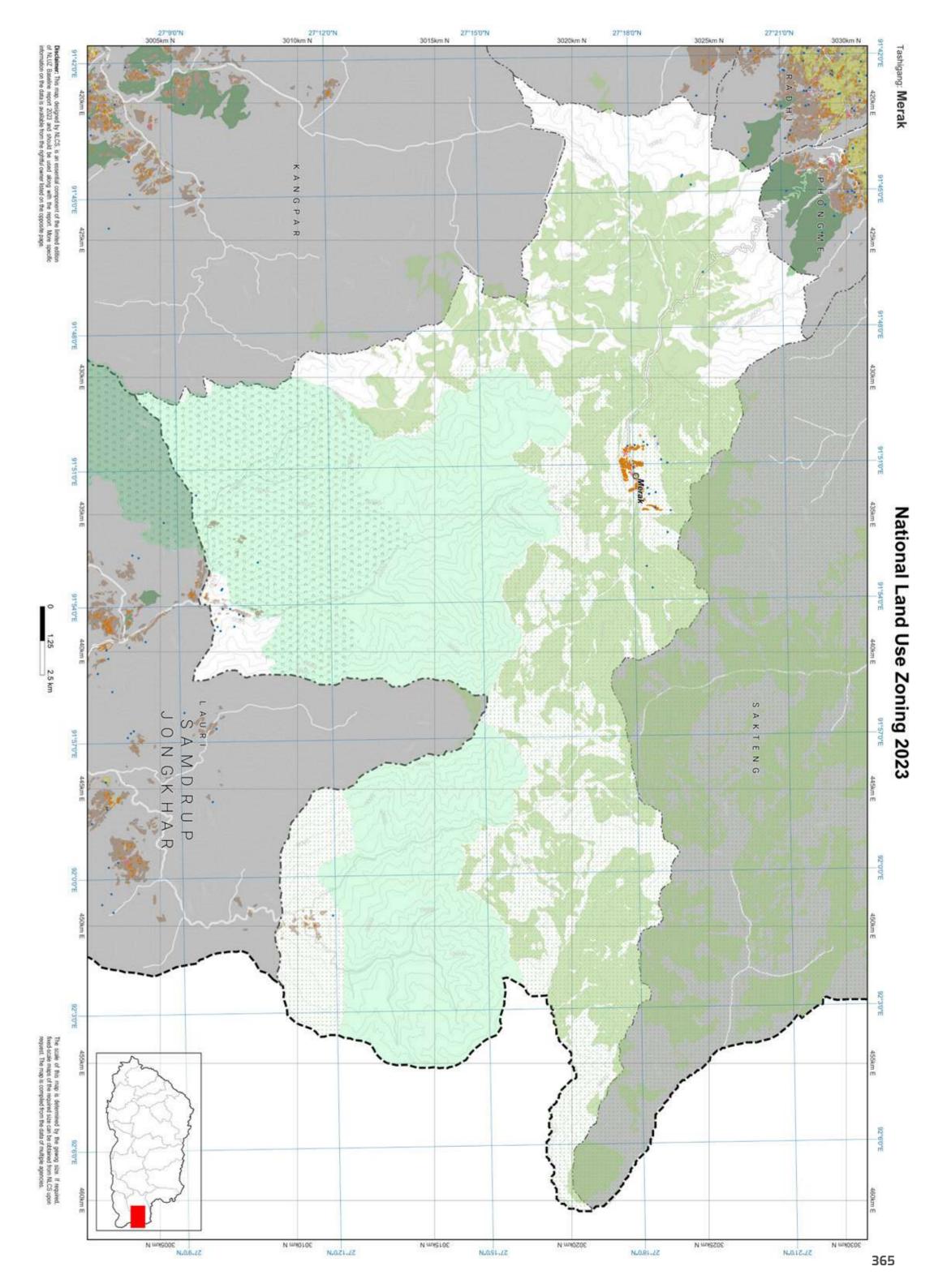
Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k
zongkhag 25k ===	Farm 5k
Ozongkhag 5k	

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Merak	858	704	1.562	121.9	21.1	345	4.4

### Data Ownership

Data Owner of the Map Content	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
National Land Commission Secretariat	



<u>'</u> (	ne Area	
	Gewog	Phongme
	Gewog code	1509
	Gewog area	24355.226
	Zone	Area
	Agriculture	2263.889
	Cultural Heritage	16.743
	Industrial	0.23
	NCA	8299.337
	Rangeland	0
	Rural Settlement	162.205
	SFMA	4164.046
	Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	13.202	0	0	0	0	0	0
NCA	13.202	0	2.712	0	0	0	0	0
Agriculture	0	2.712	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

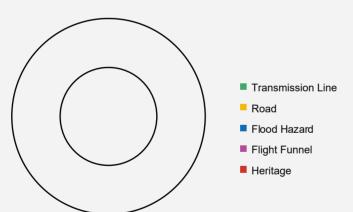
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### Map Legend

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Residential Land Institutional Land

Lease Land

Forest Management Unit Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Manufacturing and Production

> Airport Helipad O Hydro Power Plants A Hydro Power Waterways -

> > Basemap

Existing mines

Boundaries International --Dzongkhag - -Perennial

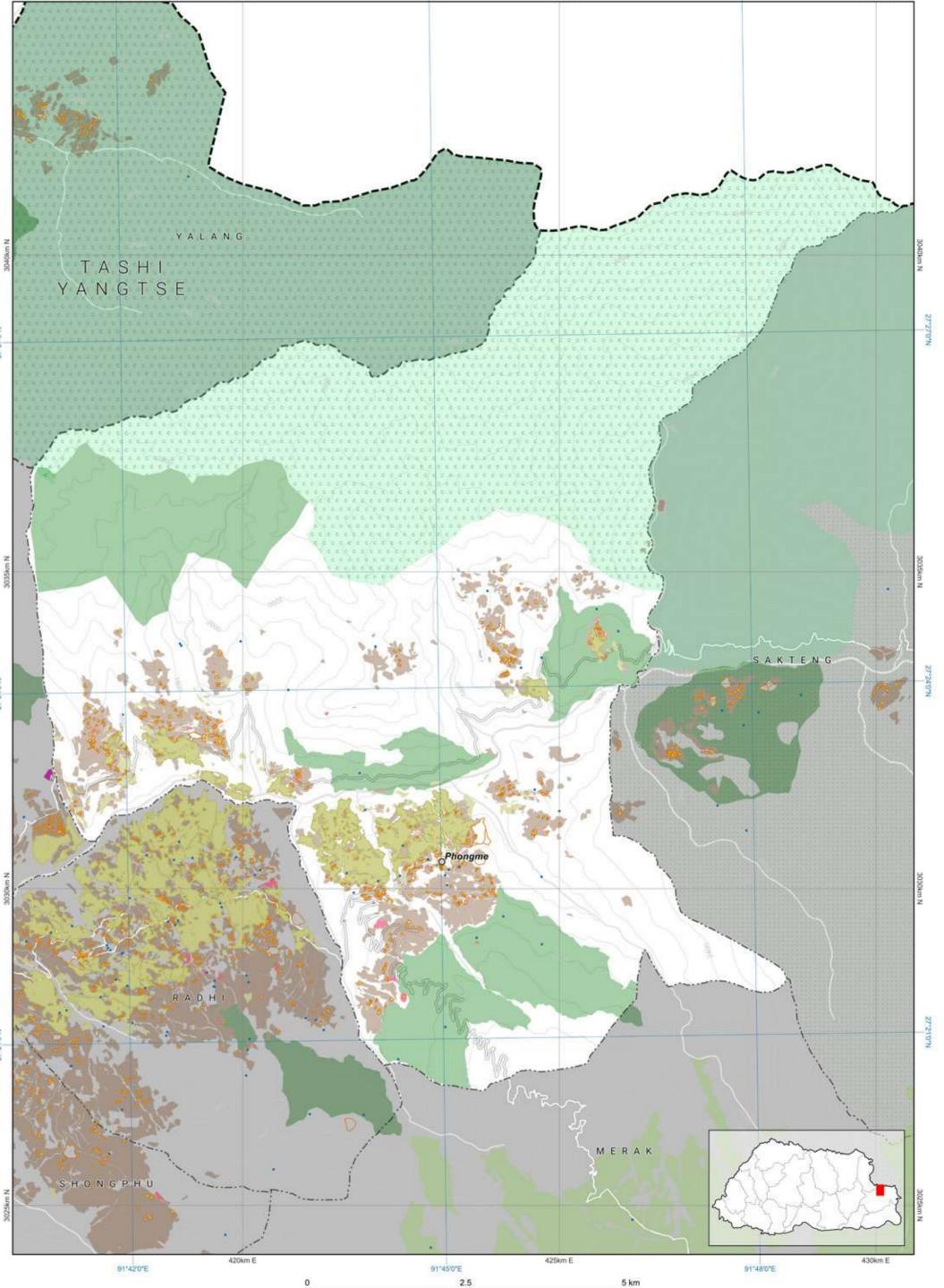
Roads for different Highway 300k =

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

### National Land Use Zoning 2023 Tashigang: Phongme



Demographic Table

1,312 2,617

91'48'0'E

Gewog code Gewog area Zone	
	Radhi 1510
Zone	7008.702
Agriculture	<b>Area</b> 3336.555
Cultural Heritage Industrial	19.313 0
NCA	0
Rangeland	0
Rural Settlement	162.941
SFMA	459.443
Urban	19.049

### **Zone Conflict**

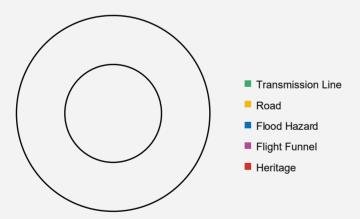
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	11.305	0	0	0	0
Urban	0	0	11.305		1.418	0	4.148	0
Culture	0	0	0	1.418	0	0	0	0
Industrial	0	0	0		0	0	0	0
Rural Settlement	0	0	0	4.148	0	0	0	0
Rangeland	0	0	0		0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0





### Ramsar Site Hazard and Risk Rain Induced Flood

Multi Use Zone Biological Corridor / Botanical Park

Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport •

> Hydro Power Plants A Hydro Power Waterways —

Helipad O

Basemap Boundaries International --

Dzongkhag - -Perennial

Roads for different

Highway 300k = Thromde 50k Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### Demographic Table

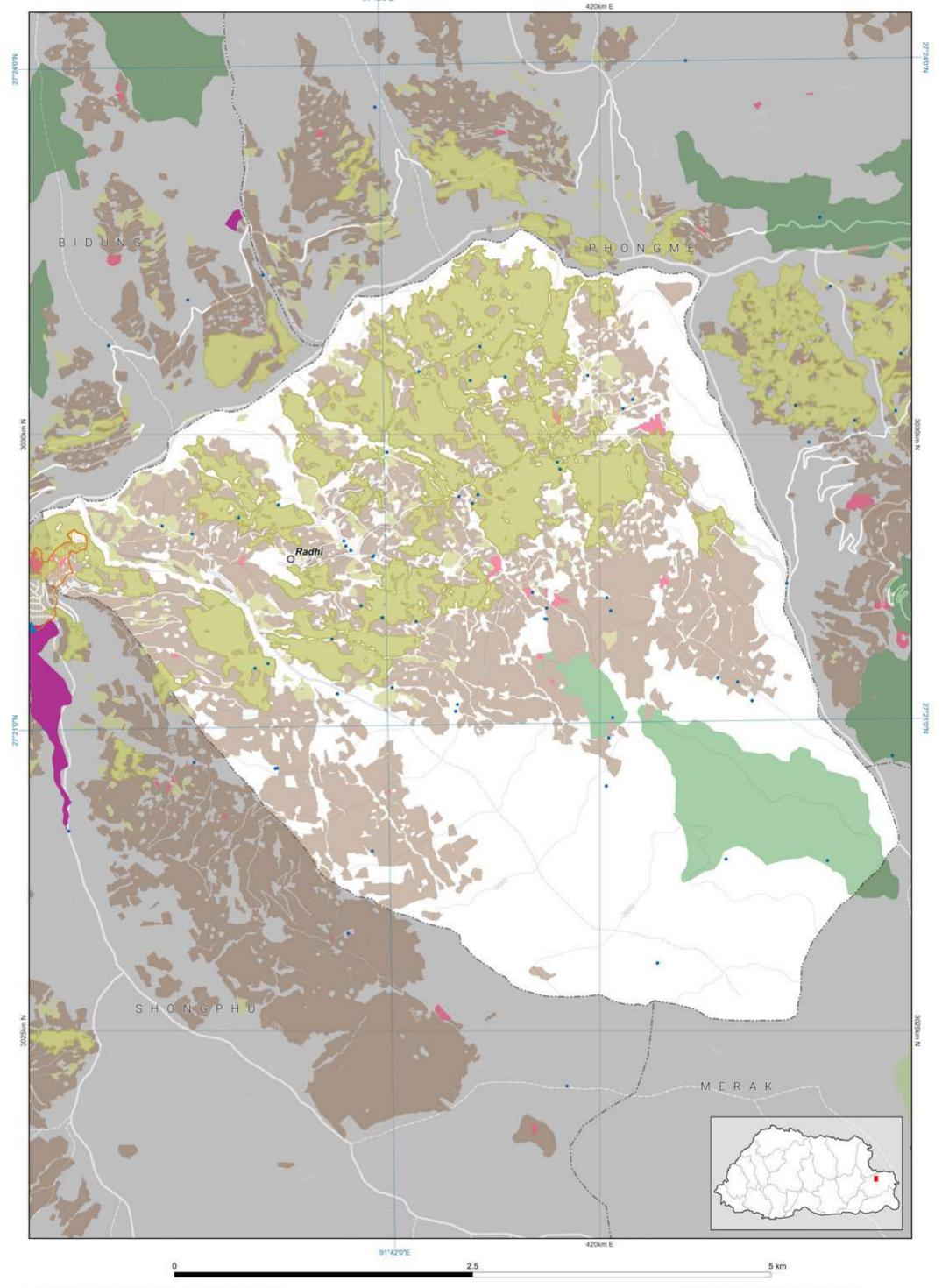
		Gev	og wise K	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Radhi	1,169	1,177	2,346	99.3	41.4	626	3.4
Rangjung Town	1,109	915	2,024	121.2	16.2	315	3.7
Disclaimer:							

### The demographic statistics provided in the table above for Rangjung Town encompass not only the area falling under the Radhi gewog but also include the demographic statistics of the town area falling under the Shongphu gewog. The same statistics for Rangjung town can be found under the Shongphu gewog.

### **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Human Settlement Ministry of Infrastructure and Transport
National Land Commission Secretariat

### National Land Use Zoning 2023 Tashigang: Radhi



0	ne Area	
	Gewog Gewog code Gewog area	<b>Sakteng</b> 1511 112572.157
	Zone Agriculture	<b>Area</b> 629.715
	Cultural Heritage Industrial	5.816 0.401
	NCA Rangeland	112487.197 45664.71
	Rural Settlement SFMA	84.535 865.683
	Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	865.564	0	0	0	0	0	0
NCA	865.564	0	623.717	0	5.816	0.401	84.51	45663.241
Agriculture	0	623.717	0	0	0	0	0	1.366
Urban	0	0	0	0	0	0	0	0
Culture	0	5.816	0	0	0	0	0	0
Industrial	0	0.401	0	0	0	0	0	0
Rural Settlement	0	84.51	0	0	0	0	0	0
Rangeland	0	45663.241	1.366	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land

Institutional Land

### Forest Management Unit Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone

**Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone

### Biological Corridor / Botanical Park Wetland Ramsar Site

Multi Use Zone

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Rangeland Tsamdro

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial Manufacturing and Production

> Existing mines Airport Helipad O

### Hydro Power Plants A Hydro Power Waterways —

Basemap Boundaries

International --Dzongkhag - -Gewog ---

Perennial Terrain

### Roads for different

Highway 300k ==== Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k Farm 5k ====

### Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	To	tal Population	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Saktona	1 000	062	2.061	114.0	16.0	475	4.2

### **Data Ownership**

Data Owner of the Map Content Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

National Land Commission Secretariat

27°18'0'N National Land Use Zoning 2023 The scale of this map is determined by the gewog size. If req fixed-scale maps of the required size can be obtained from NLCS request. The map is compiled from the data of multiple agencies. N-0.92.EZ N W#SEDE 3040km N 27\*270\*N 27\*18:D\*N S1.51,0.M **371** 

Gewog	Samkhar
Gewog code	1512
Gewog area	22025.315
Zone	Area
Agriculture	3324.7
Cultural Heritage	40.707
Industrial	11.485
NCA	3381.773
Rangeland	0
Rural Settlement	159.378
SFMA	2281.253
Urban	675.139

### **Zone Conflict**

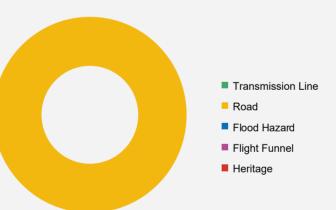
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1388.066	0	0	0	0	0	0
NCA	1388.066	0	0	99.695	0.437	0	27.636	0
Agriculture	0	495.51	0	252.362	0	0	0	0
Urban	0	99.695	252.362	0	15.026	5.621	31.196	0
Culture	0	0	0	15.026	0	0	0	0
Industrial	0	0.22	0	5.621	0	0	0	0
Rural Settlement	0	27.636	0	31.196	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0.191	9.789	0	0	0.233	0.371	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	107.605
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Data Ownership**

Dzongkhag 25k

Data Owner of the Map Content
Bhutan Power Corporation Limited Druk Holding and Investment
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development

### Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( So	ource: NSB, PHCB 2017)	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Samkhar	1,117	992	2,109	112.6	29.5	567	3.1
Tashigang Town	1,565	1,472	3,037	106.3	15.6	700	3.7

### **Map Legend**

All areas are in Acres.

ntional Land Use Zon	ing
Agricultural L	.and
Kamzhing	
Protected Chhuzhing	

Regulated Chhuzhing Lease Land

### Residential Land Institutional Land

### Forest Management Unit Community Forest Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

### Nature Conservation Area Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

> Airport Helipad O Hydro Power Plants A

### Hydro Power Waterways —

Basemap Boundaries

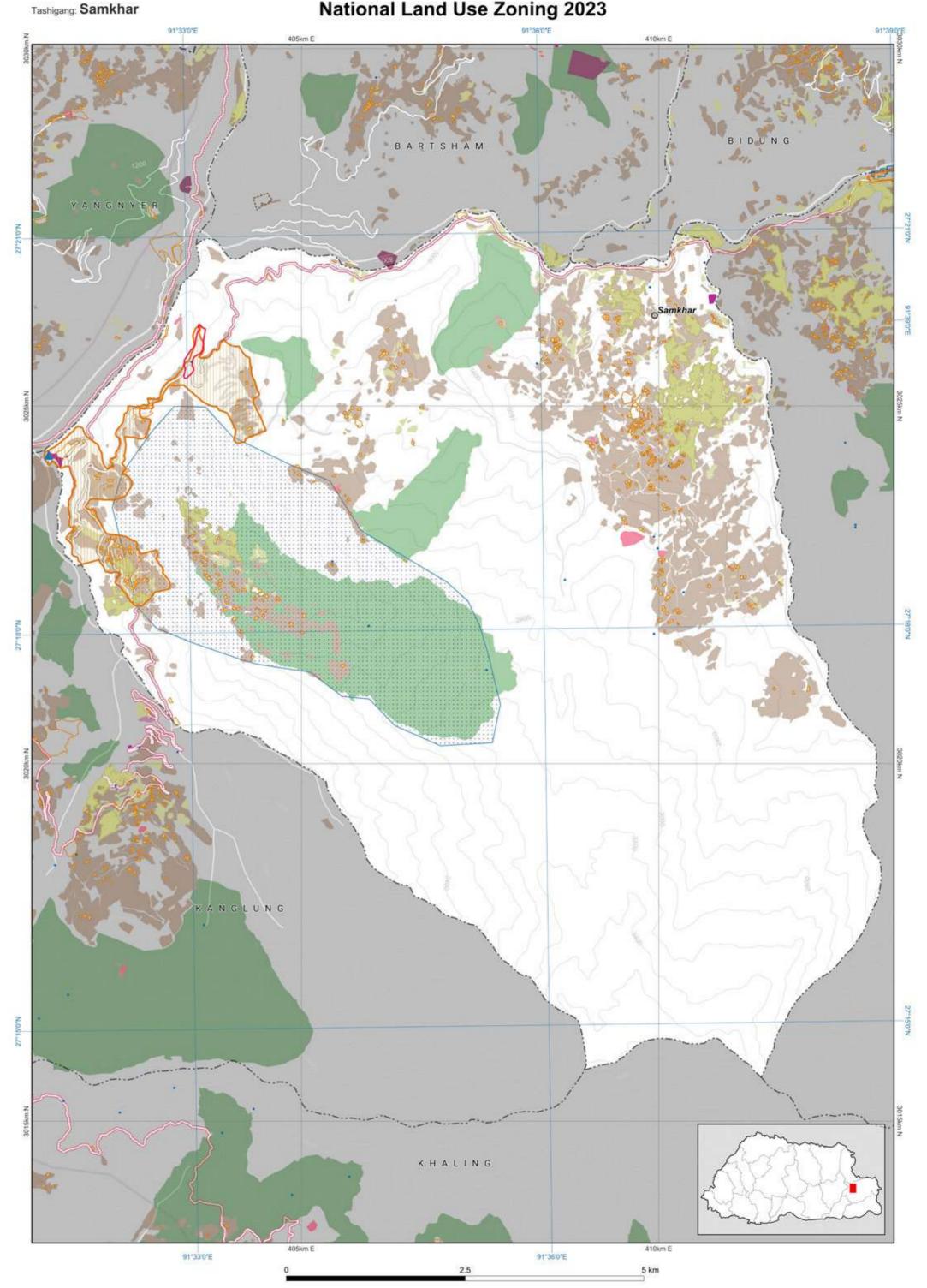
International --Dzongkhag - -

Perennial

ighway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
onakhaa 50k ——	Industrial Ele

Druk Holding and Investment
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

### National Land Use Zoning 2023



Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

<b>Zone Area</b>
Gewog Gewog code Gewog area  Zone Agriculture Cultural Heritage Industrial NCA Rangeland Rural Settlement SFMA Urban  Zone Agriculture Cultural Heritage Industrial NCA Rangeland Rural Settlement

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	37.758	0	0	0	0
Urban	0	0	37.758	0	3.559	3.688	29.437	
Culture	0	0	0	3.559	0	0	0	0
Industrial	0	0	0	3.688	0	0	0	0
Rural Settlement	0	0	0	29.437	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

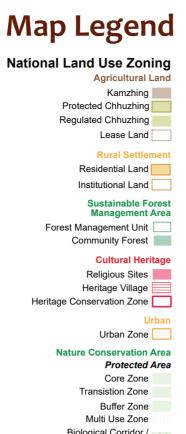
### **RoW / Buffer Conflict**

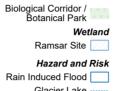
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	7.305	0	0	0	0.455	0
Flood Hazard	0	0	0.546	13.482	0	0.016	2.17	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	0
Road	24.5
Flood Hazard	16.232
Flight Funnel	0
Heritage	0
	Transmission Line Road Flood Hazard Flight Funnel

Tashigang: Shongphu





Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Manufacturing and Production

Existing mines Airport • Helipad O

> Hydro Power Plants A Hydro Power Waterways -

> > Basemap Boundaries

International --Dzongkhag - -Perennial

Roads for different

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k Farm 5k ====

### Data Ownership

Data Owner of the Map Content Bhutan Power Corporation Limited Druk Holding and Investment

Ministry of Infrastructure and Transport

National Land Commission Secretariat

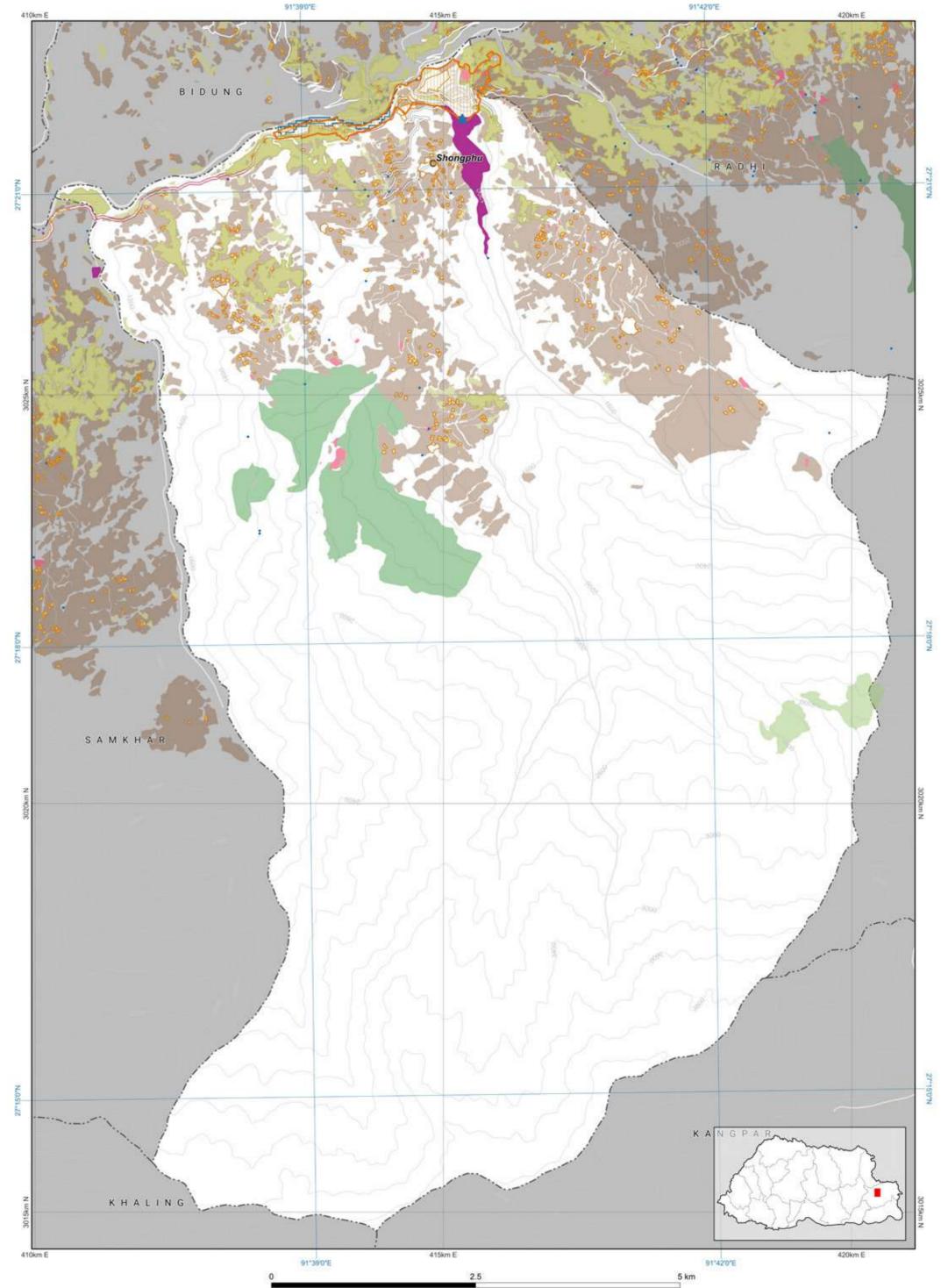
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Forests and Park Services Ministry of Energy and Natural Resources
n Household size	Department of Water Ministry of Energy and Natural Resources
3.1	Department of Human Settlement Ministry of Infrastructure and Transport
3.7	Department of Surface Transport

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Mean Hou								
Gewog / Throm	Male	Female	Total					
Shongphu	963	962	1,925	100.1	43.9	610	3.1	
Rangjung Town	1,109	915	2,024	121.2	16.2	315	3.7	

### The demographic statistics provided in the table above for Rangjung Town encompass not only the area falling under the Shongphu gewog but also include the demographic statistics of the town area falling under the Radhi gewog. The same statistics for Rangjung town can be found under the Radhi gewog.





C	ne Area	
	Gewog	Thrimshing
	Gewog code	1514
	Gewog area	13401.88
	Zone	Area
	Agriculture	3923.632
	Cultural Heritage	10.819
	Industrial	0.312
	NCA	0
	Rangeland	0
	Rural Settlement	119.218
	SFMA	680.582
	Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.206	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0.206	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	13.716	0	0	0	0	0
Road	0.593	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

_	
Buffer Zone	Area
Transmission Line	37.002
Road	1.177
Flood Hazard	0
Flight Funnel	0
Heritage	0



Tashigang: Thrimshing

91'33'0'E

### Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Potential Recharge Area

Payment for Ecosystem Services

Manufacturing and Production Existing mines

> Airport • Helipad O Hydro Power Plants A

### Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -

Perennial

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k ==
zongkhag 25k ===	Farm 5k ==
Dzongkhag 5k ——	

### **Data Ownership**

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### Demographic Table

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( So	ource: NSB, PHCB 2017)	
	Tot	tal Populatio	n	Sex ratio	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total				
Thrimshing	1,244	1,304	2,548	95.4	28.9	616	3.3

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

91°33'0'E

PEMÁGATSHEL

## MDARJONGKHAR 91°36'0"E 91'39'0'E The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

91'39'0'E

Gewog	Udzorong	
Gewog code	1515	
Gewog area	24833.916	■ Agriculture ■ Cultural Heritage
Zone	Area	■ Industrial
Agriculture	3035.659	Nature Conservation Area
Cultural Heritage	7.196	Rangeland Rural Settlement
Industrial	11.479	■ Sustainable Forest Management Are
NCA	137.771	Urban
Rangeland	0	
Rural Settlement	0	
SFMA	3540.668	
Urban	0	

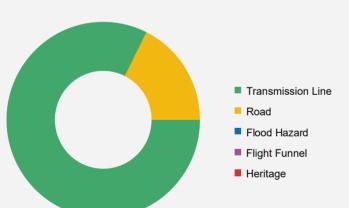
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	1.513	0	0	0	0.208	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	13.386
Road	2.862
Flood Hazard	0
Flight Funnel	0
Heritage	0



### Map Legend

Tashigang: Udzorong

BALAM

MONGAR

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

> Residential Land Institutional Land Forest Management Unit

Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

> Urban Zone **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park Ramsar Site

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Hazard and Risk

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production Existing mines Airport •

Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap

Boundaries International --Dzongkhag - -Perennial

Roads for different

Highway 300k = Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### Data Ownership

Department of Surface Transport

Ministry of Infrastructure and Transport National Land Commission Secretariat

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

### Demographic Table



	Gewog wise key Demographic Indicators, 2017 (Source: NSB, PHCB 2017)										
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Udzorong	1,349	1,411	2,760	95.6	26.9	651	3.6				

### Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

91°24'0"E

APPL

SHUMAR

PEMAGATSHEL

### KHALING

91°30'0"E

National Land Use Zoning 2023

91'27'0'E

The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

91°30'0"E

one mea	
Gewog	Yangnyer
Gewog code	1516
Gewog area	18636.269
Zone	Area
Agriculture	22389.558
Cultural Heritage	10.622
Industrial	7.507
NCA	211.484
Rangeland	0
Rural Settlement	165.984
SFMA	1884.569
Urban	0

### **Zone Conflict**

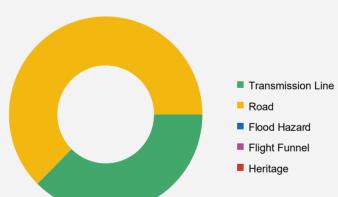
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	17.729	0	0	0	0.442	0
Agriculture	0	17.729	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0.442	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	3.954	0	3.058	0	0	0	0.445	0
Road	0	0	0.261	0	0	0.05	0.387	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

	Buffer Zone	Area
Trans	mission Line	51.47
	Road	85.909
F	lood Hazard	0
ı	Flight Funnel	0
	Heritage	0



### **Map Legend**

All areas are in Acres.

### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land Institutional Land

Forest Management Unit

### Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone

### Multi Use Zone Biological Corridor / Botanical Park

Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

### Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

> Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

### Basemap

Boundaries International --

Dzongkhag - -

Perennial

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k
Janakhaa 2Ek	F 51- 5

### **Data Ownership**

Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Energy Ministry of Energy and Natural Resources

Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Geology and Mines Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources Department of Surface Transport

Ministry of Infrastructure and Transport National Land Commission Secretariat

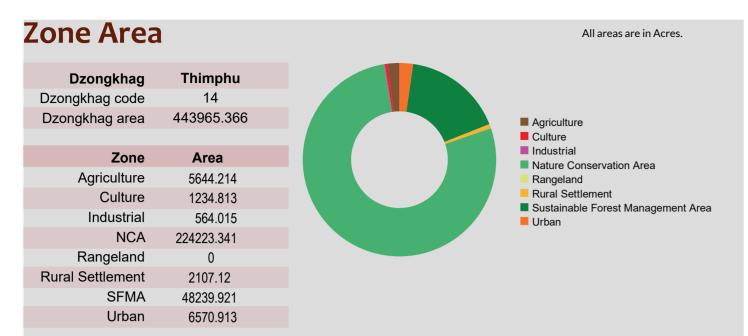


### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	To	tal Populatio	on	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Yangnyer	1,284	1,251	2,535	102.6	17.3	611	3.4			

## 27°21'0'N 27°24'0'N Yangnyer National Land Use Zoning 2023 N.0.12.72 27"24"0"N 381

### 380



### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	73.623	757.64	0.415	10.534	291.909	234.078	0
NCA	73.623	0	182.39	9.235	98.746	1.25	94.304	0
Agriculture	757.64	182.39	0	97.077	0.781	0.02	0	0
Urban	0.415	9.235	97.077	0	311.026	0	38.383	0
Culture	10.534	98.746	0.781	311.026	0	0	0	0
Industrial	291.909	1.25	0.02	0	0	0	0	0
Rural Settlement	234.078	94.304	0	38.383	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	140.084	4.118	57.829	61.601	0.221	2.841	15.844	0
Road	44.623	14.705	32.259	0	0.147	4.032	12.206	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	194.727	0	0	0	0

### **RoW / Buffer Area**

•	
Buffer Zone	Area
Transmission Line	562.352
Road	319.888
Flood Hazard	0
Flight Funnel	0
Heritage	195.521

Thimphu



### Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

### Manufacturing and Production Existing mines

Airport • Helipad O

### Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries International --

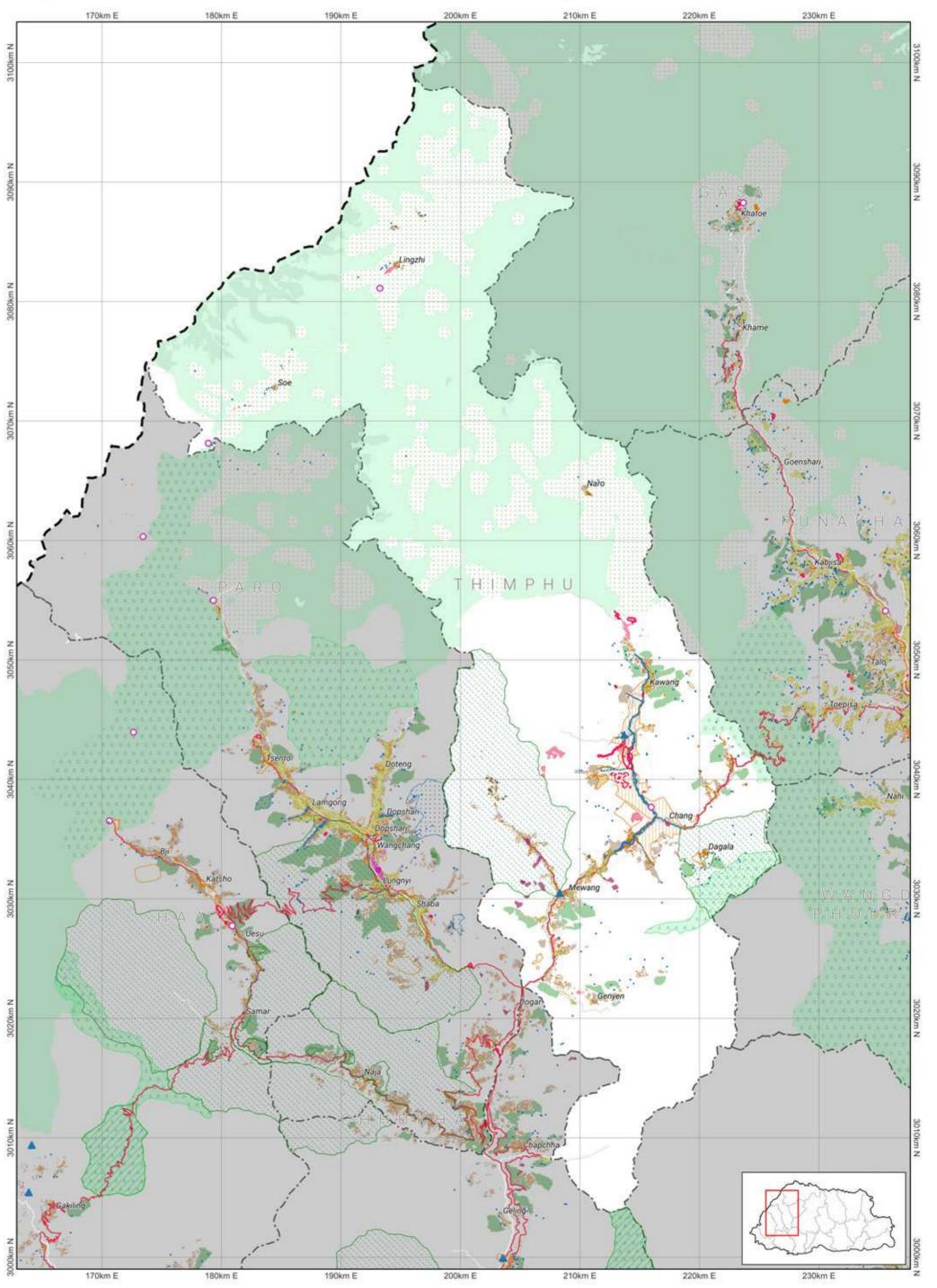
### Dzongkhag - -Perennial

### Highway 300k ---

Highway 50k === Highway 25k Highway 5k Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k

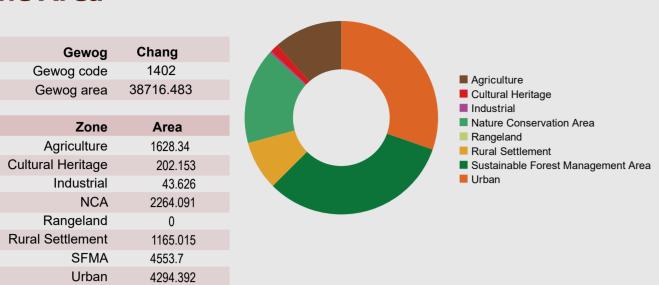
### Demographic Table

	Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population Sex ratio Aging Index Number of household Mean Household size											
Dzongkhag	Male	Female	Total								
Thimphu	72,522	66,214	138,736	109.5	16.2	30,672	4.2				



# HMPHC

### Zone Area



### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.55	0.415	0	0	0	0
NCA	0	0	86.34	0	0.139	0	6.555	0
Agriculture	0.55	86.34	0	71.463	0	0	0	0
Urban	0.415	0	71.463	0	18.94	0	34.55	0
Culture	0	0.139	0	18.94	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	6.555	0	34.55	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	35.985	4.118	8.958	60.998	0.163	0	6.885	0
Road	0	14.705	13.155	0	0	0.193	4.468	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	194.727	0	0	0	0

### **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	212.287
Road	136.651
Flood Hazard	0
Flight Funnel	0
Heritage	195.521
·	

### **Demographic Table**

		Gev	wog wise Ke	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	Tot	al Populatio	on	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Chang	3,801	2,951	6,752	128.8	23.9	1,453	3.8
Thimphu Thromde	58,996	55,555	114,551	106.2	15.0	25,408	4.3

Disclaimer:

Disclaimer: The demographic statistics provided in the table above for Thimphu thromde encompass not only the area falling under the Chang gewog but also include the demographic statistics of the thromde area falling under the Kawang gewog. The same statistics for Thimphu thromde can be found under the Kawang gewog.

### **Map Legend**

All areas are in Acres.





**Cultural Heritage** 

Religious Sites







High Conservation Value

Rangeland

### Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources Industrial



### Hydro Power Plants Hydro Power Waterways

### Basemap Boundaries International — — Dzongkhag — — Gewog — — Rivers Main river Perennial — —

Contour
Roads for different map scales
Thromde 50k
Thromde 25k
Thromde 5k ====
Access 5k ====
Industrial 5k

### Data Ownership

Data Owner of the Map Content

Department of Agriculture

Ministry of Agriculture and Livestock

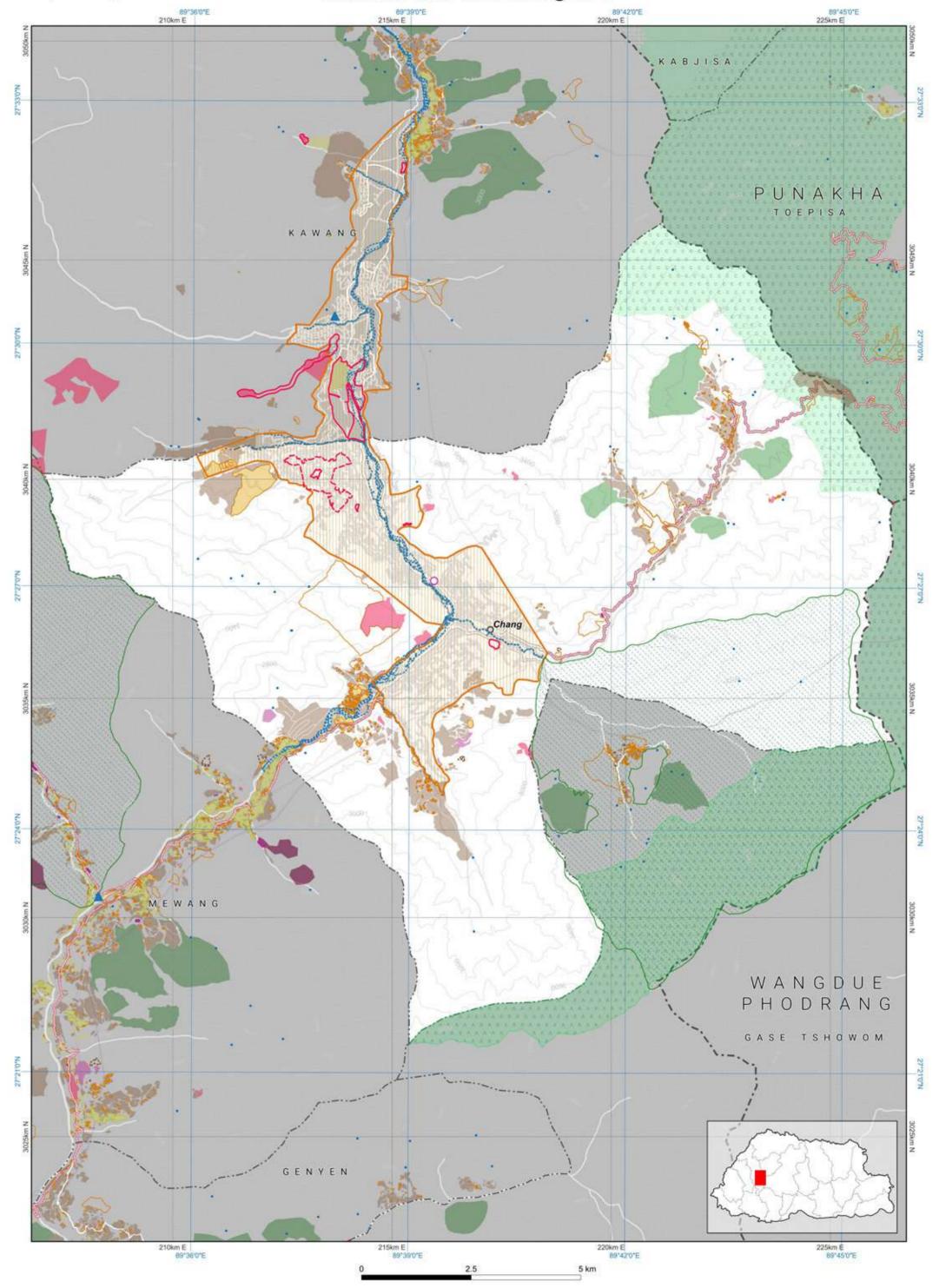
Highway 300k = Highway 50k = Highway 25k = Highway 5k =

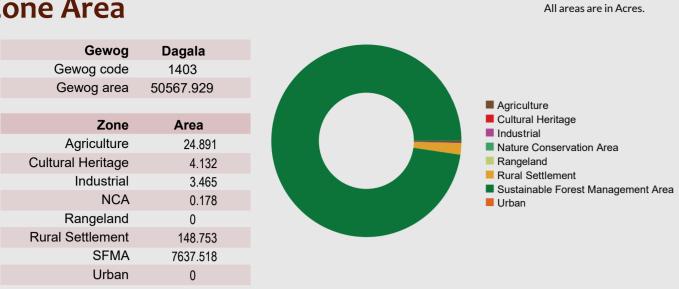
Dzongkhag 50k =

Dzongkhag 25k =



### Thimphu: Chang National Land Use Zoning 2023





### **Zone Conflict**

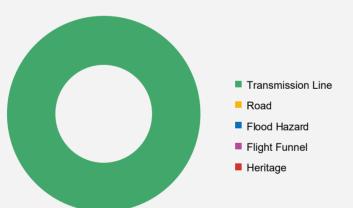
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	23.89	0	0.443	1.43	148.753	0
NCA	0	0	0	0	0	0	0	0
Agriculture	23.89	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0.443	0	0	0	0	0	0	0
Industrial	1.43	0	0	0	0	0	0	0
Rural Settlement	148.753	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	34.478	0	0	0	0	0.002	0.252	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	34.478
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

Thimphu: Dagala

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

> Residential Land Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

> **Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer

Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Tsamdro Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial Manufacturing and Production

Existing mines Airport • Helipad O Hydro Power Plants A

Hydro Power Waterways -Basemap

> Boundaries International --Dzongkhag - -Gewog ---

Perennial Terrain

Roads for different Highway 300k —— Thromde 50k

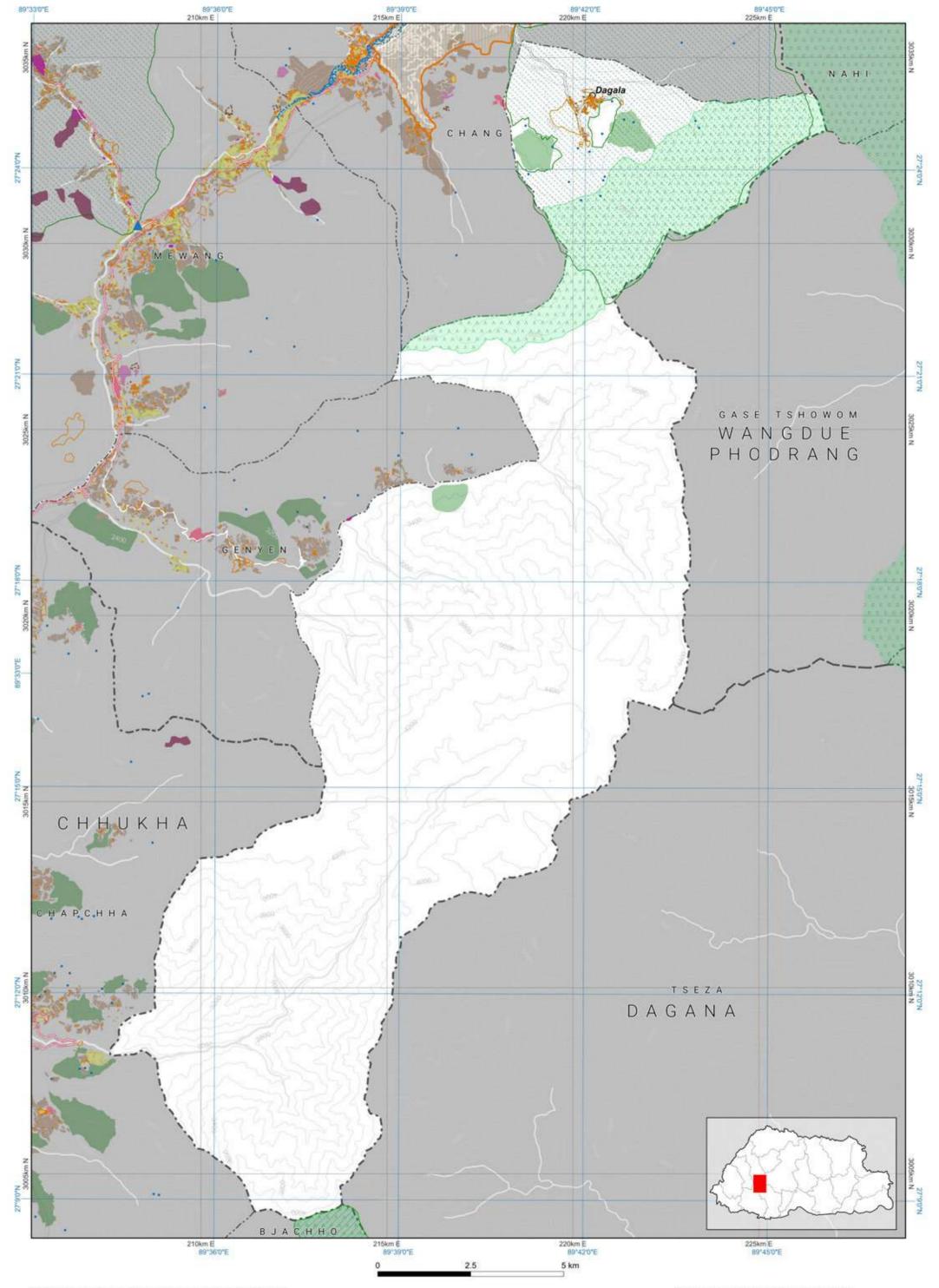
Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k Farm 5k

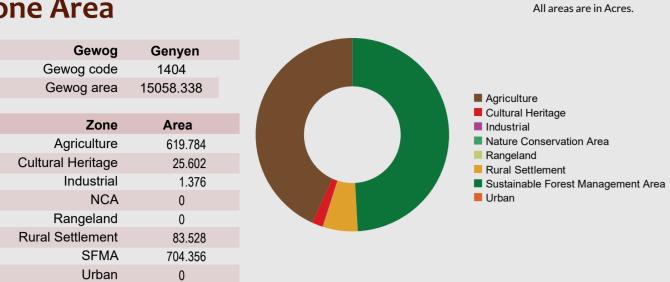
### **Demographic Table**

		Gev	vog wise K	ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)	
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Dagala	1,387	707	2,094	196.2	13.7	344	4

### Data Ownership

Data Owner of the Map Content
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat





### **Zone Conflict**

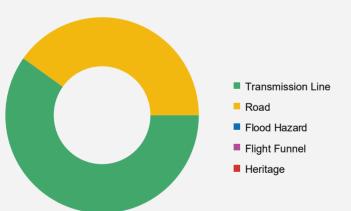
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	2.892	0	9.681	0	0	0	1.055	0
Road	0	0	2.346	0	0	0	1.044	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0		0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	48.165
Road	32.291
Flood Hazard	0
Flight Funnel	0
Heritage	0



**Data Ownership** 

Dzongkhag 5k

	Data Owner of the Map Content
	Department of Agriculture Ministry of Agriculture and Livestock
	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources



### **Map Legend**















### Powerlines

### Flight Funnel Other Effective Area-based Conservation Measures

### Key Biodiversity Area High Conservation Value

### Tsamdro Significant Watershed





### Helipad O Hydro Power Plants A

### Hydro Power Waterways — Basemap

### Boundaries International --Dzongkhag - -

Gewog
Rivers
Main river
Perennial
Terrain

	Roads for differen map scales
Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k

27°21'0'N

National Land Use Zoning 2023

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Mean Household size								
Gewog / Throm	Male	Female	Total					
Genyen	597	544	1,141	109.7	26.4	237	4.4	

N.081-12

Zo	ne Area	
	<b>Gewog</b> Gewog code Gewog area	<b>Kawang</b> 1405 73560.596
	Zone	Area
	Agriculture Cultural Heritage Industrial	1028.285 887.575
	NCA	1.068 17303.338
	Rangeland Rural Settlement SFMA	0 268.082 1855.542
	Urban	2276.521

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	6.459	9.235	27.709	0	0	0
Agriculture	0	6.459	0	25.614	0.781	0	0	0
Urban	0	9.235	25.614	0	292.086	0	3.833	0
Culture	0	27.709	0.781	292.086	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	3.833	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	13.532	0	0	0.604	0.058	0	2.113	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

vv / Barrer	
Buffer Zone	Area
Transmission Line	55.931
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population Sex ratio Aging Index Number of household Mean Household size							
Gewog / Throm	Male	Female	Total				
Kawang	3,185	2,292	5,477	139.0	23.7	1,316	3.6
Thimphu Thromde	58,996	55,555	114,551	106.2	15.0	25,408	4.3

The demographic statistics provided in the table above for Thimphu thromde encompass not only the area falling under the Kawang gewog but also include the demographic statistics of the thromde area falling under the Chang gewog. The same statistics for Thimphu thromde can be found under the Chang

### Map Legend





Forest Management Unit



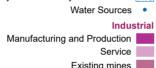


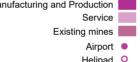




### Key Biodiversity Area High Conservation Value







### Basemap

### International --Dzongkhag - -Perennial =

<b>Terrain</b> Contour
Roads for different map scales
Thromde 50k
Thromde 25k
Thromde 5k

Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ===	Farm 5k ==
Dzongkhag 5k	

### Data Ownership

Data Owner of the Map Content
Bhutan Power Corporation Limited Druk Holding and Investment
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Human Settlement Ministry of Infrastructure and Transport
National Centre for Hydrology and Meteorology

### Thimphu: Kawang

MEWANG

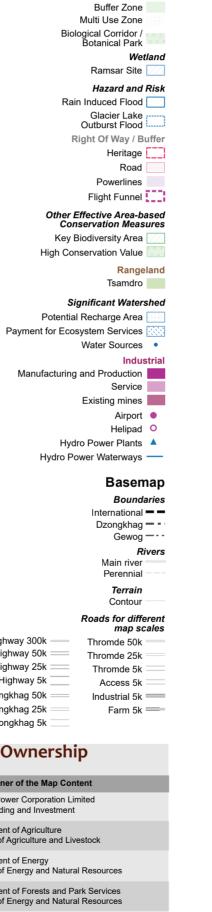
Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

89°30'0°E

### The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

KABJISA

PUNAKHA



NARO

one Ar	'ea	
(	Gewog	Lingzhi
Gewo	g code	1406
Gewo	og area	95572.752
	Zone	Area
Agri	culture	78.541
Cultural H	eritage	70.191
Inc	dustrial	0.523
	NCA	95572.752
Ran	geland	0
Rural Sett	lement	43.974
	SFMA	0
	Urban	0

### **Zone Conflict**

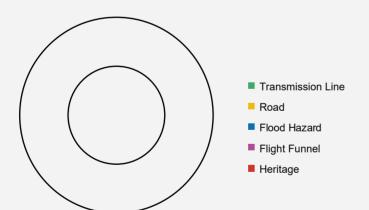
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	78.541	0	70.191	0.523	43.974	0
Agriculture	0	78.541	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	70.191	0	0	0	0	0	0
Industrial	0	0.523	0	0	0	0	0	0
Rural Settlement	0	43.974	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land

> Forest Management Unit Community Forest **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

> > Urban Zone **Nature Conservation Area** Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park Wetland Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources • Industrial Manufacturing and Production

Existing mines Airport Helipad O

Hydro Power Plants A

Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -Gewog ---Rivers Perennial = Terrain

Farm 5k ====

Roads for different Highway 300k ==== Thromde 50k Highway 50k === Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k === Industrial 5k Dzongkhag 25k

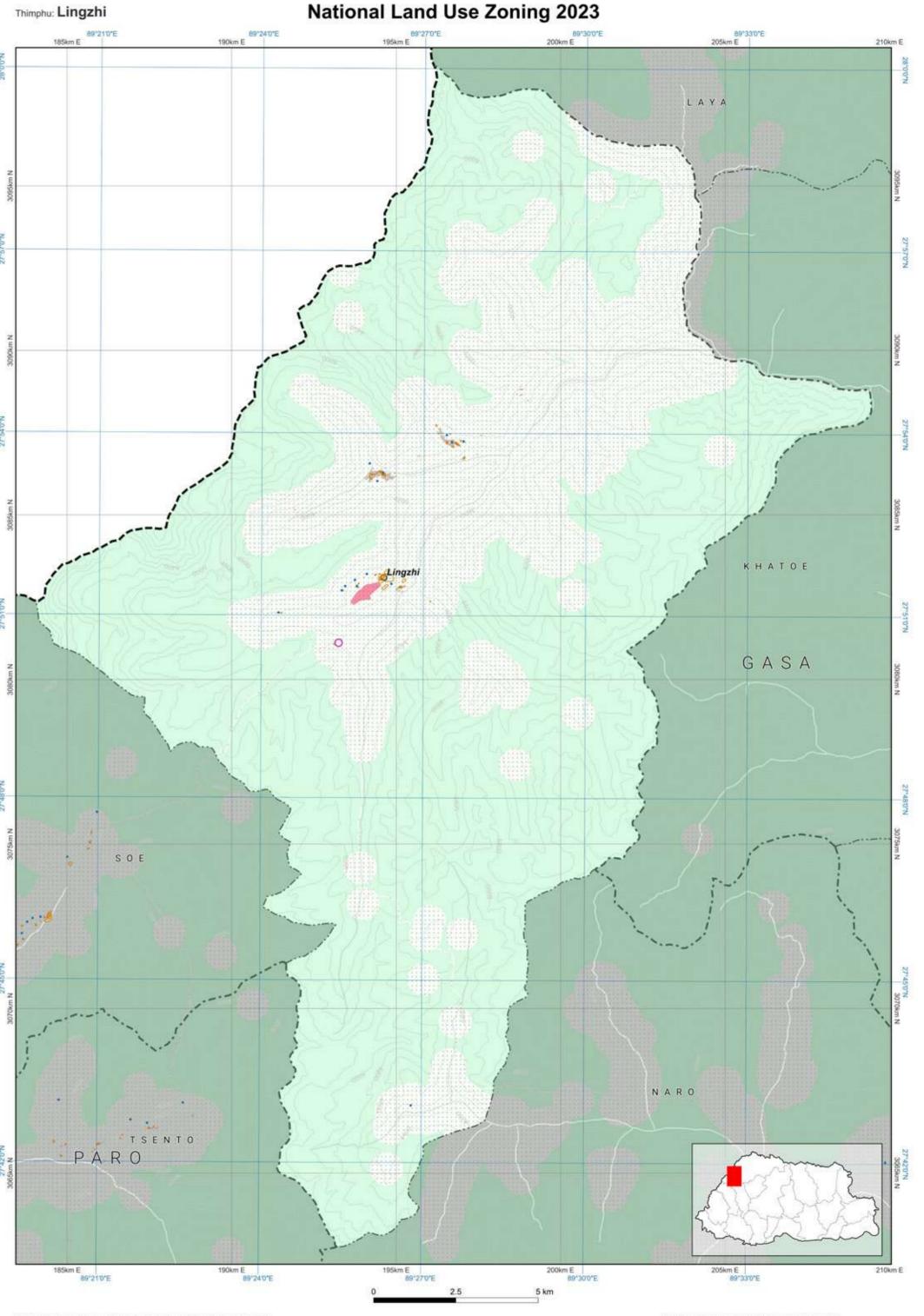
### Data Ownership

Data Owner of the Map Content

Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Air Transport Ministry of Infrastructure and Transport
National Centre for Hydrology and Meteorology
National Land Commission Secretariat

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Lingzhi	276	214	490	129.0	16.4	92	5.1



one	e Area	
	Gewog	Mewang
	Gewog code	1407
	Gewog area	56790.181
	Zone	Area
	Agriculture	2253.329
Cı	ultural Heritage	44.454
	Industrial	513.23
	NCA	74.384
	Rangeland	0
Rı	ural Settlement	353.993
	SFMA	33488.754
	Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	10.091	733.198	0	10.091	290.479	85.325	0
NCA	73.623	0	0	0	0	0	0	0
Agriculture	733.198	0	0	0	0	0.02	0	0
Urban	0	0	0	0	0	0	0	0
Culture	10.091	0	0	0	0	0	0	0
Industrial	290.479	0	0.02	0	0	0	0	0
Rural Settlement	85.325	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	53.196	0	39.190	0	0	2.839	5.539	0
Road	44.623	0	16.757	0	0.147	3.839	6.693	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0		0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	211.49
Road	150.946
Flood Hazard	0
Flight Funnel	0
Heritage	0

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Mewang	3559	3274	6,833	108.7	22.5	1,505	4.1	
Khasadrapchu Town	457	509	966	89.8	10.2	236	4.1	

### **Map Legend**

Thimphu: Mewang



Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport Helipad O

> Hydro Power Plants A Hydro Power Waterways -

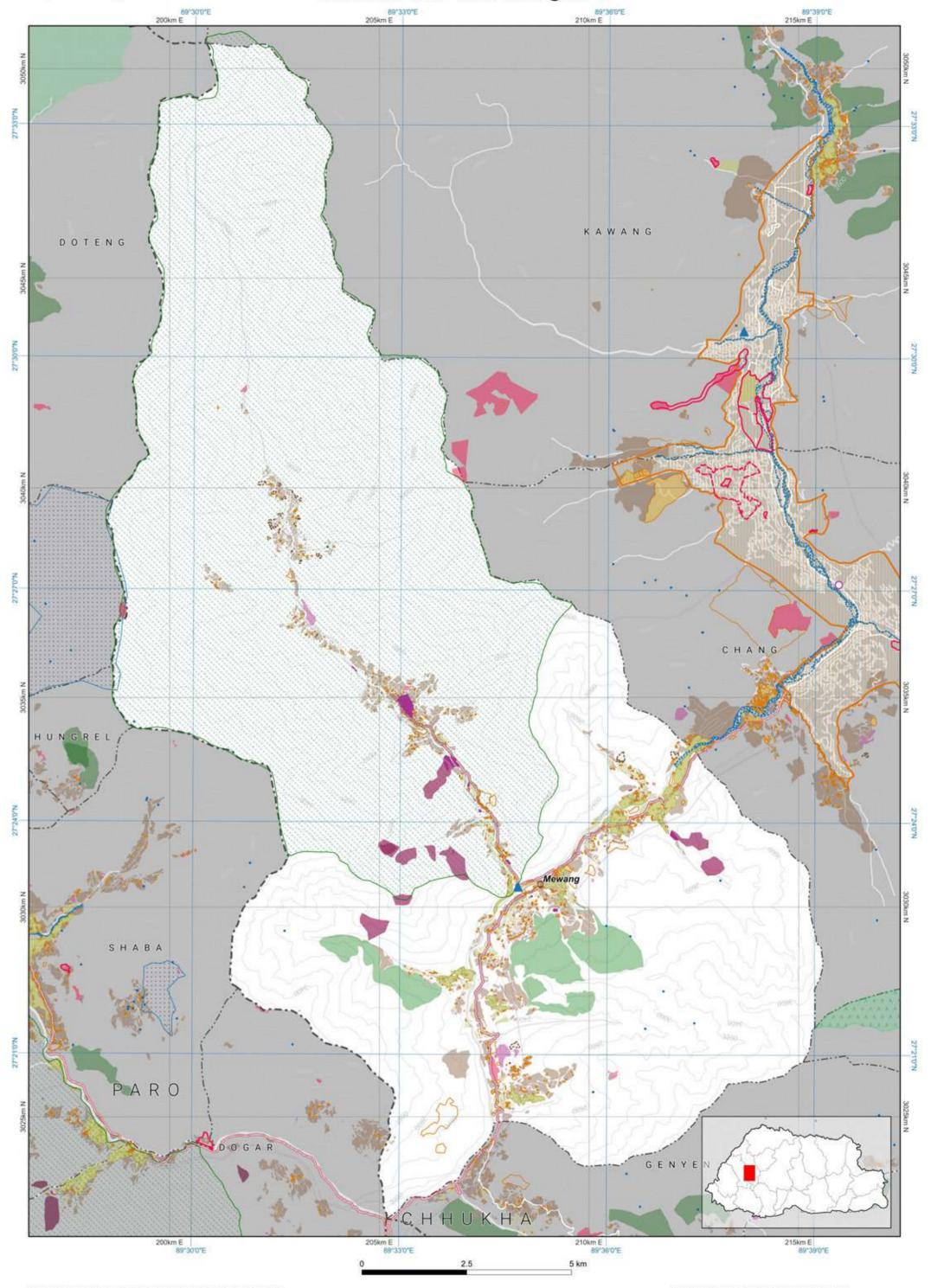
Basemap Boundaries International --Dzongkhag - -

Perennial

Highway 300k ==== Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### **Data Ownership**

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Department of Agriculture Ministry of Agriculture and Livestock
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Department of Geology and Mines Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Industry Ministry of Industry, Commerce and Employment
Department of Surface Transport Ministry of Infrastructure and Transport
National Centre for Hydrology and Meteorology
National Land Commission Secretariat



O	ne Area	
	Gewog	Naro
	Gewog code	1408
	Gewog area	69568.373
	Zone	Area
	Agriculture	1.829
	Cultural Heritage	0.13
	Industrial	0.433
	NCA	68144.811
	Rangeland	0
	Rural Settlement	30.203
	SFMA	0.051
	Urban	0

### **Zone Conflict**

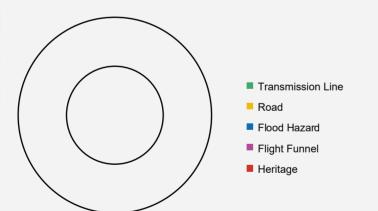
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	1.829	0	0.13	0.433	30.203	0
Agriculture	0	1.829	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.13	0	0	0	0	0	0
Industrial	0	0.433	0	0	0	0	0	0
Rural Settlement	0	30.203	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

Thimphu: Naro

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

> Residential Land Institutional Land

Lease Land

Forest Management Unit Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Wetland Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

> Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines Airport

> Helipad O Hydro Power Plants A Hydro Power Waterways —

> > Basemap Boundaries

International --Dzongkhag - -Gewog ---Rivers Perennial = Terrain Contour

Roads for different Highway 300k —— Thromde 50k

Highway 50k === Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k === Industrial 5k Dzongkhag 25k ==== Farm 5k ====

### Demographic Table

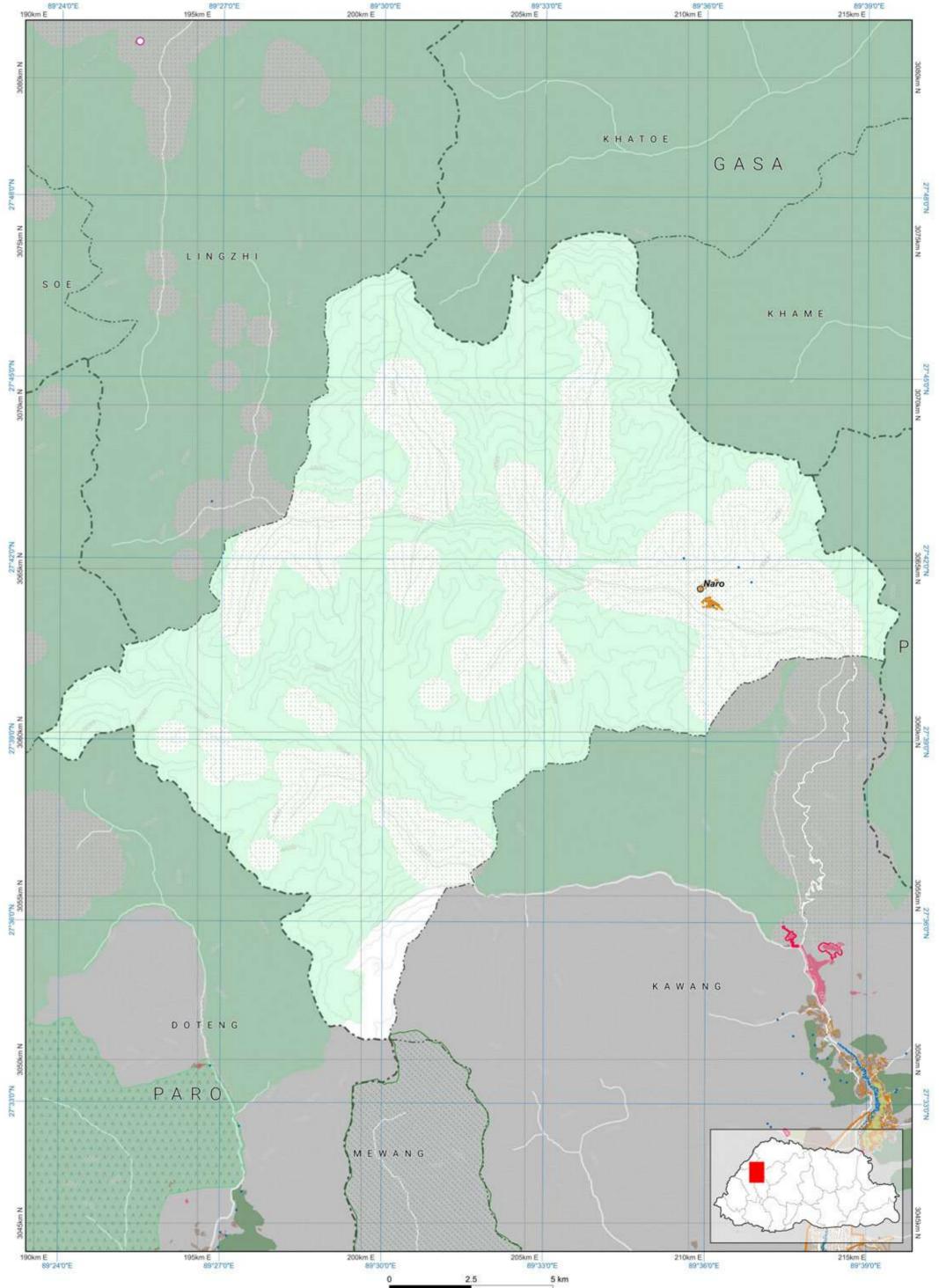
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Naro	163	87	250	187.4	18.8	44	5		

### **Data Ownership**

Data Owner of the Map Content
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Centre for Hydrology and Meteorology

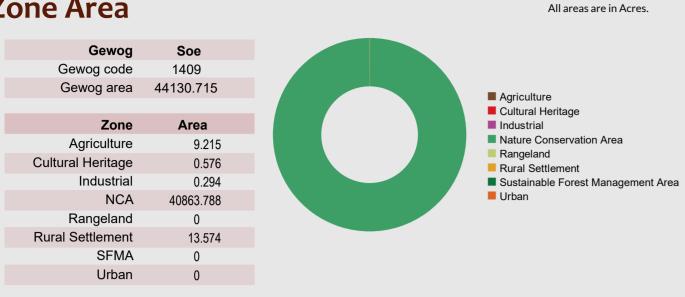
National Land Commission Secretariat

### National Land Use Zoning 2023



Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.





### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	9.215	0	0.576	0.294	13.574	0
Agriculture	0	9.215	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.576	0	0	0	0	0	0
Industrial	0	0.294	0	0	0	0	0	0
Rural Settlement	0	13.574	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



### **Map Legend**

### National Land Use Zoning Agricultural Land Kamzhing Protected Chhuzhing Regulated Chhuzhing

### Rural Settlement Residential Land

Lease Land

### Forest Management Unit Community Forest Cultural Heritage Religious Sites

### Heritage Village Heritage Conservation Zone Urban Urban Zone Urban Zone

### Nature Conservation Area Protected Area Core Zone Transistion Zone Buffer Zone



### Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer
Heritage Road Powerlines

### 

Key Biodiversity Area
High Conservation Value

### Rangeland Tsamdro

### Significant Watershed

Potential Recharge Area
Payment for Ecosystem Services
Water Sources

Industrial

Manufacturing and Production

Service

Existing mines

### Helipad O Hydro Power Plants

Hydro Power Plants Hydro Power Waterways —

### Basemap

Airport

Boundaries
International — —
Dzongkhag — —
Gewog — —

Rivers
Main river
Perennial
Terrain

### Contour Roads for different map scales

ighway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ongkhag 25k ===	Farm 5k =

### Data Ownership

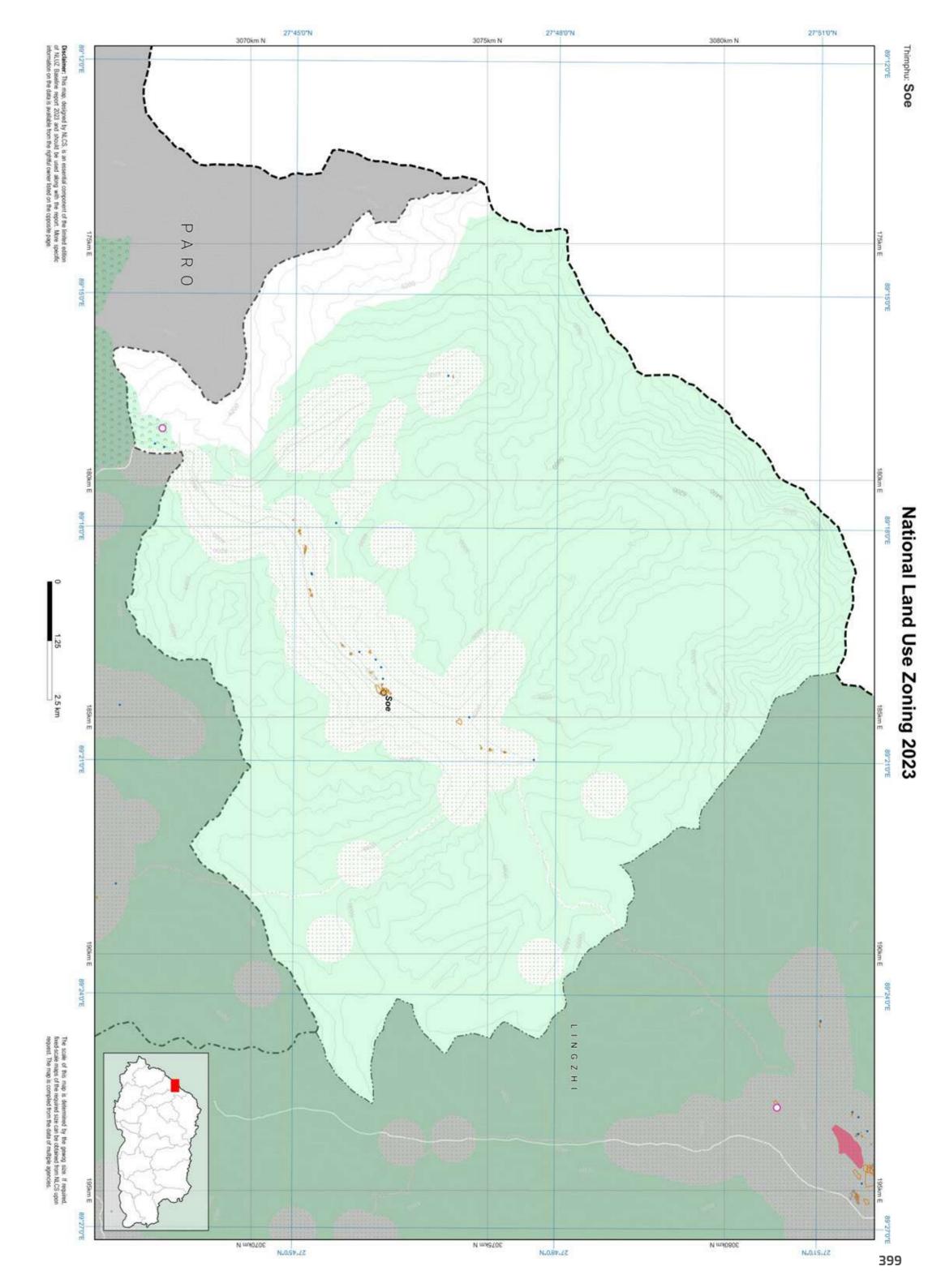
ı	Data Owner of the Map Content						
	Department of Forests and Park Services Ministry of Energy and Natural Resources						
	Department of Water Ministry of Energy and Natural Resources						

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Soo	101	Q1	192	12/17	17.0	37	4.0			

Department of Air Transport
Ministry of Infrastructure and Transport

National Centre for Hydrology and Meteorology

National Land Commission Secretariat



### **Zone Area** All areas are in Acres. Dzongkhag Trongsa 17 Dzongkhag code Dzongkhag area 447256.837 Agriculture Culture Industrial Zone Area ■ Nature Conservation Area Agriculture 10778.187 Rangeland Rural Settlement Culture 404.152 ■ Sustainable Forest Management Area Industrial 435.739 Urban NCA 313401.435 Rangeland Rural Settlement 609.838

### **Zone Conflict**

SFMA

Urban

37504.908

506.511

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	23285.75	275.183	0	5.122	70.821	17.731	0
NCA	23285.75	0	3023.658	0	243.836	45.046	77.789	0
Agriculture	275.183	3023.658	0	8.944	214.606	0.25	0	0
Urban	0	0	8.944	0	36.071	0	0.136	0
Culture	5.122	243.836	214.606	36.071	0	0	13.191	0
Industrial	70.821	45.046	0.25	0	0	0	0	0
Rural Settlement	17.731	77.789	0	0.136	13.191	0	0	0
Rangeland	0	0	0	0	0	0	0	0

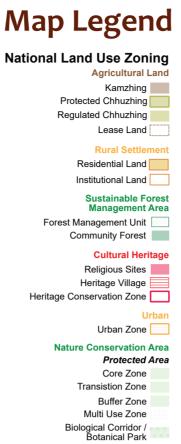
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	92.293	184.136	81.454	0	1.704	18.358	6.555	0
Road	178.199	149.007	80.692	0	0.295	5.914	14.916	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area		
Transmission Line	783.204		
Road	1250.332		
Flood Hazard	0		■ Transmission Line
Flight Funnel	0		Road
Heritage	0		Flood Hazard
			Flight Funnel
			Heritage

### **Map Legend**



### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

### Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A Hydro Power Waterways -

### Basemap

Boundaries International --Dzongkhag - -

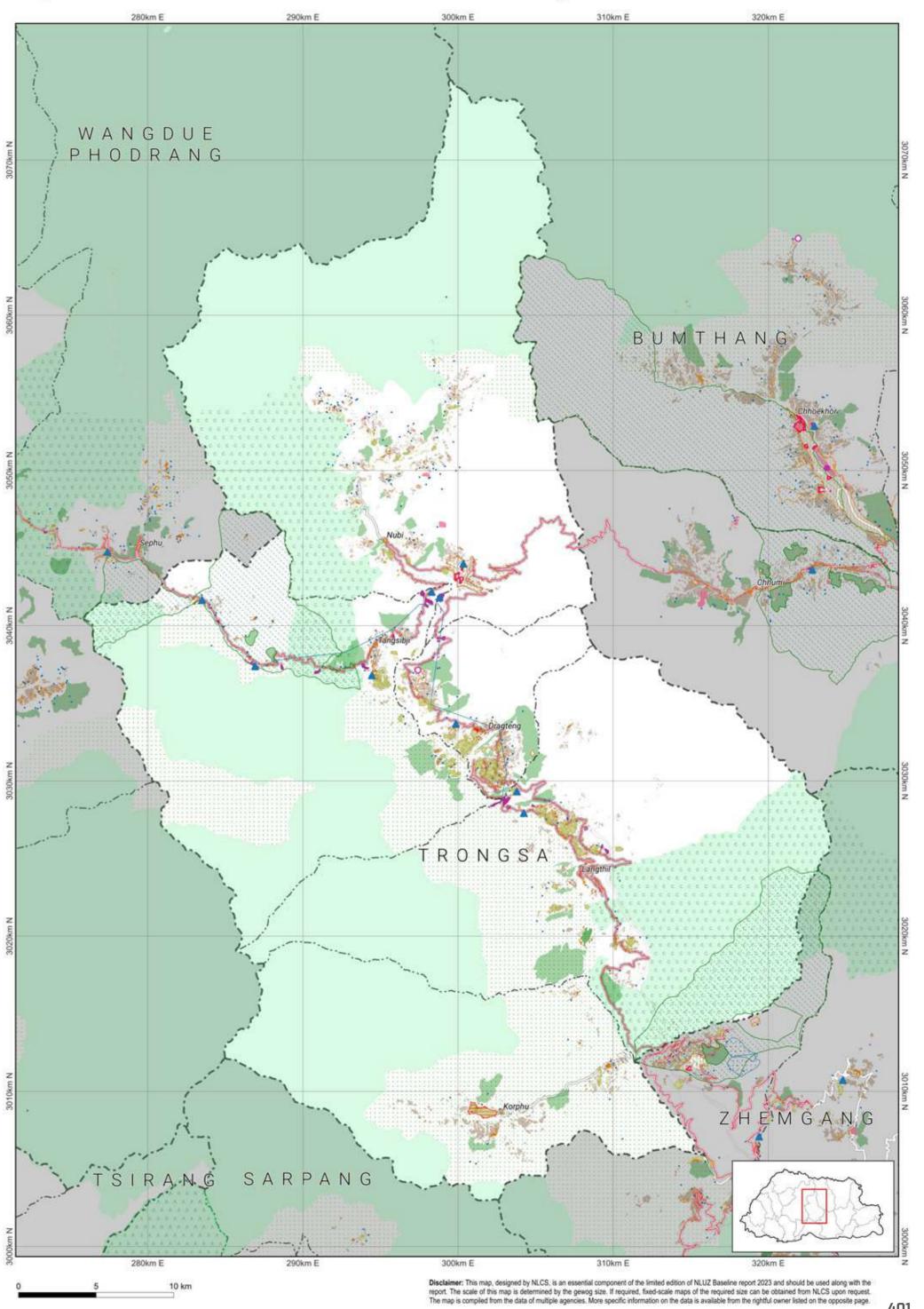
Perennial

Highway 300k = Highway 50k === Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

### **Demographic Table**

		Dzo	ongkhag Ke	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	Tot	tal Population	n	Sex ratio	Aging Index	Number of household	Mean Household size
Dzongkhag	Male	Female	Total				
Trongsa	11,878	8,082	19,960	147.0	26.7	3,690	3.6

### Trongsa



<b>.</b>		
	Gewog	Dragteng
	Gewog code	1701
	Gewog area	20994
	Zone	Area
	Agriculture	2565.467
	Cultural Heritage	22.241
	Industrial	37.934
	NCA	36.132
	Rangeland	0
	Rural Settlement	238.613
	SFMA	2274.586
	Urban	0

### **Zone Conflict**

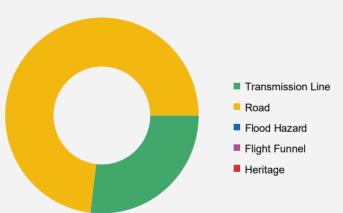
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0.099		0	0	0	0	0
NCA	0.099	0	1.13	0	0	0	0	0
Agriculture	0	1.13	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	3.984	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	3.984	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	8.463	0	19	0	1.704	0.925	3.449	0
Road	12.475	0	41.896	0	0.031	2.662	6.743	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	94.597
Road	257.259
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Demographic Table**

		Gev	og wise K	ey Demographic	Indicators, 2017 ( So	ource: NSB, PHCB 2017)	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Dragteng	3,563	2,637	6,200	135.1	22.8	994	3.3
Kuengarabten Town	232	192	424	120.8	15.9	112	3.5

### **Map Legend**

### **National Land Use Zoning**

All areas are in Acres.

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Residential Land

Forest Management Unit Community Forest

Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Potential Recharge Area

Payment for Ecosystem Services

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap

Boundaries International --Dzongkhag - -

Perennial

Highway 300k = Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

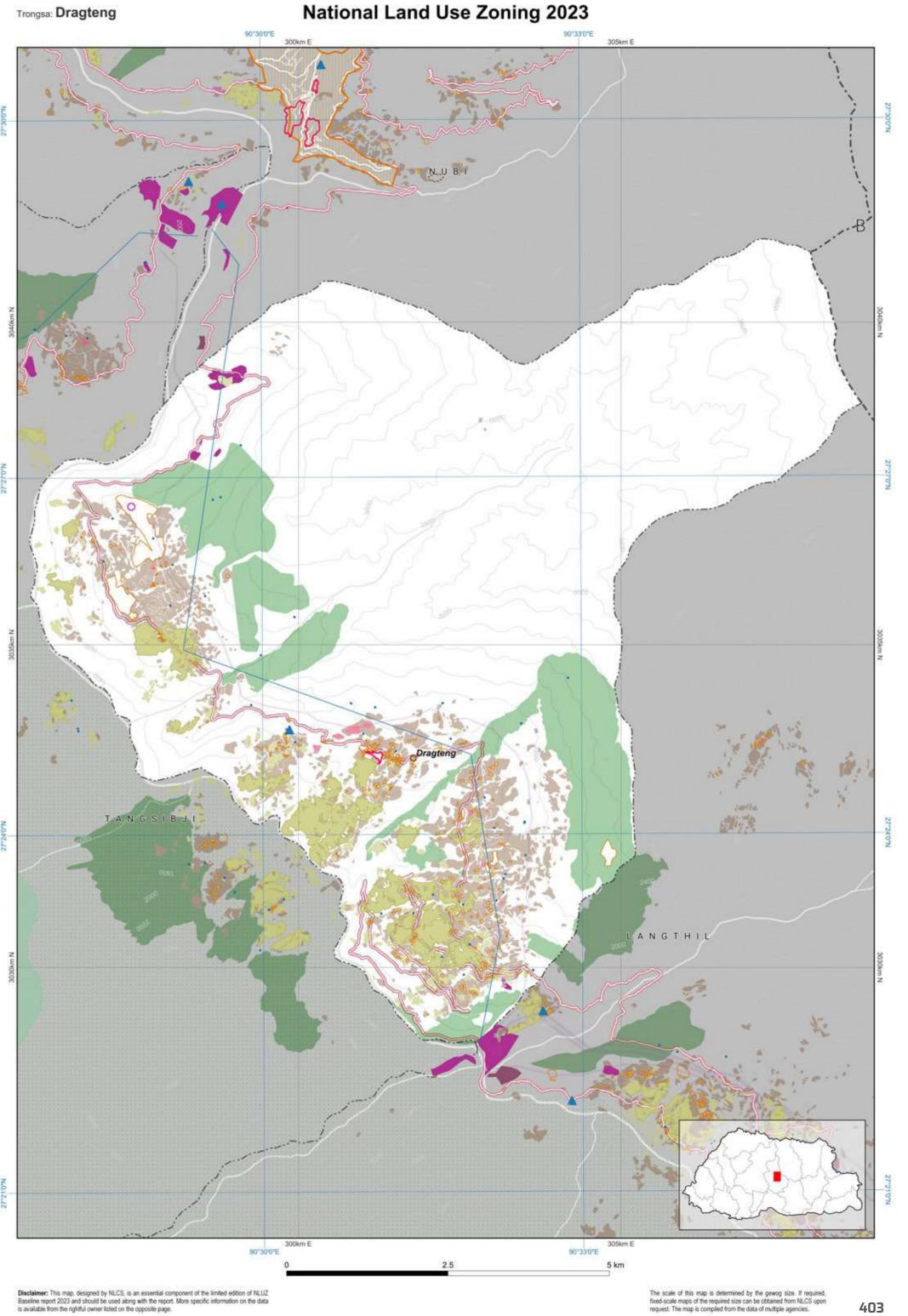
### **Data Ownership**

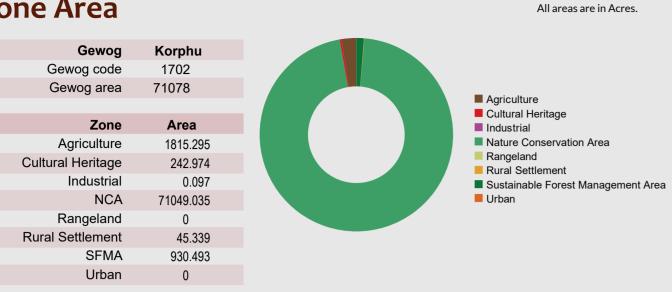
Data Owner of the Map Content Bhutan Power Corporation Limited Druk Holding and Investment Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs Department of Air Transport Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### Trongsa: Dragteng

### The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.





### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	930.493	0.00	0	0	0	0	0
NCA	930.493	0	1,815.295	0	242.974	0.097	45.339	0
Agriculture	0	1,815.295	0	0	214.606	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	242.974	214.606	0	0	0	9.207	0
Industrial	0	0.097	0	0	0	0	0	0
Rural Settlement	0	45.339	0	0	9.207	0	0	0
Rangeland	0	0	0	0	0	0	0	0

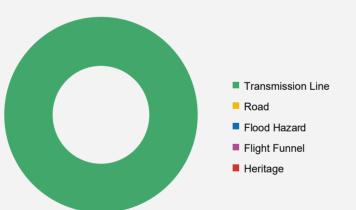
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	5.998	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### **RoW / Buffer Area**

**Demographic Table** 

Buffer ZoneAreaTransmission Line5.998Road0Flood Hazard0Flight Funnel0Heritage0		
Road 0 Flood Hazard 0 Flight Funnel 0	Buffer Zone	Area
Flood Hazard 0 Flight Funnel 0	Transmission Line	5.998
Flight Funnel 0	Road	0
_	Flood Hazard	0
Heritage 0	Flight Funnel	0
	Heritage	0



### Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017) Mean Household size 345 749 203 3.6

### **Map Legend**











Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk

Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value Rangeland

### Tsamdro Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Industrial Manufacturing and Production

### Existing mines Airport Helipad O

Hydro Power Plants A Hydro Power Waterways -

### Basemap Boundaries

International --Dzongkhag - -Gewog ---

### Perennial Terrain Contour

	map scale
Highway 300k —	Thromde 50k
Highway 50k ===	Thromde 25k

Thromde 25k	Highway 50k
THIOTHUC ZON	0 ,
Thromde 5k	Highway 25k ===
Access 5k	Highway 5k
Industrial 5k	zongkhag 50k ===
Farm 5k	zongkhag 25k ===

Dzongkhag 5k

### Data Ownership Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs National Land Commission Secretariat

### S N D Z SO RG DO U D Z 0 National Land Use Zoning 2023 N I 0 Z 0

27\*18'D'N

iic i ii ca	
Gewog	Langthil
Gewog code	1703
Gewog area	125932
Zone	Area
Agriculture	2405.175
Cultural Heritage	1.919
Industrial	131.196
NCA	81159.041
Rangeland	0
Rural Settlement	118.672
SFMA	15781.525
Urban	0

### **Zone Conflict**

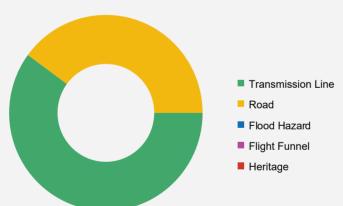
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	15116.289	16.23	0	0	0	0	0
NCA	15116.289	0	614.45	0	0	4.685	19.943	0
Agriculture	16.23	614.45	0	0	0	0.25	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	4.685	0.25	0	0	0	0	0
Rural Settlement	0	19.943	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	83.831	178.137	62	0	0	17.433	3.106	0
Road	31.714	95.435	29	0	0.011	1.273	5.12	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	667.957
Road	444.055
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning**

All areas are in Acres.

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land

Institutional Land

### Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone

### Urban Zone **Nature Conservation Area**

Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

### Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

### Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport • Helipad O

Hydro Power Waterways -

### Basemap

Boundaries

International --Dzongkhag - -

Perennial

ighway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k

### Data Ownership

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources

Department of Forests and Park Services Ministry of Energy and Natural Resources

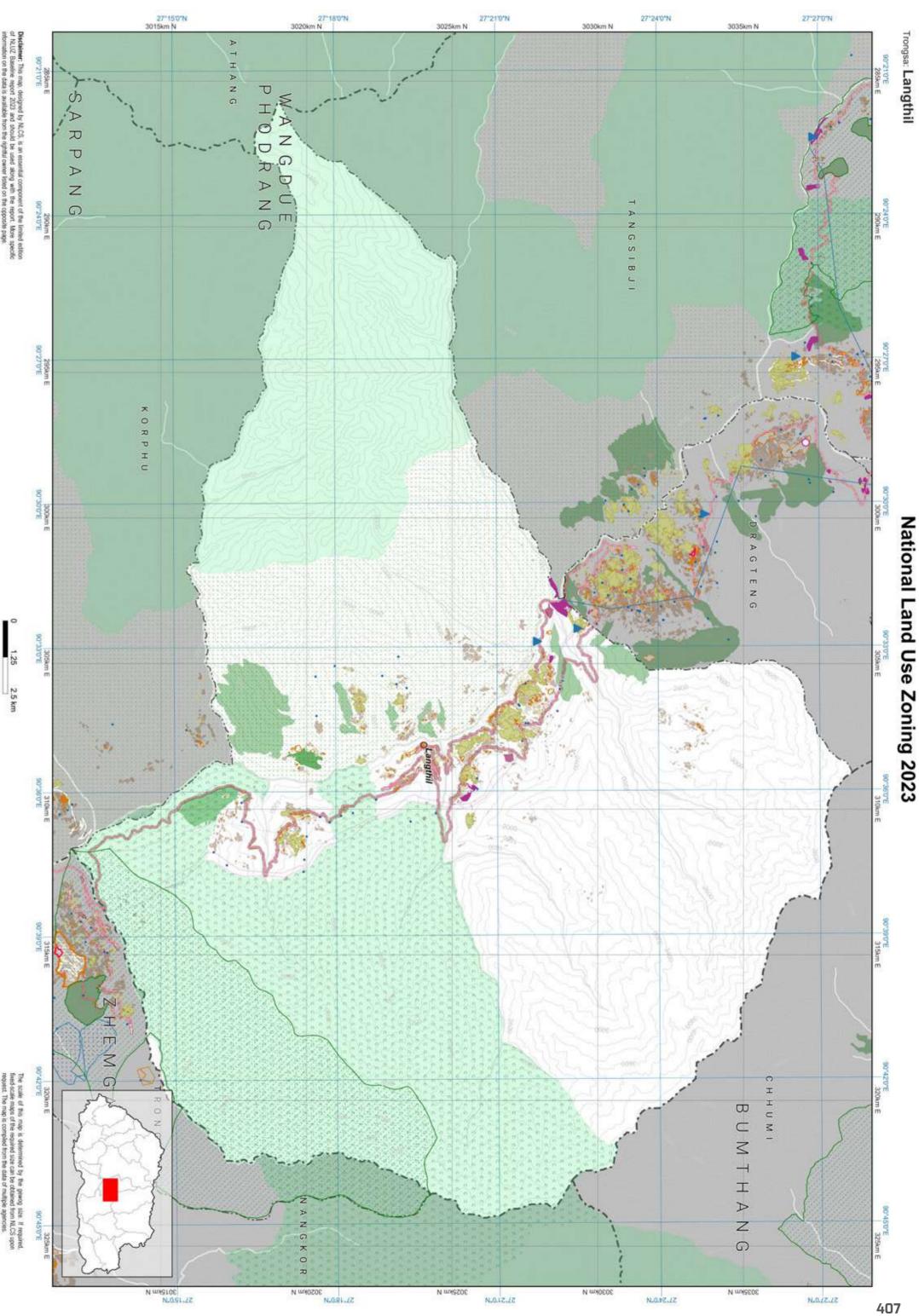
Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water

Ministry of Energy and Natural Resources Department of Surface Transport

Ministry of Infrastructure and Transport National Land Commission Secretariat

### Demographic Table

				,g		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Langthil	2,332	1,418	3,750	164.5	28.1	748	3.5



Zc	ne Area	
	Gewog	Nubi
	Gewog code	1704
	Gewog area	137965
	Zone	Area
	Agriculture	2643.986
	Cultural Heritage	126.704
	Industrial	36.918
	NCA	87014.792
	Rangeland	0
	Rural Settlement	111.488
	SFMA	1423.447
	Urban	506.511

### **Zone Conflict**

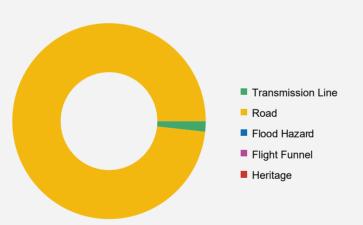
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	17.891	0.00	0	0	0	0	0
NCA	17.891	0	124.61	0	0	0	1.062	0
Agriculture	0	124.61	0	8.944	0	0	0	0
Urban	0	0	8.944	0	36.071	0	0.136	0
Culture	0	0	0	36.071	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	1.062	0	0.136	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0.054	0	3.768	0	0.151	0.092	0.821	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	5.462
Road	307.846
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population Sex ratio Aging Index Number of household Mean Household size										
Gewog / Throm	Male	Female	Total							
Nubi	2,075	1,096	3,171	189.3	41.6	481	4.1			
Trongsa Town	1,667	1,455	3,122	114.6	11.4	660	3.7			

### **Map Legend**









	Core Zone	
	Transistion Zone	
	Buffer Zone	
	Multi Use Zone	
F	Biological Corridor /	



Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

> Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport

Helipad O Hydro Power Plants A Hydro Power Waterways —

### Basemap

Boundaries International --Dzongkhag - -

Perennial Terrain

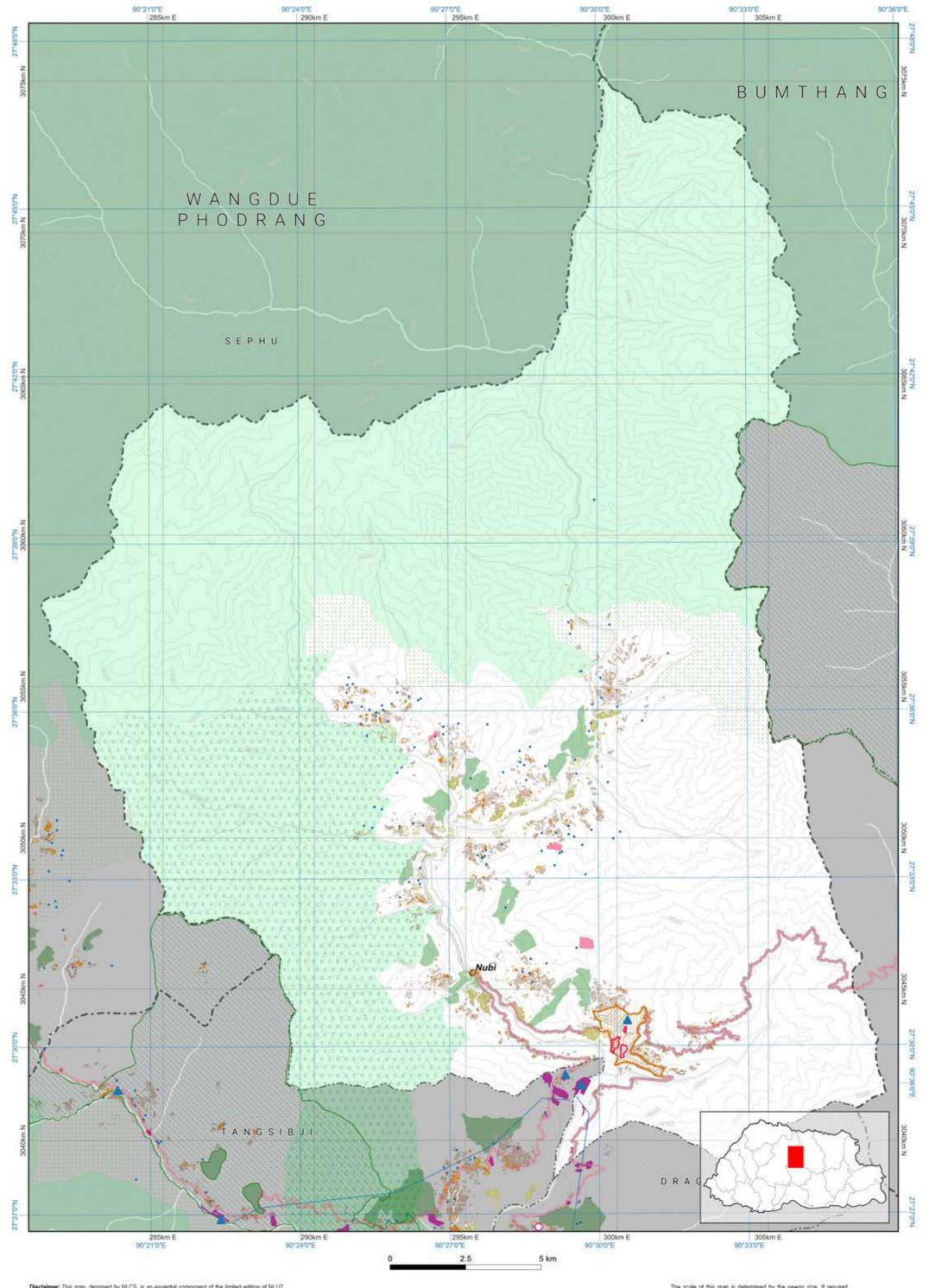
Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k ==
zongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

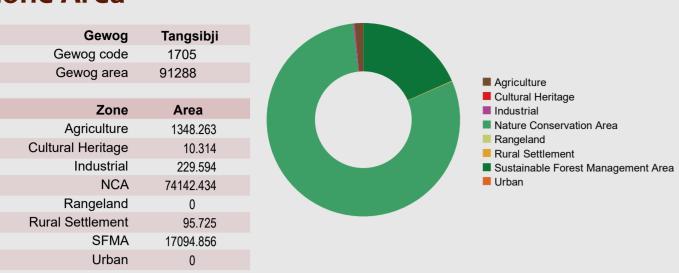
### **Data Ownership**

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Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### Trongsa: Nubi National Land Use Zoning 2023





### **Zone Conflict**

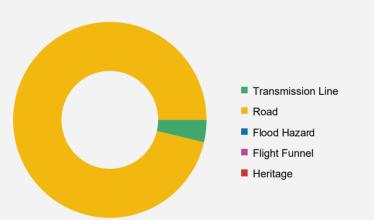
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	7220.978	258.95	0	5.122	70.821	17.731	0
NCA	7220.978	0	468.18	0	0.862	40.264	11.444	0
Agriculture	258.95	468.18	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	5.122	0.862	0	0	0	0	0	0
Industrial	70.821	40.264	0	0	0	0	0	0
Rural Settlement	17.731	11.444	0	0	0	0	0	0
Rangeland	0		0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	133.957	53.572	6.414	0	0.102	1.887	2.233	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	9.191
Road	241.173
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

All areas are in Acres.

Trongsa: Tangsibji

PHOBJI

### **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

### Residential Land Institutional Land

Lease Land

### Forest Management Unit Community Forest **Cultural Heritage** Religious Sites





Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Hazard and Risk

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Rain Induced Flood

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

### High Conservation Value

### Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

### Manufacturing and Production Existing mines Airport •

Helipad O Hydro Power Plants A

### Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Perennial

### Terrain

	iliap scales
Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ====	Industrial 5k
Dzongkhag 25k	Farm 5k

### **Data Ownership**

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Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water

Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

Department of Culture and Dzongkha Development Ministry of Home Affairs

### **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
Total Population Sex ratio Aging Index Number of household Mean Household size											
Gewog / Throm	Gewog / Throm Male Female Total		Total								
Tangsibji	1,605	939	2,544	170.9	32.2	492	3.3				

WANGDUE PHODRANG

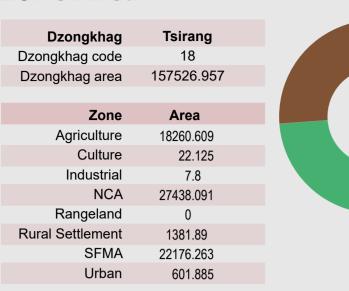
ATHANG

# LANGTHIL KORPHU The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

90°30'0°E 300km E

National Land Use Zoning 2023

### Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.



### **Map Legend**

All areas are in Acres.

Agriculture

Culture

Industrial

Rangeland Rural Settlement

Nature Conservation Area

■ Sustainable Forest Management Area





### Residential Land

### Forest Management Unit

Community Forest





### **Nature Conservation Area** Protected Area

### Core Zone Transistion Zone Buffer Zone Multi Use Zone

### Biological Corridor / Botanical Park

### Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines

Airport • Helipad O

### Hydro Power Plants A Hydro Power Waterways —

### Basemap Boundaries International --

Dzongkhag - -

### Perennial Terrain

### Roads for different

Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ngkhag 25k ===	Farm 5k

### **Zone Conflict**

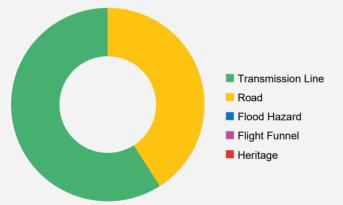
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1687.447	0.02	0	0	0	0.28	0
NCA	1687.447	0	356.79	0	0	0.1	15.438	0
Agriculture	0.02	356.79	0	51.913	0	0.3	0.038	0
Urban	0	0	51.913	0	8.783	0.154	6.512	0
Culture	0	0	0	8.783	0	0	0	0
Industrial	0	0.1	0.3	0.154	0	0	0	0
Rural Settlement	0.28	15.438	0.038	6.512	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	110.565	40.522	142.748	0.198	0	0	4.946	0
Road	57.812	50.125	45.707	0	0.125	0.365	5.217	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

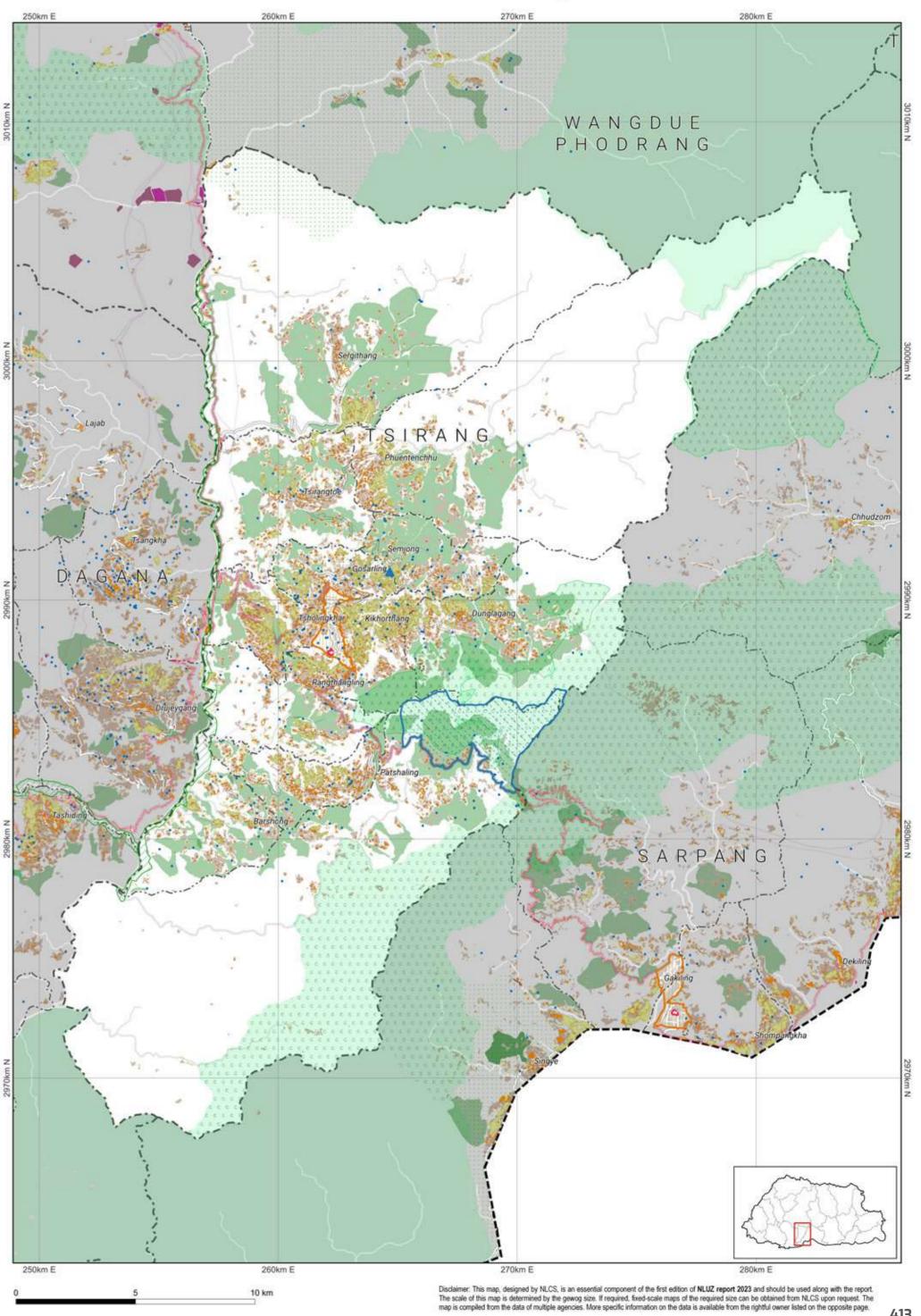
### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	618.446
Road	428.768
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Demographic Table**

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Mean Household s							Mean Household size	
Dzongkhag	Male	Female	Total					
Tsirang	11,526	10,850	22,376	106.2	30.1	5,063	4	



### Barshong Gewog 1801 Gewog code 5355.109 Gewog area Zone Area 1080.236 Agriculture Cultural Heritage 0.852 Industrial 0.199 487.998 NCA Rangeland 0 Rural Settlement 57.231 SFMA 1488.979 Urban

**Zone Conflict** 

### All areas are in Acres. Map Legend

Agriculture

Industrial

Rangeland

Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area

### National Land Use Zoning Agricultural Land Kamzhing

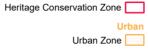


### Residential Land Institutional Land

Tsirang: Barshong

### Sustainable Forest Management Area Forest Management Unit

### Cultural Heritage Religious Sites Heritage Village



### Nature Conservation Area Protected Area Core Zone Transistion Zone

### Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site \_\_\_\_\_ Hazard and Risk Rain Induced Flood \_\_\_\_\_

Outburst Flood
ght Of Way / Buffer
Heritage
Dood

### Road Powerlines

### 

Key Biodiversity Area
High Conservation Value

### Rangeland Tsamdro

### Significant Watershed Potential Recharge Area

ayment for Ecosystem Service	es [	
Water Source	es	
Inc	lust	

Manufacturing and Production
Service
Existing mines
Airport

### Helipad O Iro Power Plants A

### Hydro Power Waterways — Basemap

### Boundaries International — — Dzongkhag — Gewog — -

Gewog
River
Main river
Perennial
Terrain
Contour

Roads for different
map scales
Thursda FOL

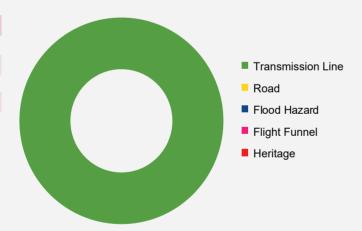
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### RoW / Buffer Conflict

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	4.926	0.018	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	5.038
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



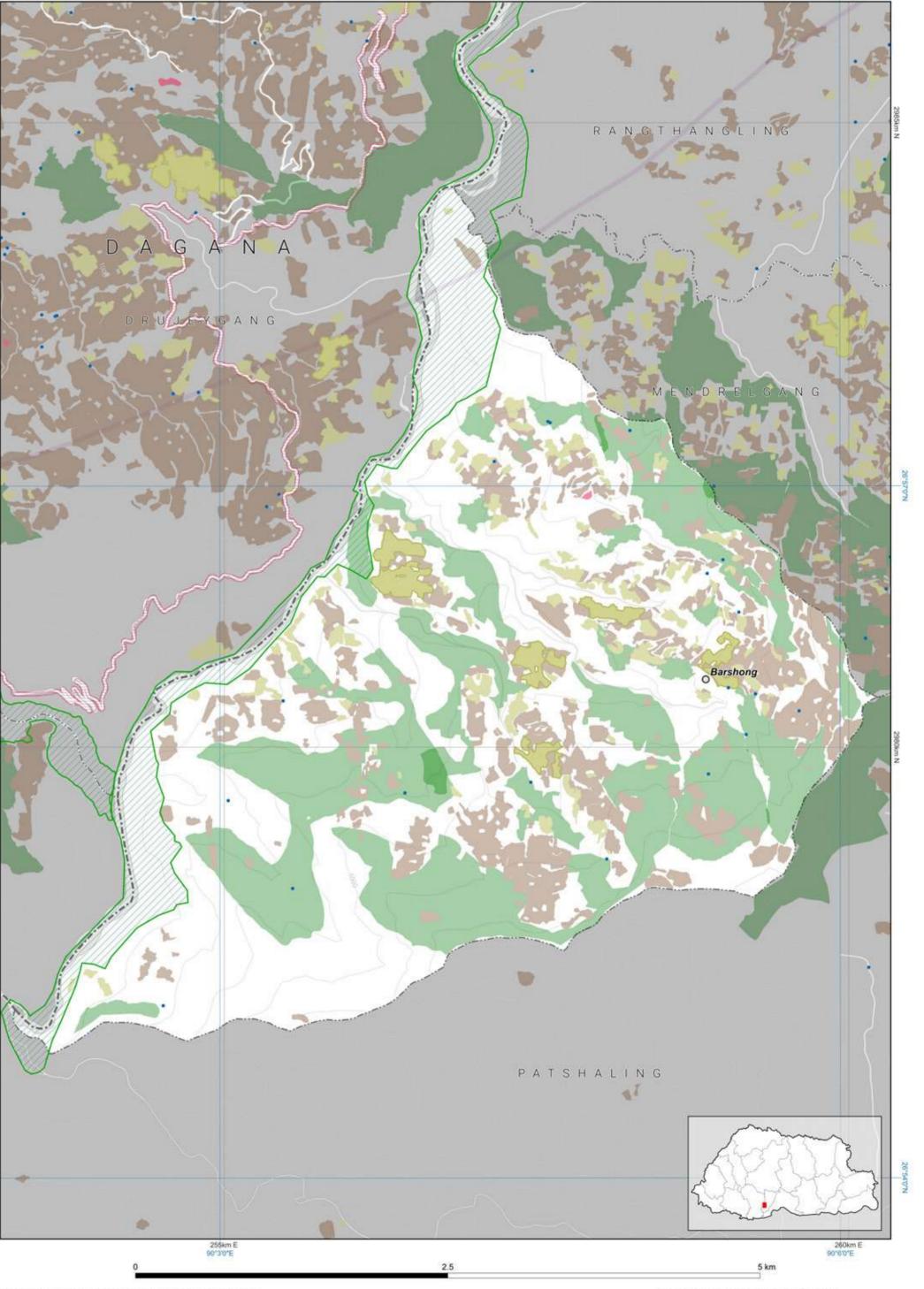
### Data Ownership

Highway 300k =

vata Owner of the Map Content
epartment of Agriculture linistry of Agriculture and Livestock
epartment of Energy linistry of Energy and Natural Resources
epartment of Forests and Park Services linistry of Energy and Natural Resources
epartment of Water linistry of Energy and Natural Resources
lational Land Commission Secretariat

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Barshong	423	419	842	101.0	49.7	224	3.8	

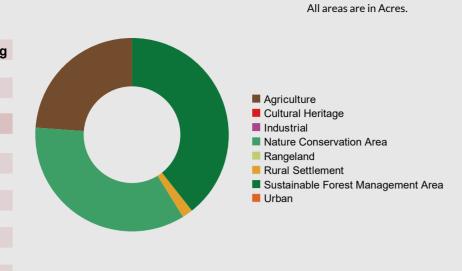


# JUNGLAGANG

# SIRANG

### Zone Area

Gewog	Dunglagang
Gewog code	1803
Gewog area	11334.074
Zone	Area
Agriculture	1800.177
Cultural Heritage	0
Industrial	0.154
NCA	2645.404
Rangeland	0
Rural Settlement	135.325
SFMA	2974.018
Urban	0



### **Zone Conflict**

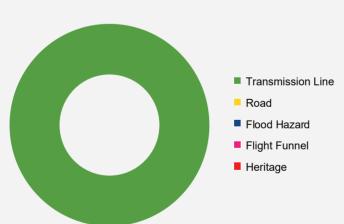
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	199.83	0	0	0	0	0	0
NCA	199.83	0	2.27	0	0	0	0	0
Agriculture	0	2.27	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	21.757	17.346	9.862	0	0	0	0.125	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone Area
Transmission Line 68.029
Road 0
Flood Hazard 0
Flight Funnel 0
Heritage 0



### **Map Legend**





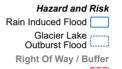


**Cultural Heritage** 









nt Of Way / Buffer
Heritage Road
Powerlines

### 

Key Biodiversity Area
High Conservation Value

### Rangeland Tsamdro

### Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources

Industrial

Manufacturing and Production
Service
Existing mines
Airport

### Helipad O Hydro Power Plants A dro Power Waterways —

Hydro Power Waterways — Basemap

### Boundaries International - -

Dzongkhag — •
Gewog — •
Rivers
Main river
Perennial
Terrain
Contour

### Roads for differe map scal

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k =
Ozongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

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Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

# S N

National Land Use Zoning 2023

417

27°00'N

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	То	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Dunglagang	779	767	1,546	101.6	38.5	411	3.7		

2390km N

	_	
4	Zone Area	
7	Gewog	Gosarling
	Gewog code	1804
	Gewog area	2481.811
	Zone	Area
	Agriculture	1281.171
-	Cultural Heritage	1.267
	Industrial	1.169
	NCA	0
	Rangeland	0
	Rural Settlement	82.726
	SFMA	257.577
	Urban	3.251
	Zone Conflict	<b>.</b>
	Lone Commic	



### Agriculture

- Cultural Heritage Industrial ■ Nature Conservation Area Rangeland
- Rural Settlement
- Sustainable Forest Management Area

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0.135	0	0	0	0
Urban	0	0	0.135	0	0	0.136	0.002	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0.136	0	0	0	0
Rural Settlement	0	0	0	0.002	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

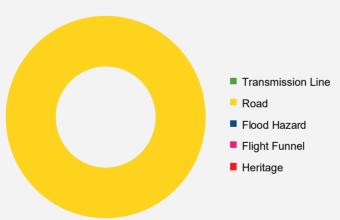
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	4.255	0	0.053	0.254	0.366	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Demographic Table

Buffer Zone	Area	
Transmission Line	0	
Road	14.976	
Flood Hazard	0	
Flight Funnel	0	
Heritage	0	



### **Map Legend**





### Forest Management Unit Community Forest **Cultural Heritage** Religious Sites





Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

### Water Sources • Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

### Hydro Power Waterways -Basemap

Boundaries International --Dzongkhag - -

Perennial Terrain Contour

Highway 300k ====	Thromde 50k
Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ===	Farm 5k
Dzongkhag 5k	

### Data Ownership

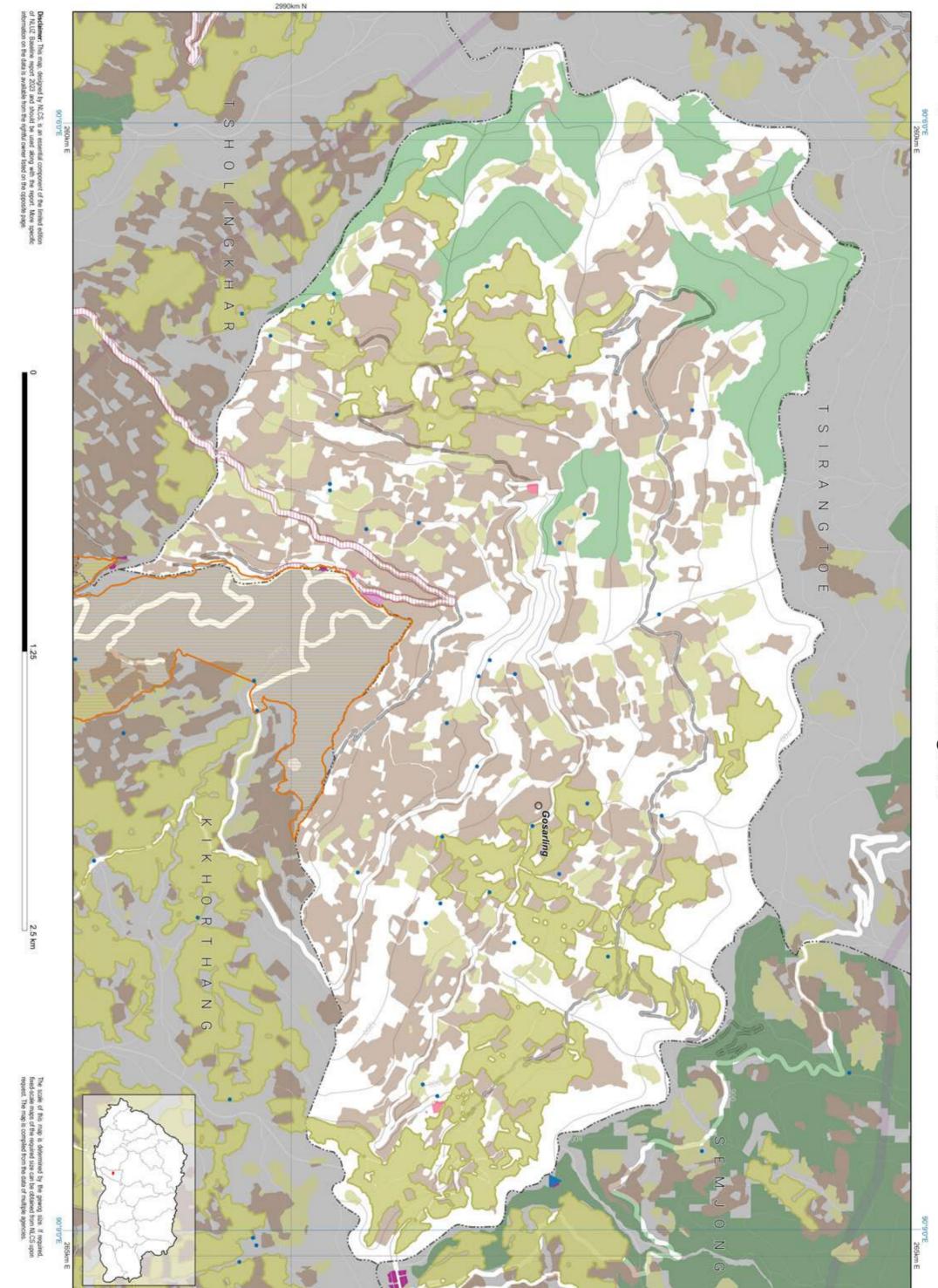
### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Water Ministry of Energy and Natural Resource
Department of Human Settlement Ministry of Infrastructure and Transport

Mean Household size 939 1,864 4.2 30.8

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)





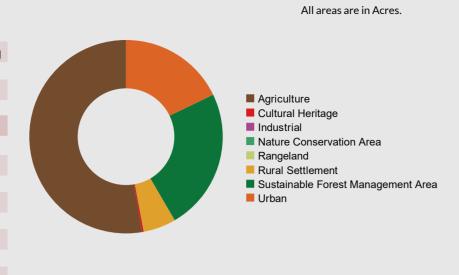
### Tsirang: Kikhorthang

### National Land Use Zoning 2023

# **LIKHORTHANG**



Gewog	Kikhorthang
Gewog code	1805
Gewog area	4370.206
Zone	Area
Agriculture	1750.255
Cultural Heritage	10.156
Industrial	0.018
NCA	0.011
Rangeland	0
Rural Settlement	182.28
SFMA	789.147
Urban	593.816



### **Zone Conflict**

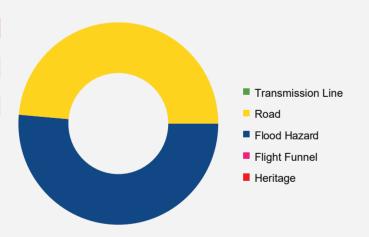
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0.011	0	0	0	0	0	0
NCA	0.011	0	0	0	0	0	0	0
Agriculture	0	0	0	50.125	0	0	0	0
Urban	0	0	50.125	0	8.783	0.018	5.652	0
Culture	0	0	0	8.783	0	0	0	0
Industrial	0	0	0	0.018	0	0	0	0
Rural Settlement	0	0	0	5.652	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	5.632	0.198	0	0	0	0
Road	0	0	1.958	0	0	0	0.587	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	10.88
Road	10.288
Flood Hazard	0
Flight Funnel	0
Heritage	0



### Map Legend National Land Use Zoning

Agricultural Land
Kamzhing
Protected Chhuzhing
Regulated Chhuzhing
Lease Land
Rural Settlement
Residential Land
Institutional Land

Sustainable Forest Management Area
Forest Management Unit Community Forest

**Cultural Heritage** 

Religious Sites
Heritage Village
Heritage Conservation Zone
Urban
Urban Zone

Nature Conservation Area
Protected Area
Core Zone
Transistion Zone
Buffer Zone

Multi Use Zone
Biological Corridor /
Botanical Park

Wetland
Ramsar Site

Hazard and Risk
Rain Induced Flood
Glacier Lake
Outburst Flood
Right Of Way / Buffer
Heritage
Road
Powerlines

Flight Funnel .....

Other Effective Area-based Conservation Measures

Key Biodiversity Area \_\_\_\_ High Conservation Value \_\_\_\_ Rangeland

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services

Water Sources
Industrial
Manufacturing and Production
Service
Existing mines
Airport

Helipad O
Hydro Power Plants 
Hydro Power Waterways

Basemap

Boundaries
International --

International — Dzongkhag — Gewog — Rivers

Main river
Perennial — Terrain
Contour

Roads for different

Highway 300k Thromde 50k Highway 50k Thromde 25k Highway 25k Access 5k Dzongkhag 50k Industrial 5k

Data Ownership

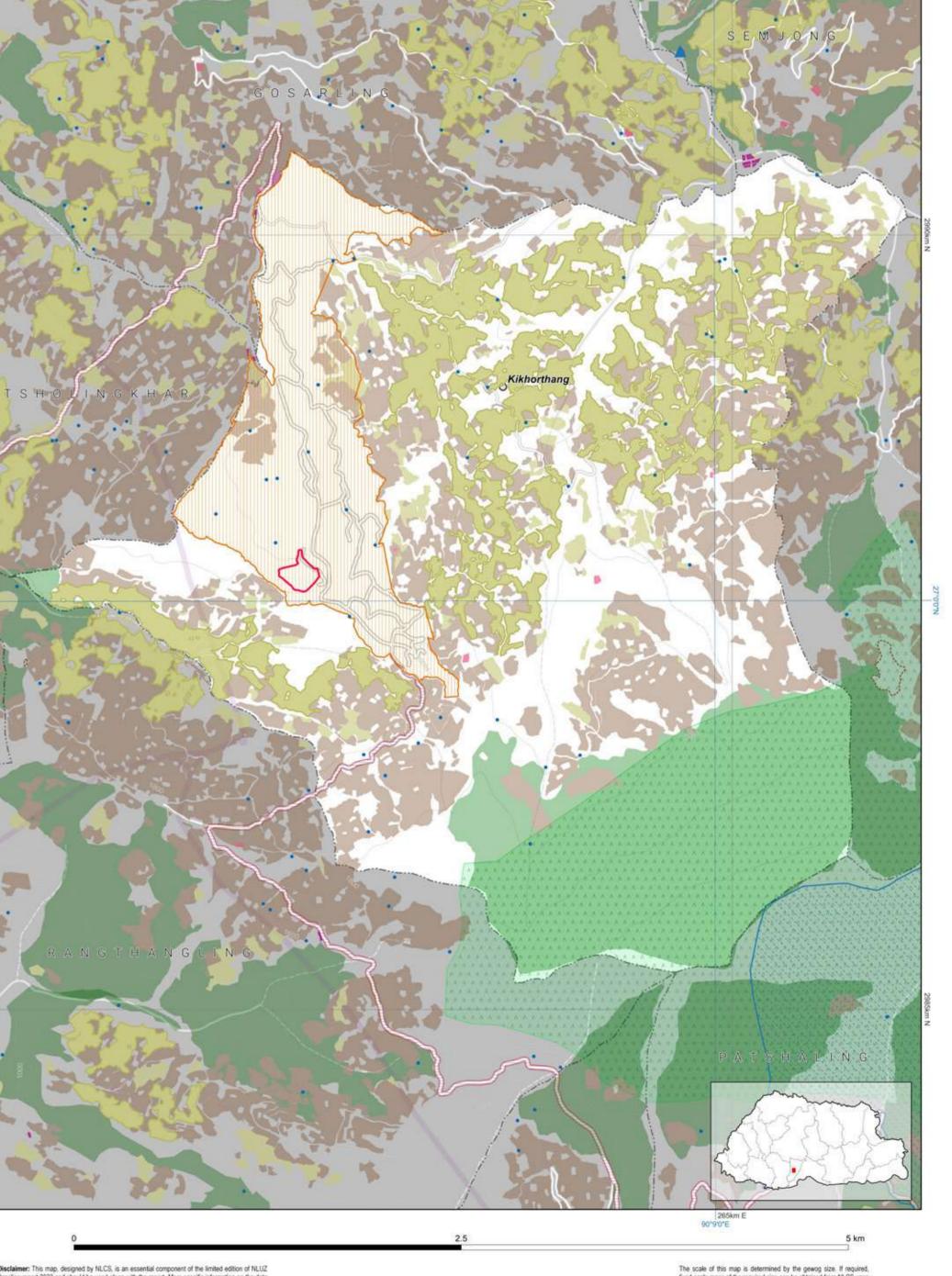
Dzongkhag 25k

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Kikhorthang	1,099	1,046	2,145	105.1	34.1	524	4	
Tsirang Town	1,854	1,594	3,448	116.3	12.8	630	3.9	



110 / 11 Ca	
Gewog	Mendrelgang
Gewog code	1806
Gewog area	3666.791
Zone	Area
Agriculture	1390.065
Cultural Heritage	1.577
Industrial	0.031
NCA	3.252
Rangeland	0
Rural Settlement	152.259
SFMA	803.61
Urban	0

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	2.025	0	0	0	0	0	0
NCA	2.025	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	3.771	0	2.284	0	0	0	0	0
Road	5.542	0	0.109	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	16.333
Road	10.41
Flood Hazard	0
Flight Funnel	0
Heritage	0

### **Map Legend**

All areas are in Acres.

Agriculture

Industrial

Rangeland

Urban

Cultural Heritage

Rural Settlement

Transmission Line

Flood HazardFlight FunnelHeritage

Road

Nature Conservation Area

■ Sustainable Forest Management Area









maucea Flood
Glacier Lake Outburst Flood
ght Of Way / Buffer
Heritage
Road



### Key Biodiversity Area High Conservation Value

### Tsamdro Significant Watershed Potential Recharge Area





### Hydro Power Waterways — Basemap

### Boundaries nternational = =

Terrain	
Perennial	
Main river	
Ri	vers
Gewog '	
Dzongkhag <sup>1</sup>	
miemational ·	

00.11041
Roads for differe
map scal
Thromdo FOL

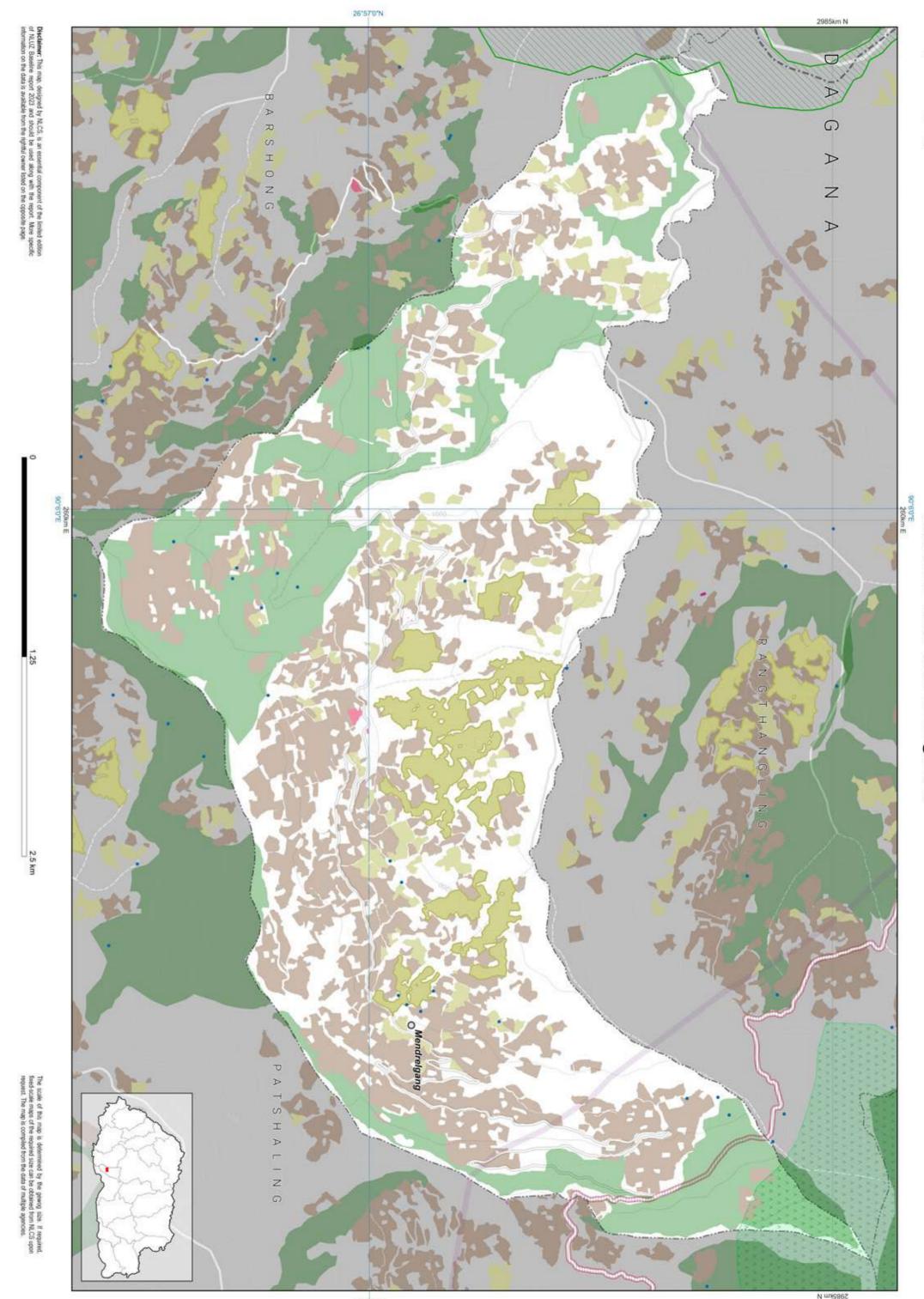
Highway 300k ===	Thromde 50k =
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

### Data Ownership Data Owner of the Map Content

Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
Netice all and Commission Commission

### Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
Total Population Sex ratio Aging Index Number of household Mean Household size											
Gewog / Throm	Male	Female	Total								
Mendrelgang	1,276	1,231	2,507	103.7	16.8	434	3.8				
Mendrelgang Town	31	31	62	100.0	47.1	16	3.7				



### N.0./9.9Z

Zone Area  Gewog  Gewog code  Gewog area	Patshaling 1802 41917.898	1						
Zone	Area				■ Cu	griculture ultural Heritage dustrial ature Conservat		
Agriculture Cultural Heritage Industrial NCA	1363.055					angeland	lion Area	
Cultural Heritage Industrial	0.667 0.2					ural Settlement	st Management A	_
NCA	15223.043				■ Ur		st Management Al	Ì
Rangeland	0							
Rural Settlement	96.449							
SFMA	3571.326							
Urban	0							
one Conflict	:							
		Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland	

### **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1464.578	0.00	0	0	0	0	0
NCA	1464.578	0	289.41	0	0	0.1	11.172	0
Agriculture	0.00	289.41	0	0	0	0	0	0
Urban	0	0	0	0	0		0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0.1	0	0	0	0	0	0
Rural Settlement	0	11.172	0	0		0	0	0
Rangeland	0	0	0	0	0	0	0	0

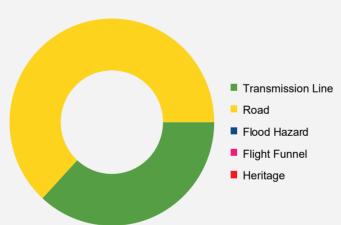
### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	1.784	8.593	12.889	0	0	0	2.149	0
Road	38.361	41.983	4.574	0	0.072	0	0.609	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

**Demographic Table** 

Buffer Zone	Area
Transmission Line	55.132
Road	94.443
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**





Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

> Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_ Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production Existing mines

> Airport • Helipad O Hydro Power Plants A Hydro Power Waterways ----

### Basemap Boundaries

International --Dzongkhag - -Perennial

Roads for different

Highway 300k ---Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

### Data Ownership

### Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources

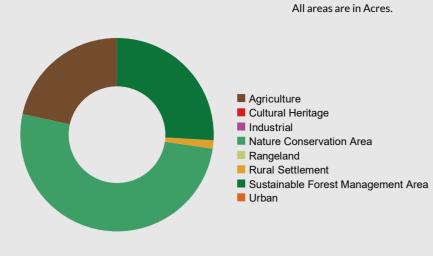
Mean Household size 592 1,159 32.7 296 3.9

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

# 26"57"B"N National Land Use Zoning 2023 N.0.19.9Z Se.24.0.4 26.27.0°N

Gewog	Phuentenchhu
Gewog code	1808
Gewog area	33752.06
Zone	Area
Agriculture	2075.961
Cultural Heritage	1.611
Industrial	0.067
NCA	4918.68
Rangeland	0
Rural Settlement	135.892
SFMA	2493.699
Urban	0



### **Zone Conflict**

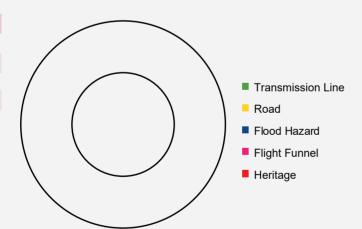
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

### **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

### RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



### **Map Legend**

### **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

### Residential Land Institutional Land

Forest Management Unit Community Forest

**Cultural Heritage** 

### Religious Sites Heritage Village Heritage Conservation Zone

Urban Zone **Nature Conservation Area** 

### Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

### Ramsar Site Hazard and Risk

Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

### Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

### Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Industrial Manufacturing and Production

> Airport Helipad O

### Hydro Power Plants A Hydro Power Waterways —

Existing mines

Basemap Boundaries International --

Dzongkhag - -Perennial

### Terrain Contour

Farm 5k

	map scale		
hway 300k ===	Thromde 50k		
ghway 50k ===	Thromde 25k		
ghway 25k ===	Thromde 5k		
lighway 5k	Access 5k		
akhaa 50k	Industrial Ek		

### Data Ownership

Dzongkhag 25k

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

### 27'30'N 27°9'0'N National Land Use Zoning 2023 DZ RG GE N:0.6-12 N mx8005 N.0.9./Z 427

### Demographic Table

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)						
Total Population			Sex ratio Aging I	Aging Index	ndex Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total				
Phuentenchhu	665	666	1,331	99.8	29.9	321	4.1

Rangthangling

	A baseline Report on Nac	ionat cana os	e zoning o	Dila
SN	Zone Are	a		
	Gew	og Rar	ngthangli	ng
	Gewog co	_	809	
	Gewog ar	ea 5876	.688	
	Zo	-	Area	
(5)	Agricultu		326.151	
	Cultural Herita Industr	_	0.346	
			0.72 173.699	
	Rangela		0	
ANG	Rural Settleme		94.807	
	SFM		328.753	
-	Urb	an	0	
_	Zone Cor	Aic+		
	Zone Cor	IIIICC		
C				
N		SFMA	NCA	Αç
	SFMA	0	0	
	NCA	0	0	
	Agriculture	0	0.21	
	Urban	0	0	
	Culture	0	0	
	Industrial Rural Settlement	0	0	
	Rangeland	0	0	
	Rangolalia	U	U	



# Agriculture

- Cultural Heritage Industrial Nature Conservation Area
- Rangeland Rural Settlement ■ Sustainable Forest Management Area

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0.21	0	0	0	0	0
Agriculture	0	0.21	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

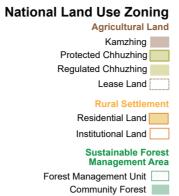
# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	7.8	0	30.150	0	0	0	1.026	0
Road	0.043	0	5.069	0	0	0.109	0.933	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	77.891
Road	31.958
Flood Hazard	0
Flight Funnel	0
~	0
ŭ	
	Transmission Line Road

# **Map Legend**







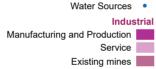




## Powerlines Flight Funnel Other Effective Area-based Conservation Measures









## Hydro Power Waterways — Basemap

## Boundaries International --Dzongkhag - -

Main river
Perennial ——
Terrain

## Roads for different Thromde 50k

	THI OTHER DOK
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ====	Industrial 5k
Dzongkhag 25k ====	Farm 5k
Dzongkhag 5k	

# Data Ownership

Highway 300k =

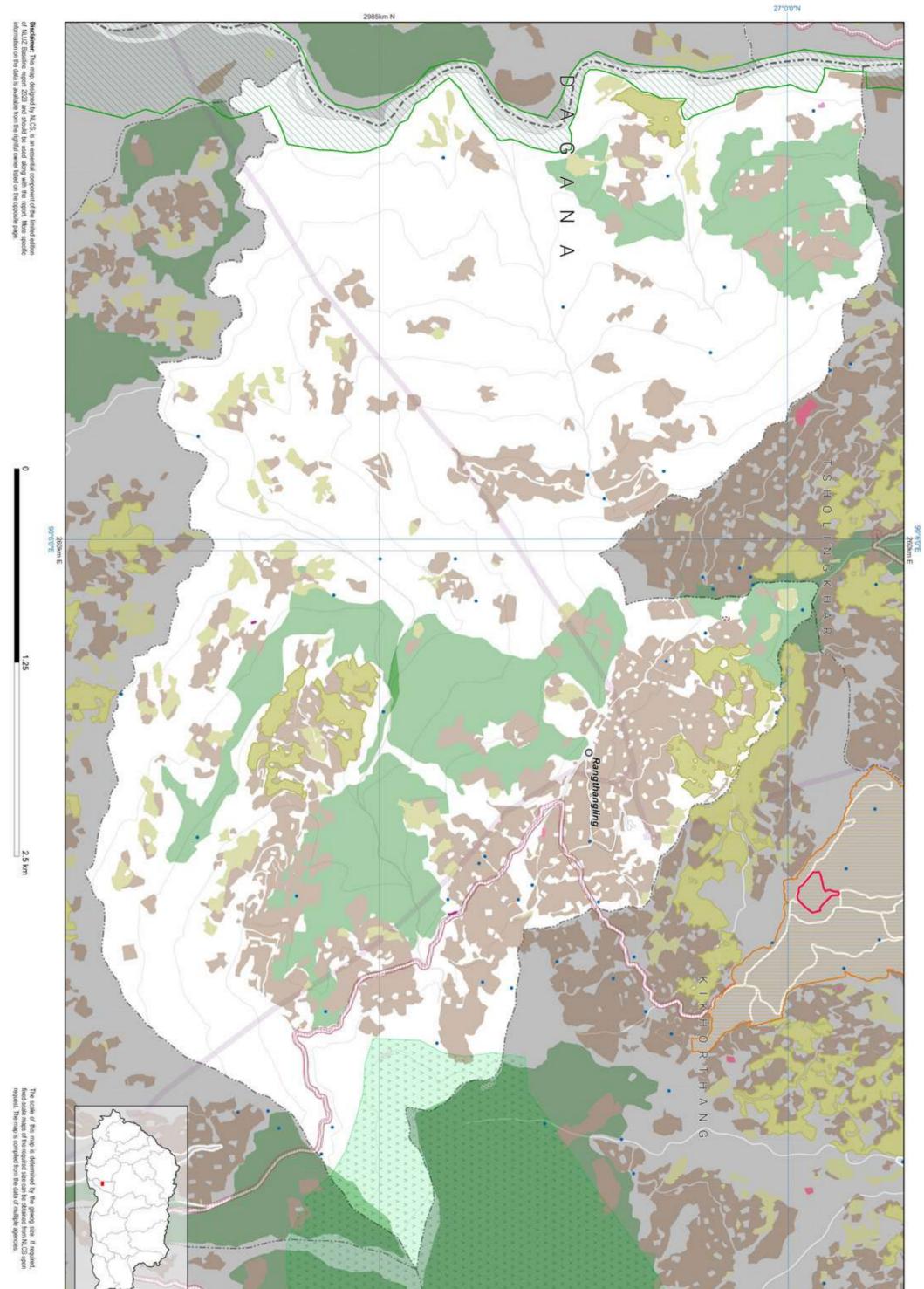
Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock

Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources

Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

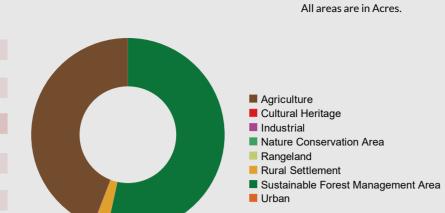
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Rangthangling	803	782	1,585	102.7	37.2	395	4		



## Demographic Table

N.0.0.4Z

<b>45</b> Z	one Area	
7	Gewog	Semjong
	Gewog code	1810
	Gewog area	3680.091
	Zone	Area
	Agriculture	1247.838
	Cultural Heritage	0.996
	Industrial	1.674
_	NCA	0
	Rangeland	0
4 6	Rural Settlement	66.855
	SFMA	1511.744
	Urban	0



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.01	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0.01	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	36.953	0	24.361	0	0	0	0.033	0
Road	0	0	0	0	0	0	0	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	72.78
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



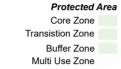
# **Map Legend**

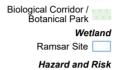




## Forest Management Unit Community Forest **Cultural Heritage** Religious Sites







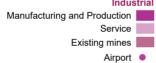


## Powerlines Flight Funnel

## Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

## Tsamdro Significant Watershed Potential Recharge Area





## Helipad O Hydro Power Plants A Hydro Power Waterways —

## Basemap Boundaries

# International --Dzongkhag - -

	Main river == Perennial ==	
	<b>Terrain</b> Contour	
_		

	Roads for diffe map so
Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Himburgu Fla	

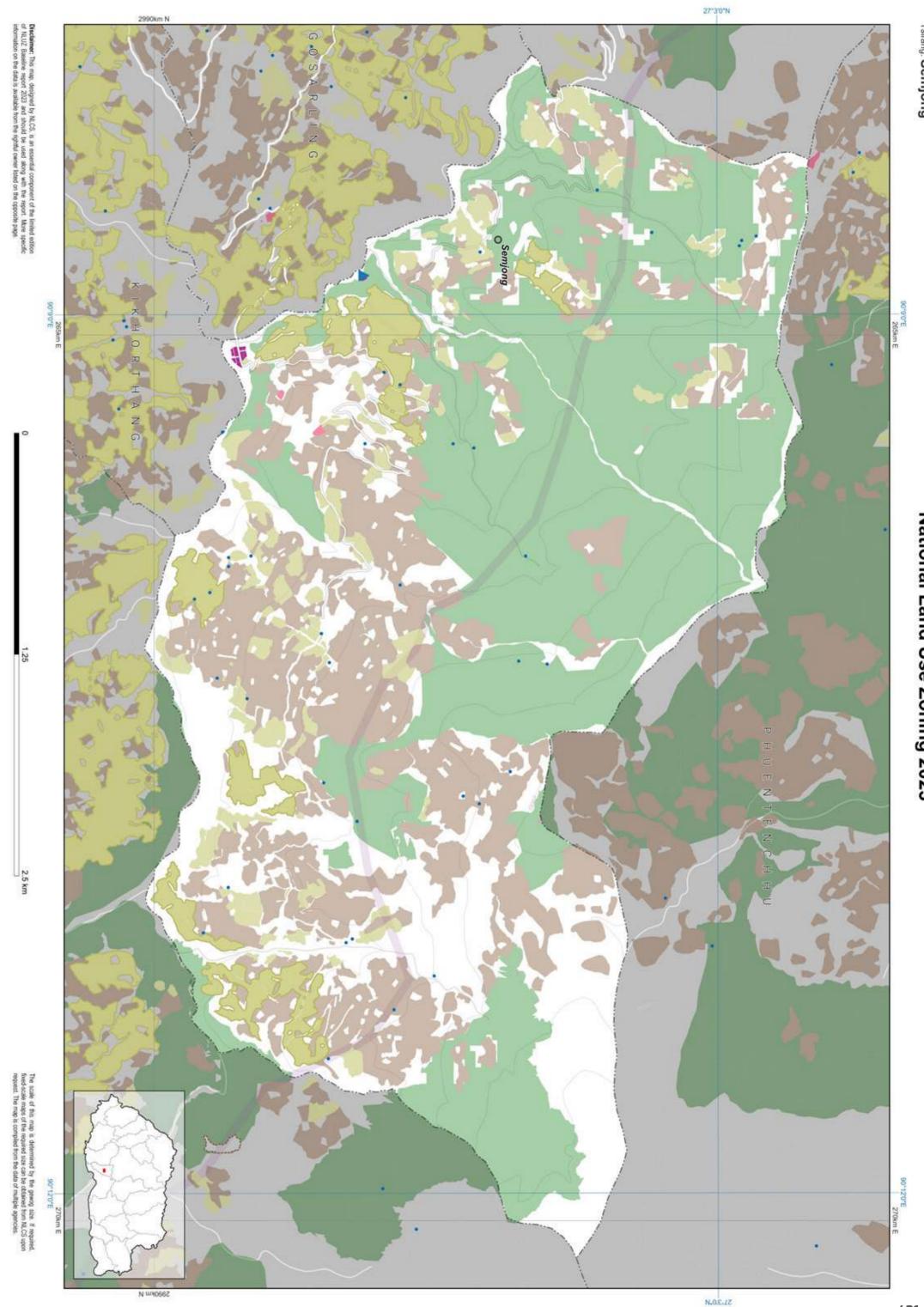
Thromde 25k	Highway 50k ——
Thromde 5k	Highway 25k ====
Access 5k	Highway 5k
Industrial 5k	Dzongkhag 50k ====
Farm 5k	Dzongkhag 25k ====
	Dzongkhag 5k

## **Data Ownership**

Data Owner of the Map Content

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Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

	Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Mean Household							Mean Household size		
	Gewog / Throm	Male	Female	Total					
	Semjong	712	600	1,312	118.7	52.1	309	4	



Gewog Gewog code Gewog area	<b>Sergithang</b> 1807 33992.762	
Zone	Area	■ Agriculture ■ Cultural Heritage ■ Industrial
Agriculture	1692.023	■ Nature Conservation Area
Cultural Heritage	1.049	Rangeland Rural Settlement
Industrial	3	Sustainable Forest Management Area
NCA	3791.941	■ Urban
Rangeland	0	
Rural Settlement	119.317	
SFMA	5085.372	
Urban	0	

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0.28	0
NCA	0	0	49.90	0	0	0	4.265	0
Agriculture	0.00	49.90	0	0	0	0.3	0.038	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0.3	0	0	0	0	0
Rural Settlement	0.28	4.265	0.038	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	7.108	9.657	3.207	0	0	0	0.147	0
Road	1.295	4.122	1.099	0	0	0.002	0.383	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	148.164
Road	78.6
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**

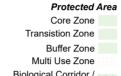


## Lease Land Residential Land

## Institutional Land Forest Management Unit

## Community Forest **Cultural Heritage** Religious Sites Heritage Village







Hazard and Risk
ain Induced Flood
Glacier Lake Outburst Flood
Right Of Way / Buffer
Heritage

Powerlines

## Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

## Tsamdro Significant Watershed

Potential Recharge Area Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

> Airport • Helipad O Hydro Power Plants A

## Hydro Power Waterways —

Basemap Boundaries International --

Dzongkhag - -Perennial

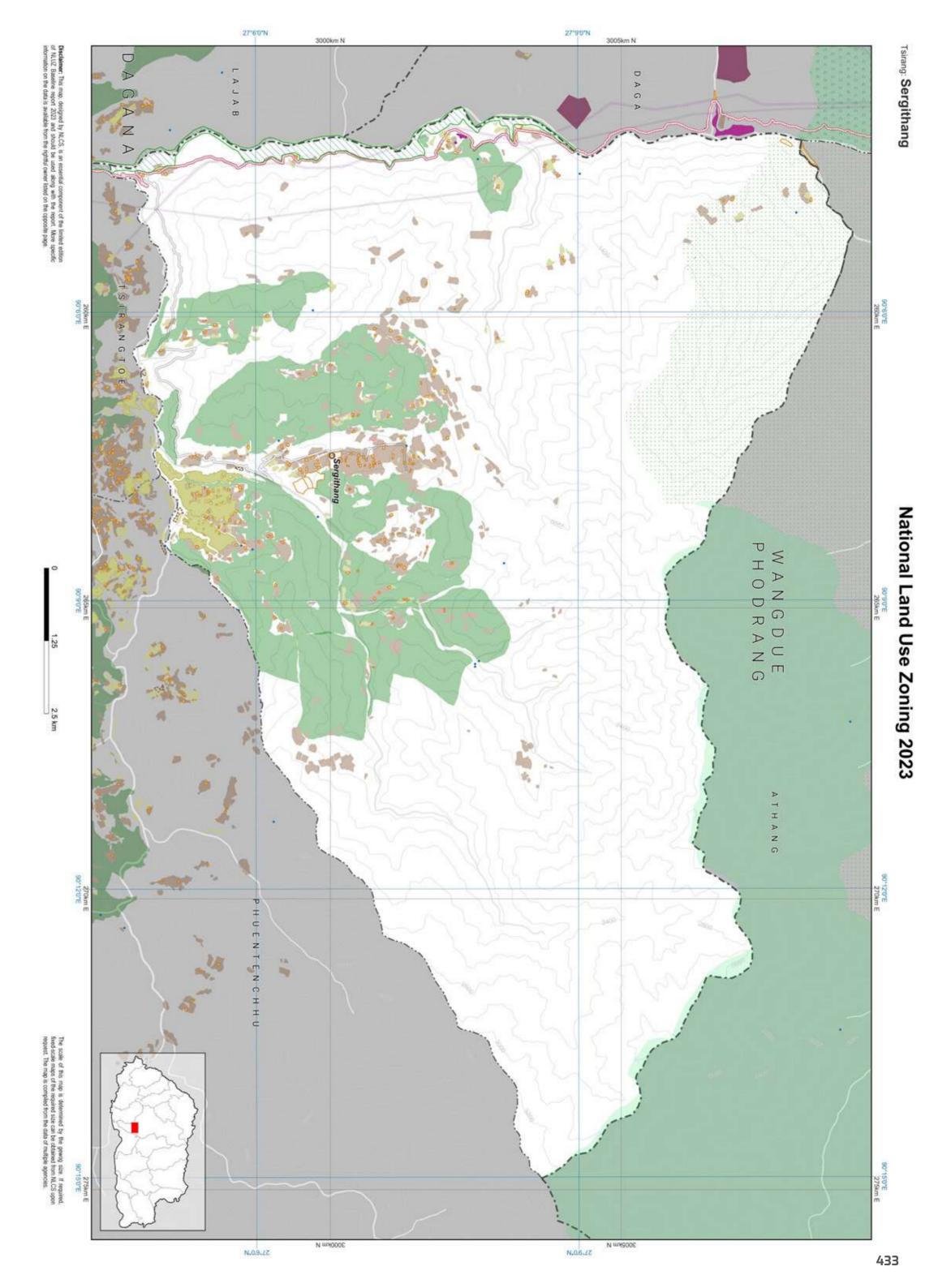
lighway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k =
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k ≡
ongkhag 25k ===	Farm 5k ≡
Zonakhaa 5k ——	

## Data Ownership

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	To	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Sergithang	731	648	1.379	112.8	33.3	300	4.3	





rea	3						All areas	s are in Acres.
Gew	og 1	<b>T</b> sholingkha	r					
Gewog co	de	1811						
Gewog ar	rea 33	313.961				_,	,	
							griculture ultural Heritage	
Zo	ne	Area					dustrial	
Agricultu	ure	1573.984					ature Conservat	tion Area
Cultural Herita	ige	2.985					angeland ural Settlement	
Industr	rial	0.331						st Management
N	CA	68.734				■ Ur	ban	
Rangela	ınd	0						
Rural Settleme	ont	121.315						
rtarai octionic	EIIL	121.313						
SFN		399.36						
	MA							
SFN Urb	MA pan <b>flict</b>	399.36 4.815	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFN Urb Zone Conf	MA pan  flict	399.36 4.815	Agriculture	<b>Urban</b>	Culture	Industrial	Settlement	Rangeland
SFN Urb Zone Conf	MA pan  flict  sfma 0	399.36 4.815 NCA 0	0.00	0	0	0	Settlement 0	0
SFMA NCA	MA pan  flict  SFMA 0 0	399.36 4.815 NCA 0	0.00 7.87	0	0	0	Settlement 0 0	0
SFMA NCA Agriculture	MA pan  flict  SFMA 0 0 0.00	399.36 4.815 NCA 0 0 7.87	0.00 7.87 0	0 0 1.653	0 0 0	0 0 0	Settlement 0 0 0	0 0
SFM One Cont	MA pan  flict  SFMA 0 0	399.36 4.815 NCA 0	0.00 7.87	0	0	0	Settlement 0 0	0

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	7.87	0	0	0	0	0
Agriculture	0.00	7.87	0	1.653	0	0	0	0
Urban	0	0	1.653	0	0	0	0.858	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0.858	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	19.549	0	0	0	1.103	0
Road	12.571	0.417	28.391	0	0	0	2.338	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	28.245
Road	140.831
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**



## Buffer Zone Multi Use Zone Biological Corridor / Botanical Park



# Other Effective Area-based Conservation Measures



## Significant Watershed Potential Recharge Area Payment for Ecosystem Services



## Helipad O Hydro Power Plants A

## Hydro Power Waterways — Basemap

## Boundaries International --Dzongkhag - -Gewog ---

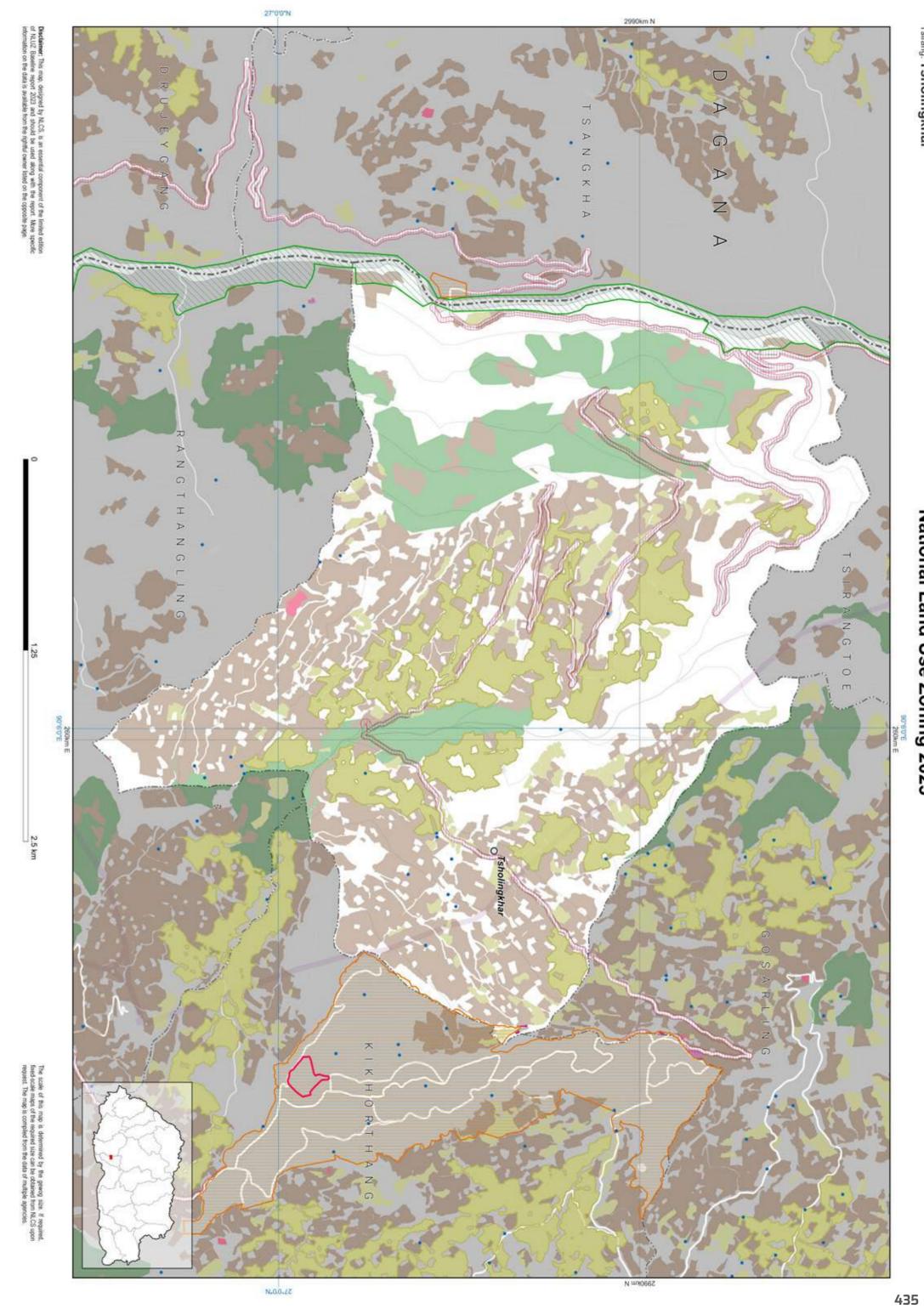
Rivers
Main river
Perennial
Terrain
Contour

0 ,	
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k =
Dzongkhag 5k	

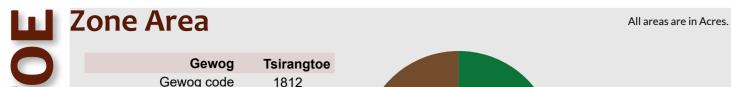
## Data Ownership

Data Owner of the Map Content	
Department of Agriculture Ministry of Agriculture and Livestock	
Department of Energy Ministry of Energy and Natural Resources	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
Department of Human Settlement Ministry of Infrastructure and Transport	
Department of Surface Transport Ministry of Infrastructure and Transport	
National Land Commission Secretariat	

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
Total Population Sex ratio Aging Index Number of household Mean Household size							
Gewog / Throm	Male	Female	Total				
Tsholingkhar	892	853	1,745	104.6	38.0	421	4.1



	zone / li ca							
	Gewog	Tsirangtoe						
	Gewog code	1812						
	Gewog area	7784.503						
(5	Zone	Area						
	Agriculture	1679.609						
	Cultural Heritage	0.619						
	Industrial	0.237						
	NCA	125.098						
	Rangeland	0						
	Rural Settlement	137.428						
	SFMA	1972.558						
	Urban	0						
Zone Conflict								



<ul> <li>Agriculture</li> <li>Cultural Heritage</li> <li>Industrial</li> <li>Nature Conservation Area</li> <li>Rangeland</li> <li>Rural Settlement</li> <li>Sustainable Forest Management Area</li> </ul>

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	0	0	0	0	0
NCA	0	0	0.30	0	0	0	0	0
Agriculture	0.00	0.30	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	31.392	0	34.795	0	0	0	0.363	0
Road	0	3.603	0.252	0	0	0	0.001	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	135.954
Road	47.261
Flood Hazard	0
Flight Funnel	0
Heritage	0

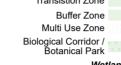
# **Map Legend**













Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

# Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

# High Conservation Value

## Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

## Manufacturing and Production Existing mines

Helipad O Hydro Power Plants A

## Hydro Power Waterways -

## Basemap Boundaries

International --Dzongkhag - -

# Perennial

# Roads for different

Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ===	Farm 5k
Dzonakhag 5k	

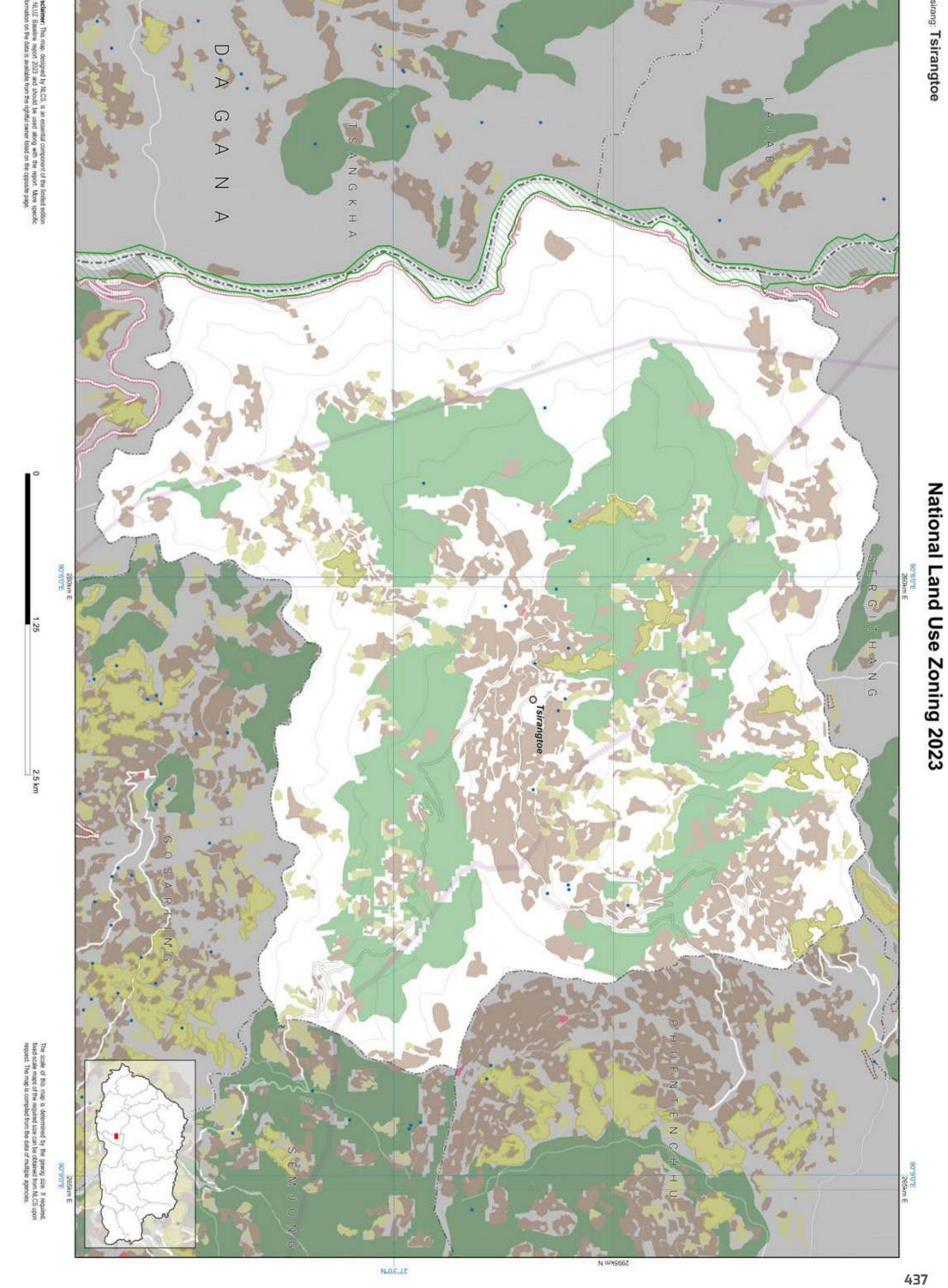
## Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock

Highway 300k =

# Data Ownership

Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

# Residential Land Institutional Land **Cultural Heritage** Airport •



Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Tsirangtoe	769	682	1,451	112.8	26.8	348	3.9



# All areas are in Acres.

Agriculture

Culture

Industrial

Rangeland Rural Settlement

Nature Conservation Area

■ Sustainable Forest Management Area

**National Land Use Zoning** 

**Map Legend** 

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Residential Land

Institutional Land

Forest Management Unit Community Forest

**Cultural Heritage** Religious Sites Heritage Village

Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines Airport • Helipad O

Hydro Power Plants A

Hydro Power Waterways ----

Basemap Boundaries

International --Dzongkhag - -Gewog ---Perennial Terrain

Roads for different

Highway 300k —— Thromde 50k Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

# **Zone Conflict**

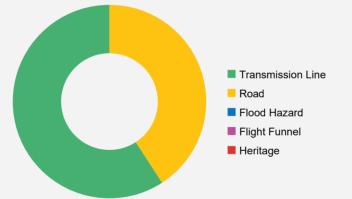
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	21749.356	655.73	0	37.314	0.901	584.657	0
NCA	21749.356	0	1,311.86	0	11.31	97.59	2141.665	0
Agriculture	655.73	1,311.86	0	0.002	0	8.234	0.005	0
Urban	0	0	0.002	0	39.424	0	0	0
Culture	37.314	11.31	0	39.424	0	0	0	0
Industrial	0.901	97.59	8.234	0	0	0	0.1	0
Rural Settlement	584.657	2141.665	0.005	0	0	0.1	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	46.633	249.354	86.733	0	0	29.281	5.234	0
Road	0.017	214.657	20.296	0	0.013	27.035	11.914	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

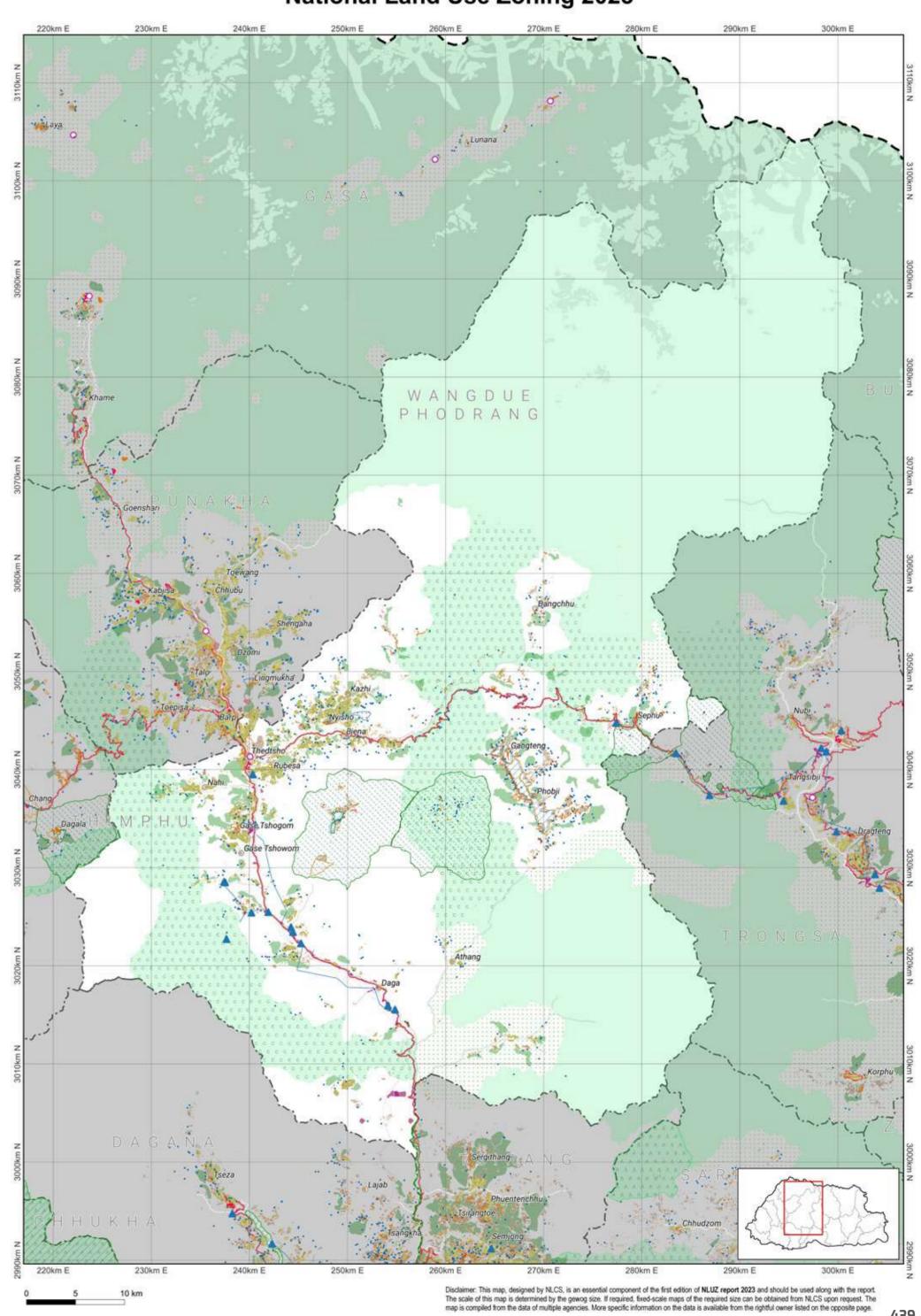
# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	1443.921
Road	996.927
Flood Hazard	0
Flight Funnel	0
Heritage	0



## **Demographic Table**

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Dzongkhag	Male	Female	Total				
Wangdue Phodrang	24,302	17,884	42,186	135.9	22.3	8,556	3.8





## All areas are in Acres.

Agriculture

Rangeland

Urban

Cultural Heritage Industrial

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area

## **Map Legend National Land Use Zoning**

Agricultural Land
Kamzhing
Protected Chhuzhing
Regulated Chhuzhing
Lease Land

# Residential Land

# Institutional Land

## Forest Management Unit Community Forest





## Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

## Wetland Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

## Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

# Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

## Water Sources • Industrial Manufacturing and Production

Existing mines Airport Helipad O

Hydro Power Plants A Hydro Power Waterways ----

## Basemap Boundaries

International --Dzongkhag - -Gewog ---

Rivers Perennial = Terrain Contour

## Roads for different map scales

Highway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ====	Industrial 5k =
Dzongkhag 25k ====	Farm 5k =
Dzongkhag 5k	

# **Zone Conflict**

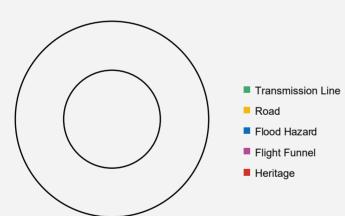
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	8574.846	0.00	0	0	0	0	0
NCA	8574.846	0	517.63	0	1.22	0.05	34.854	0
Agriculture	0.00	517.63	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	1.22	0	0	0	0	0	0
Industrial	0	0.05	0	0	0	0	0	0
Rural Settlement	0	34.854	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# RoW / Buffer Conflict

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

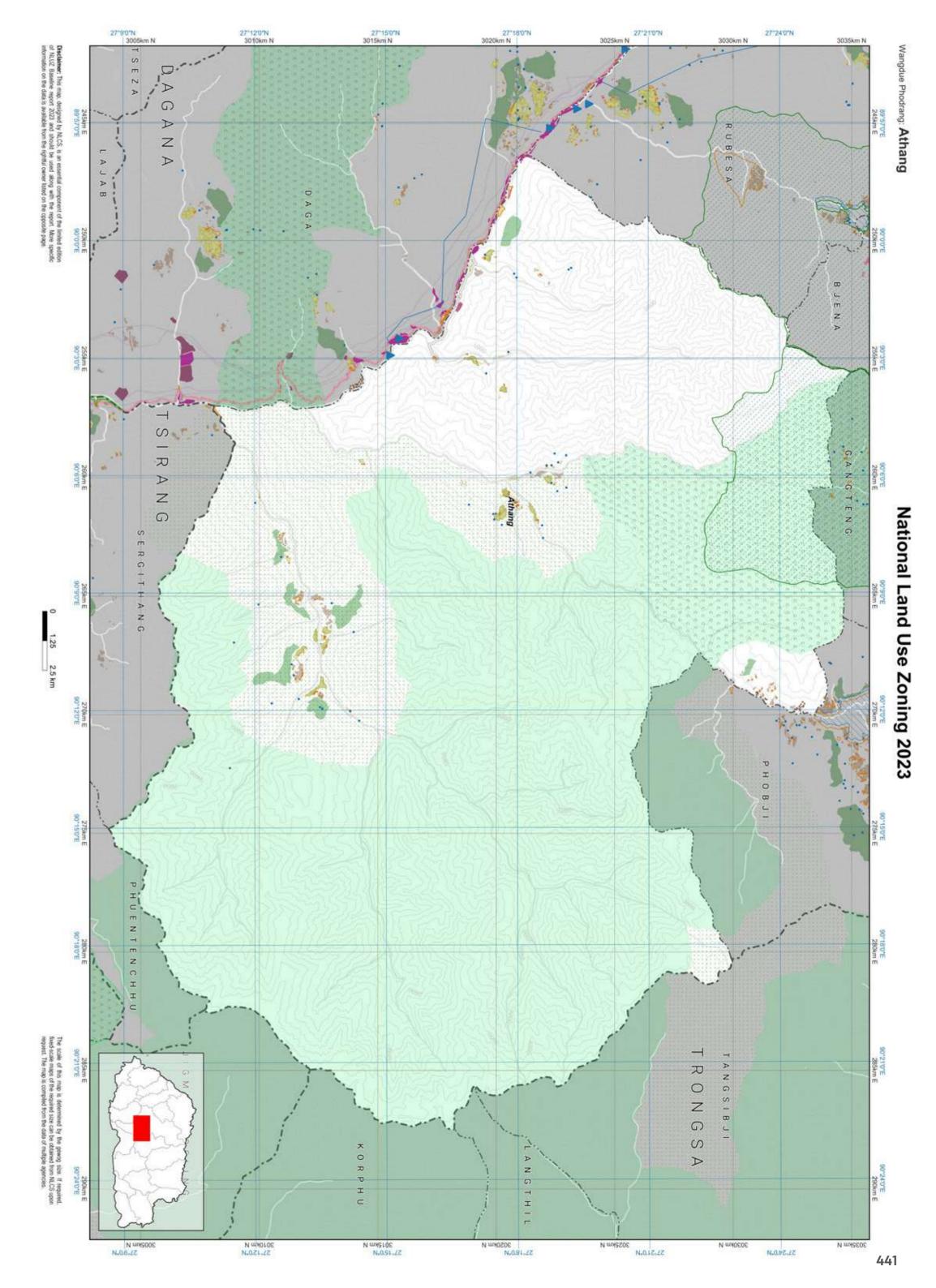


## **Data Ownership**

Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
		Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
	Gewog / Throm	Male	Female	Total					
	Athang	409	364	773	112.4	39.5	181	3.8	

Department of Agriculture Ministry of Agriculture and Livestock	
Department of Energy Ministry of Energy and Natural Resources	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
National Land Commission Secretariat	



70r	ne Area	
201	ie Ai ea	
	Gewog	Bjena
Z	Gewog code	1902
ш =	Gewog area	29236.086
	Zone	Area
	Agriculture	1345.734
	Cultural Heritage	30.258
•	Industrial	67.176
_	NCA	8108.401
	Rangeland	0
	Rural Settlement	64.257
	SFMA	10801.486
	Urban	0

# **Zone Conflict**

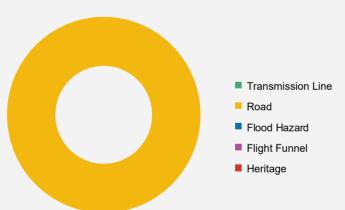
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	629.901	263.45	0	28.47	0.3	12.752	0
NCA	629.901	0	62.72	0	0.219	12.224	3.115	0
Agriculture	263.45	62.72	0	0	0	8.234	0	0
Urban	0	0	0	0	0	0	0	0
Culture	28.47	0.219	0	0	0	0	0	0
Industrial	0.3	12.224	8.234	0	0	0	0	0
Rural Settlement	12.752	3.115	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	56.944	5.108	0	0	0.486	1.801	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	127.163
Flood Hazard	0
Flight Funnel	0
Heritage	0



# Data Ownership

Dzongkhag 5k

	Ministry of Agriculture and Livestock
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Geology and Mines Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	Department of Surface Transport Ministry of Infrastructure and Transport
_	National Land Commission Secretariat

# **Map Legend**

nal Land Use Zoning					
Agricultural Land					
Kamzhing					
Protected Chhuzhing					
Regulated Chhuzhing					
Lease Land					

## Residential Land Institutional Land Sustainable Forest

**Rural Settlement** 

Management Area
Forest Management Unit
Community Forest
Cultural Heritage

## Religious Sites Heritage Village Heritage Conservation Zone



Protected A	Area
Core Zone	
Transistion Zone	
Buffer Zone	
Multi Use Zone	

Hazard and Risk	
ain Induced Flood	
Glacier Lake Outburst Flood	

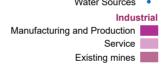
t Of Way / Buffer	
Heritage	
Road	
Dawarlinas	

## Flight Funnel Other Effective Area-based

Key Biodiversity Area	111
gh Conservation Value	

## Rangeland Tsamdro

## Potential Recharge Area Payment for Ecosystem Services



## Airport Helipad O Hydro Power Waterways —

## Basemap Boundaries

International 💳 💳
Dzongkhag
Gewog
Rivers
Main river
Perennial

Perennial
Terrain
Contour
Roads for different

	o o i i i o a i	
	Roads for different map scales	
Highway 300k ====	Thromde 50k	
Highway 50k ====	Thromde 25k	
Highway 25k ====	Thromde 5k	
Highway 5k	Access 5k	
Dzongkhag 50k ===	Industrial 5k	
Dzongkhag 25k ===	Farm 5k	

# Data Owner of the Map Content Department of Agriculture

## Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Bjena	1,135	781	1,916	145.3	47.6	437	3.4

# 27°270'N 27"30"0"N National Land Use Zoning 2023 27\*30'0"N 27"24'0"N N.0.12.12 443

**Zone Conflict** 

,	A Baseline Report on National Land	l Use Zoning of Bhu	ıtan
A	Zone Area		
	Gewog	Daga	
	Gewog code	1903	
	Gewog area	85903.792	
	Zone	Area	
	Agriculture	1006.287	
	Agriculture Cultural Heritage	1006.287 4.722	
	Cultural Heritage	4.722	
	Cultural Heritage Industrial	4.722 588.241	
	Cultural Heritage Industrial NCA	4.722 588.241 41851.391	
	Cultural Heritage Industrial NCA Rangeland	4.722 588.241 41851.391 0	
	Cultural Heritage Industrial NCA Rangeland Rural Settlement	4.722 588.241 41851.391 0 72.854	

# All areas are in Acres.

Agriculture

Industrial

Rangeland

■ Cultural Heritage

Rural Settlement

■ Nature Conservation Area

■ Sustainable Forest Management Area





Wangdue Phodrang: Daga

GASE TSHOWOM

# Residential Land



# Ramsar Site

Outburst Flood
Right Of Way / Buf
Heritage [
D

## Other Effective Area-based Conservation Measures

High Conservation Value

## Potential Recharge Area

Airport • Helipad O

# Basemap

International --Dzongkhag - -Gewog ---

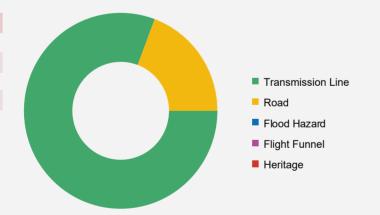
ngnway 300k ——	i nromae suk
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k =

**RoW / Buffer Conflict** 

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	6.042	184.872	33.253	0	0	26.256	1.615	0
Road	0	58.721	1.284	0	0	22.978	2.785	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	1126.259
Road	269.035
Flood Hazard	0
Flight Funnel	0
Heritage	0



## **Data Ownership**

Department of Agriculture Ministry of Agriculture and Livestock	Data Owner of the Map Content	

Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

## Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population Sex ratio Aging Index Number of household Mean Household size									
Gewog / Throm	Male	Female	Total						
Daga	5,010	1,047	6,057	478.5	17.9	646	3.2		
Rurichu Town	103	110	213	93.6	2.7	64	3.3		
Disalaina									



# Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

DAGANA

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

National Land Use Zoning 2023

KHEBISA

# **Map Legend National Land Use Zoning**

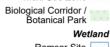












## Hazard and Risk Rain Induced Flood Glacier Lake ---

## Flight Funnel

Key Biodiversity Area

# Significant Watershed

Payment for Ecosystem Services Water Sources • Industrial

## Manufacturing and Production Existing mines

## Hydro Power Plants A Hydro Power Waterways -

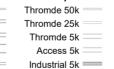
# Boundaries

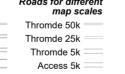
## Perennial Terrain Contour

Roads for different map scales
Thromde 50k
TI 1 051

JUK	Thromde 25k
25k ====	Thromde 5k
y 5k	Access 5k
50k ====	Industrial 5k















Ol	ne Area	
	Gewog	Dangchhu
	Gewog code	1904
	Gewog area	42193.561
	Zone	Area
	Agriculture	634.457
	Cultural Heritage	10.454
	Industrial	55.023
	NCA	21921.704
	Rangeland	0
	Rural Settlement	73.26
	SFMA	971.143
	Urban	0

# **Zone Conflict**

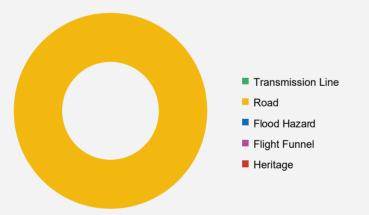
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	245.585	0.00	0	0	0	0	0
NCA	245.585	0	15.55	0	1.934	40.005	1.262	0
Agriculture	0	15.55	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	1.934	0	0	0	0	0	0
Industrial	0	40.005	0	0	0	0	0	0
Rural Settlement	0	1.262	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	56.411	1.250	0	0	0.444	1.268	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	184.675
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

## Residential Land Institutional Land

Forest Management Unit Community Forest

## **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

## **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

## Biological Corridor / Botanical Park Ramsar Site

Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

## Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources •

Manufacturing and Production Existing mines

> Airport Helipad O

## Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Gewog ---

Perennial =

## Terrain Contour Roads for different

Highway 300k —— Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k \_

## Dzongkhag 50k ==== Dzongkhag 25k

## Industrial 5k Farm 5k ====

## **Data Ownership**

# Data Owner of the Map Content

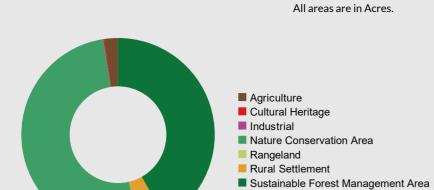
## **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)									
Total Population Sex ratio Aging Index Number of household Mean Household s									
Gewog / Throm	Male	Female	Total						
Dangchhu	546	556	1,102	98.2	36.1	217	4.5		
Nobding Town	386	327	713	118.0	9.0	115	3.8		

Ministry of Agriculture and Livestock
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Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
lational Land Commission Secretariat

# **National Land Use Zoning 2023** Wangdue Phodrang: Dangchhu NYISHO SEPHU BJENA 270km E 90\*12'0\*E

Gewog	Gangteng
Gewog code	1905
Gewog area	24663.389
Zone	Area
Agriculture	693.313
Cultural Heritage	47.124
Industrial	21.324
NCA	15370.801
Rangeland	0
Rural Settlement	1374.021
SFMA	12584.749
Urban	0



# **Zone Conflict**

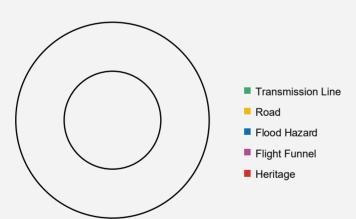
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	10341.003	54.56	0	1.472	0.2	13.751	0
NCA	10341.003	0	149.57	0	1.479	3.346	1077.425	0
Agriculture	54.56	149.57	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	1.472	1.479	0	0	0	0	0	0
Industrial	0.2	3.346	0	0	0	0	0.1	0
Rural Settlement	13.751	1077.425	0	0	0	0.1	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

> Residential Land Institutional Land

Sustainable Forest Forest Management Unit Community Forest

**Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

> Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Wetland Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value Rangeland

Tsamdro Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Industrial Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A Hydro Power Waterways -

## Basemap Boundaries

Airport

International --Dzongkhag - -Gewog ---Rivers Perennial =

Terrain Contour Roads for different

Highway 300k —— Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k ==== Farm 5k ====

# **Demographic Table**

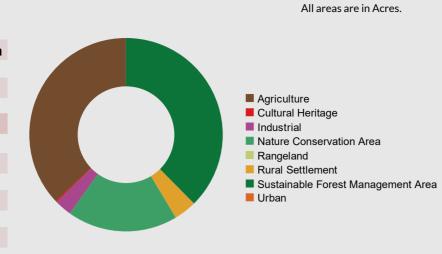
Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Total Population			Sex ratio	Aging Index	Number of household	Mean Household size	
Gewog / Throm	Male	Female	Total					
Gangteng	1,569	1,206	2,775	130.1	22.4	536	3.6	

## **Data Ownership**

Data Owner of the Map Content Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources National Land Commission Secretariat

# 27'27'0'N 27°30'0'N National Land Use Zoning 2023 21.51.0\*N

Gewog	Gase Tshogom
Gewog code	1707
Gewog area	7161.764
Zone	Area
Agriculture	1185.751
Cultural Heritage	6.394
Industrial	91.047
NCA	590.553
Rangeland	0
Rural Settlement	121.647
SFMA	1201.766
Urban	0



# **Zone Conflict**

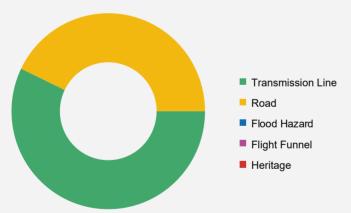
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	17.261	0	0	0	1.369	0
Road	14.834	0	1.337	0	0	0.558	0.214	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Area
73.764
55.317
0
0
0



Highway 300k =

Department of Agriculture Ministry of Agriculture and Livestock	
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Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
Department of Surface Transport Ministry of Infrastructure and Transport	
National Land Commission Secretariat	

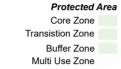
# **Map Legend**

National Land Use Zoning
Agricultural Land
Kamzhing
Protected Chhuzhing
Regulated Chhuzhing
Lease Land



## Forest Management Unit Community Forest **Cultural Heritage**





**Nature Conservation Area** 



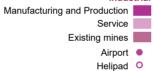




	-
Key Biodiversity Area	0
h Conservation Value 🔣	-
Rangelar	nd

## Significant Watershed Potential Recharge Area





## Hydro Power Plants A Hydro Power Waterways —

# Basemap

## Boundaries International --Dzongkhag -Gewog ---

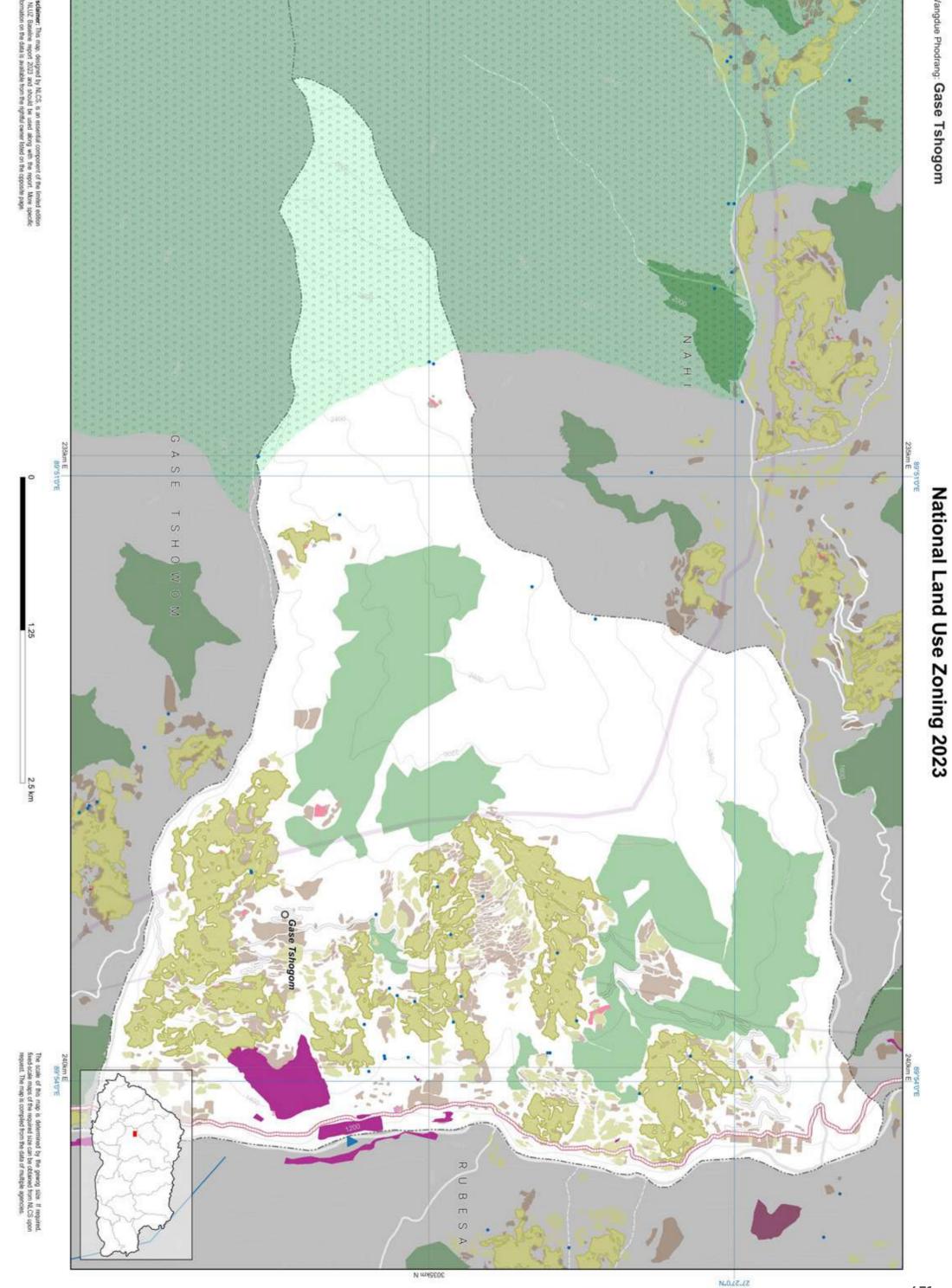
3
Rivers
Main river
Perennial
Terrain
Contour

00111041		
Roads	for differe map scal	
Thron	mde 50k =	
Thron	mde 25k =	

Highway 50k ====	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ===	Farm 5k
Dzongkhag 5k	

## **Data Ownership** Data Owner of the Map Content

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Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat



27:270'N

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Gase Tshogom	2 071	1 880	3 960	100.6	16.5	833	3.6

Gewog	Gase Tshowom
Gewog code	1906
Gewog area	51358.882
Zone	Area
Agriculture	621.448
Cultural Heritage	4.748
Industrial	51.765
NCA	18206.995
Rangeland	0
Rural Settlement	55.056
SFMA	981.046
Urban	0

# **Map Legend**

All areas are in Acres.

AgricultureCultural Heritage

Industrial

Rangeland

Rural Settlement

0.566

Nature Conservation Area

■ Sustainable Forest Management Area

## National Land Use Zoning

Lana OSC Zon	···y	
Agricultural Land		
Kamzhing		
Protected Chhuzhing		
Regulated Chhuzhing		
Lease Land		

# Rural Settlement Residential Land

## Institutional Land

# Management Area Forest Management Unit

# Community Forest Cultural Heritage



# Urban Zone Urban

# Nature Conservation Area Protected Area

Core Zorie	
Transistion Zone	
Buffer Zone	
Multi Use Zone	

### Biological Corridor / Botanical Park Wetland Ramsar Site

# Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood
Right Of Way / Buff
Heritage

# Road Powerlines

Flight Funnel

### Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value Rangelar

# Tsamdro Significant Watershed Potential Recharge Area

	9	
Payment for Ed	cosystem Services	
	Water Sources	•
	Indus	strial

Industrial

Manufacturing and Production

Service

Existing mines

Airport

## Helipad O Hydro Power Plants A

## Hydro Power Waterways —

# Basemap Boundaries International --

International — Dzongkhag — Gewog — - Rivers

Main river
Perennial

Terrain
Contour

## Roads for different map scales

Highway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
Ozongkhag 50k ===	Industrial 5k
Ozongkhag 25k ===	Farm 5k
Dzongkhag 5k	

# Industrial 0 0

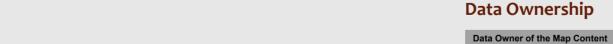
**Zone Conflict** 

SFMA

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	12.861	0	14.432	0	0	0.686	1.796	0
Road	0	0	0	0	0	0.327	1.019	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	123.665
Road	52.462
Flood Hazard	0
Flight Funnel	0
Heritage	0



Transmission Line

Flood Hazard

Flight Funnel

Heritage

Road

## Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
Total Population				Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Gase Tshowom	623	336	959	185.4	35.3	188	3.7			
Rurichu Town	103	110	213	93.6	2.7	64	3.3			
Disalaimanu										

# Disclaimer: Disclaimer: The demographic statistics provided in the table above for Rurichu town encompass not only the area falling under the Gase Tshowom gewog but also include the demographic statistics of the town area falling under the Daga gewog. The same statistics for Ririchu town can be found under the Daga gewog.

# Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Geology and Mines Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat

Bhutan Power Corporation Limited

Department of Agriculture Ministry of Agriculture and Livestock

Department of Energy Ministry of Energy and Natural Resources

Druk Holding and Investment

# **National Land Use Zoning 2023** Wangdue Phodrang: Gase Tshowom PUNAKHA THIMPHU CHANG DAGA DAGANA TSEZA

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ. Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

one Area	
Gewog	Kazhi
Gewog code	1908
Gewog area	154780.926
Zone	Area
Agriculture	654.92
Cultural Heritage	41.401
Industrial	1.249
NCA	117281.789
Rangeland	0
Rural Settlement	58.265
SFMA	1195.13
Urban	0

# **Zone Conflict**

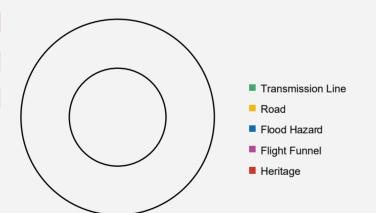
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	150.663	0.00	0	0	0	0	0
NCA	150.663	0	13.83	0	0.554	0.217	8.275	0
Agriculture	0	13.83	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.554	0	0	0	0	0	0
Industrial	0	0.217	0	0	0	0	0	0
Rural Settlement	0	8.275	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

Wangdue Phodrang: Kazhi

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone Nature Conservation Area Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

Wetland Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_ Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value Rangeland

Tsamdro Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Industrial Manufacturing and Production Existing mines

> Helipad O Hydro Power Plants A Hydro Power Waterways ----

Basemap Boundaries

Airport

International --Dzongkhag - -Gewog ---Rivers Perennial Terrain Contour

Farm 5k ====

Roads for different Highway 300k ==== Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k

## **Data Ownership**

Dzongkhag 25k ====

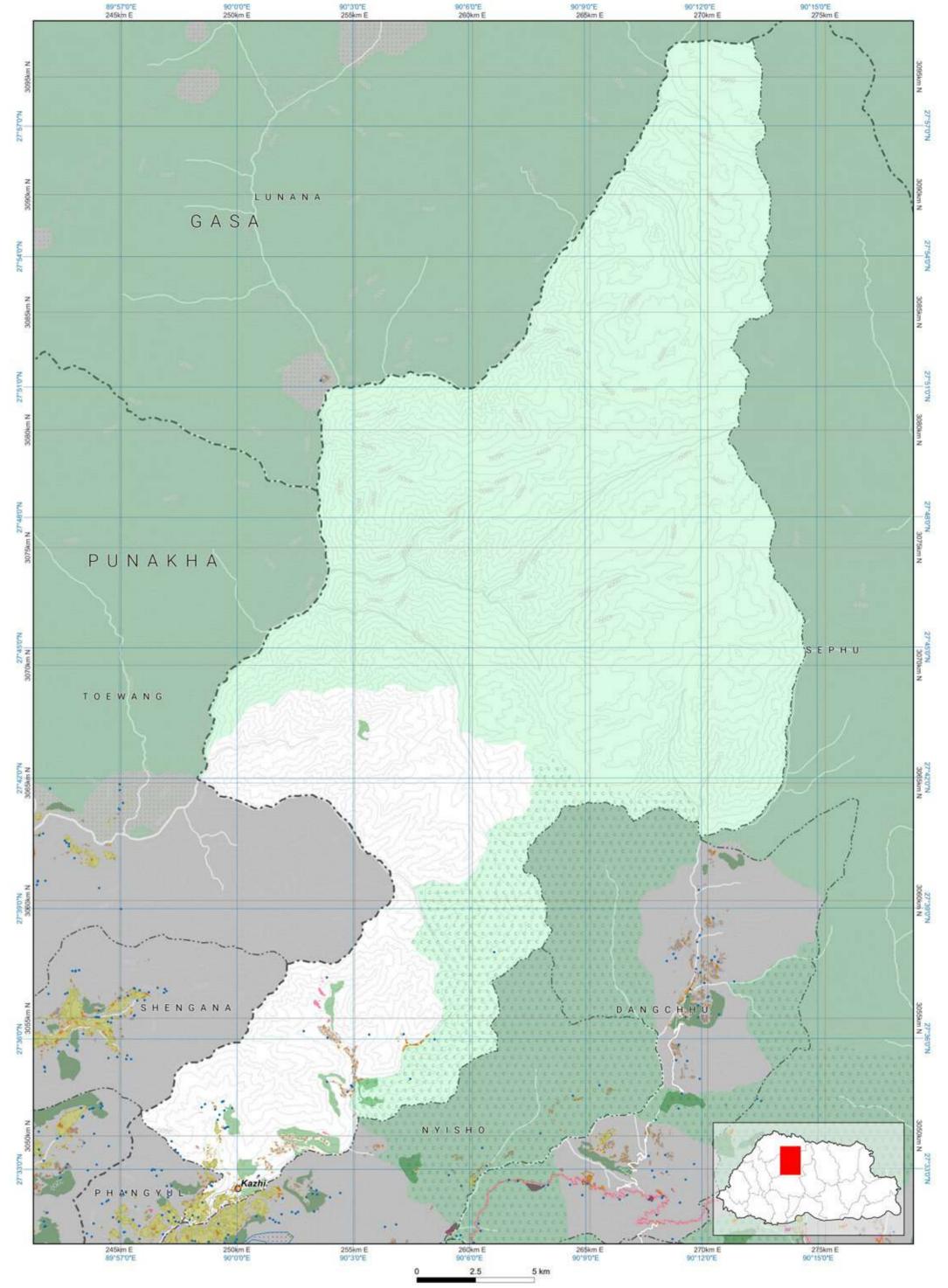
Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources National Centre for Hydrology and Meteorology

National Land Commission Secretariat

# **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)										
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size			
Gewog / Throm	Male	Female	Total							
Kazhi	695	594	1,289	117.0	47.2	334	3.7			

# 245km E 89\*57\*0\*E Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.



OI I	C / li Ca	
	Gewog	Nahi
	Gewog code	1909
	Gewog area	16742.294
	Zone	Area
	Agriculture	670.003
	Cultural Heritage	6.426
	Industrial	0.053
	NCA	11359.773
	Rangeland	0
	Rural Settlement	31.786
	SFMA	902.208
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	364.379	0.00	0	0	0	0	0
NCA	364.379	0	140.91	0	1.087	0	6.183	0
Agriculture	0	140.91	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	1.087	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	6.183	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	2.267	64.482	20.287	0	0	0	0.428	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

148

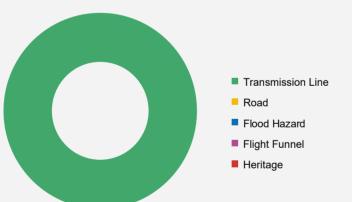
3.7

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	99.21
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table

305



# **Map Legend**

All areas are in Acres.

## **National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

## Residential Land Institutional Land

Lease Land

## Forest Management Unit Community Forest **Cultural Heritage**





Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

## Wetland Ramsar Site

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Hazard and Risk

## Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

## High Conservation Value Rangeland Tsamdro

## Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources • Industrial

## Manufacturing and Production Existing mines Airport

Helipad O Hydro Power Plants A Hydro Power Waterways —

## Basemap

Boundaries International --Dzongkhag - -

Gewog ---Perennial = Terrain

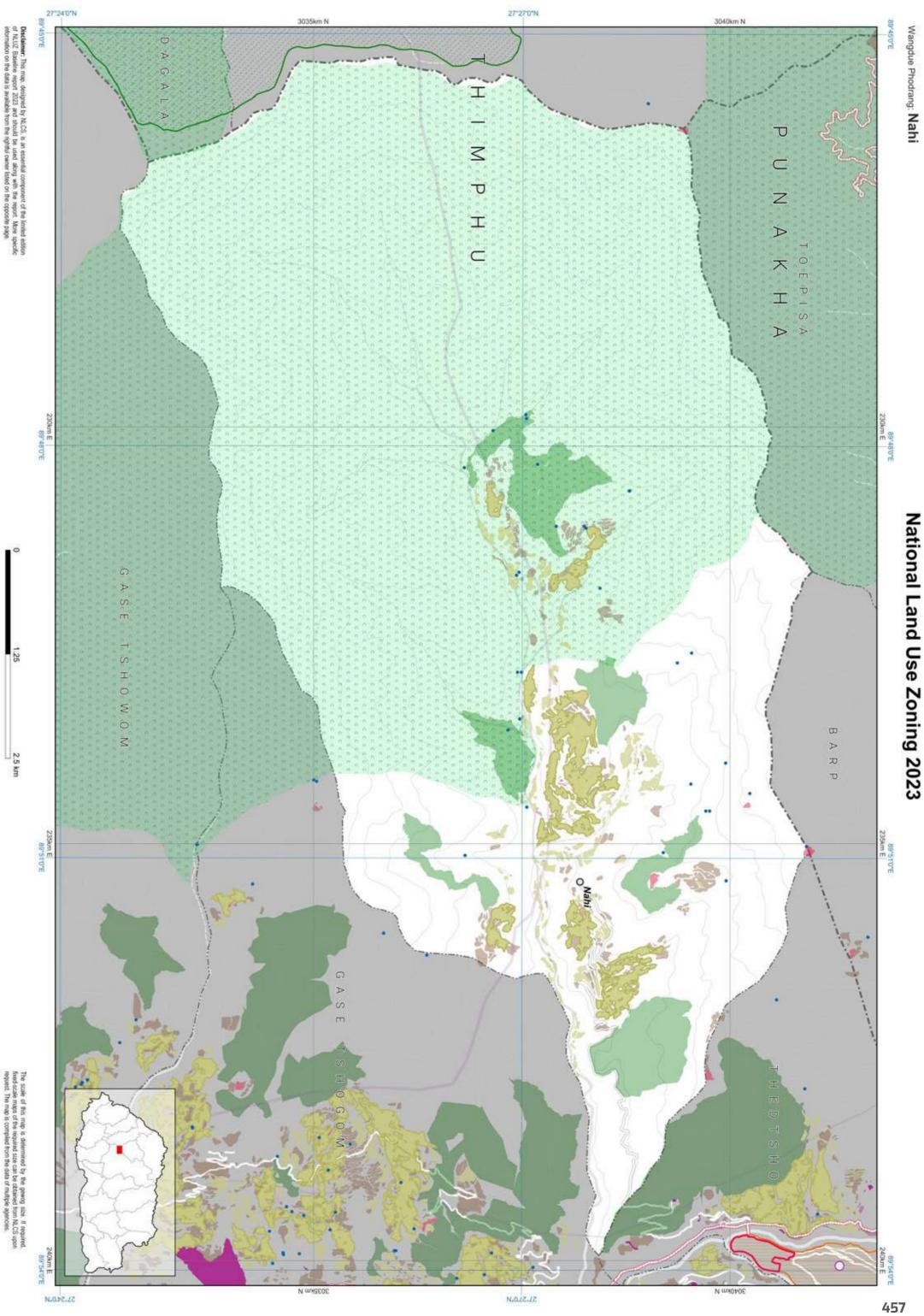
## Contour Roads for different

Highway 300k ====	Thromde 50k =
Highway 50k ===	Thromde 25k =
Highway 25k ====	Thromde 5k =
Highway 5k	Access 5k =
Dzongkhag 50k ===	Industrial 5k =
Dzongkhag 25k ====	Farm 5k =
Dzongkhag 5k	

## Data Ownership

	Data Owner of the Map Content
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	Department of Energy Ministry of Energy and Natural Resources
	Department of Forests and Park Services Ministry of Energy and Natural Resources
	Department of Water Ministry of Energy and Natural Resources
	National Land Commission Secretariat

Ministry of Agriculture and Livestock
Department of Energy Ministry of Energy and Natural Resources
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat



C / II Ca	
Gewog	Nyisho
Gewog code	1910
Gewog area	28765.236
Zone	Area
Agriculture	1431.879
Cultural Heritage	4.136
Industrial	32.452
NCA	15675.41
Rangeland	0
Rural Settlement	99.215
SFMA	819.989
Urban	0

# **Zone Conflict**

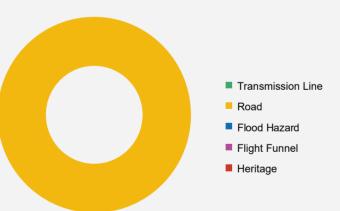
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	178.001	0.00	0	0	0	0	0
NCA	178.001	0	95.36	0	0.154	15.819	16.17	0
Agriculture	0	95.36	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0.154	0	0	0	0	0	0
Industrial	0	15.819	0	0	0	0	0	0
Rural Settlement	0	16.17	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
<b>Transmission Line</b>	0	0	0	0	0	0	0	0
Road	0	0	1.040	0	0	0	0.094	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	30.735
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land

> Forest Management Unit Community Forest

Institutional Land

**Cultural Heritage** 

Religious Sites Heritage Village Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park Wetland Ramsar Site

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

Hazard and Risk

Powerlines Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value Rangeland Tsamdro

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Water Sources • Industrial Manufacturing and Production Existing mines

Airport Helipad O Hydro Power Plants A Hydro Power Waterways —

> Basemap Boundaries

International --Dzongkhag - -Gewog ---

Perennial Terrain Roads for different

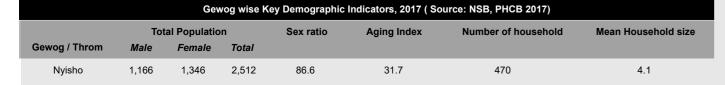
Highway 300k —— Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k \_ Dzongkhag 50k ==== Industrial 5k Dzongkhag 25k Farm 5k ==== Dzongkhag 5k

## **Data Ownership**

Data Owner of the Map Content

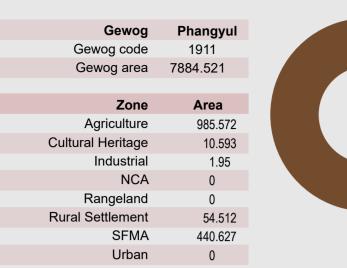
	nt of Agriculture Agriculture and Livestock	
	nt of Forests and Park Services Energy and Natural Resources	
	nt of Geology and Mines Energy and Natural Resources	
Departmen Ministry of	nt of Water Energy and Natural Resources	
	nt of Surface Transport Infrastructure and Transport	
National La	and Commission Secretariat	

## Demographic Table



# 27°30'0"N <sup>⊥</sup> > z D National Land Use Zoning 2023 N.0.96.4Z 27-3301N

**Zone Conflict** 



## **Map Legend** All areas are in Acres.

Agriculture

Industrial

Rangeland

Urban

■ Cultural Heritage

Rural Settlement

■ Nature Conservation Area

Rural

■ Sustainable Forest Management Area

# **National Land Use Zoning**



Wangdue Phodrang: Phangyul

# Residential Land

# Institutional Land

## Forest Management Unit Community Forest **Cultural Heritage**





## Urban Zone **Nature Conservation Area** Protected Area

Core Zone	
Transistion Zone	
Buffer Zone	
Multi Use Zone	

## Biological Corridor / Botanical Park Wetland

## Ramsar Site Hazard and Risk Rain Induced Flood Glacier Lake ----

Outburst Flood !
Right Of Way / Buf
Heritage
Road

# Flight Funnel

# Other Effective Area-based Conservation Measures

Key Biodiversity Area	
igh Conservation Value	
Rangeland	Н

Tsamdro

Potential Recharge Area	
Payment for Ecosystem Services	8
Water Sources	•

Indust	ri
Manufacturing and Production	
Service	
Existing mines	

## Airport • Helipad O

## Hydro Power Plants A Hydro Power Waterways -

## Basemap Boundaries International --

## Dzongkhag - -Gewog --Perennial

## Terrain Contour

	Roads for different map scale			
Highway 300k ====	Thromde 50k			
Highway 50k ====	Thromde 25k			
Highway 25k ====	Thromde 5k			
Highway 5k	Access 5k			
Dzongkhag 50k ===	Industrial 5k ====			

## Road Flood Hazard Flight Funnel Heritage

## **Data Ownership**

Dzongkhag 25k =

Department of Agriculture Ministry of Agriculture and Livestock	
Department of Forests and Park Services Ministry of Energy and Natural Resources	
Department of Water Ministry of Energy and Natural Resources	
Department of Surface Transport Ministry of Infrastructure and Transport	
National Land Commission Secretariat	

**RoW / Buffer Area** 

**RoW / Buffer Conflict** 

Flood Hazard Zone

Dullel Zolle	Alta
Transmission Line	0
Road	49.141
Flood Hazard	0
Flight Funnel	0
Heritage	0



# Data Owner of the Map Content

Demograph	ic Tabl	le						De M
		Gev	vog wise K	(ey Demographic	Indicators, 2017 ( Sc	ource: NSB, PHCB 2017)		D∈ Mi
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	De
Gewog / Throm	Male	Female	Total					Mi
Phangyul	519	445	964	116.6	40.3	225	3.6	Na

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

Gewog	Phobji
Gewog code	1912
Gewog area	37429.274
Zone	Area
Agriculture	1218.655
Cultural Heritage	24.297
Industrial	0.519
NCA	15647.118
Rangeland	0
Rural Settlement	1286.225
SFMA	2168.466
Urban	0

# **Zone Conflict**

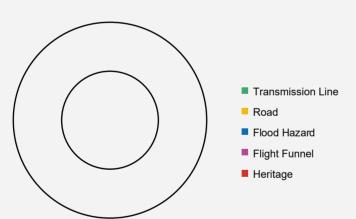
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	31.338	0.00	0	0	0	0	0
NCA	31.338	0	39.09	0	0.046	0	930.81	0
Agriculture	0.00	39.09	0	0	0	0	0.005	0
Urban	0.00	0	0	0	0	0	0	0
Culture	0.00	0.046	0	0	0	0	0	0
Industrial	0.00	0	0	0	0	0	0	0
Rural Settlement	0.00	930.81	0.005	0	0	0	0	0
Rangeland	0.00	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



**Map Legend** National Land Use Zoning Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest **Cultural Heritage** Religious Sites Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

All areas are in Acres.

Wangdue Phodrang: Phobji

Biological Corridor / Botanical Park Wetland Ramsar Site

Rain Induced Flood

Glacier Lake
Outburst Flood

Right Of Way / Buffer

Heritage

Road

Powerlines
Flight Funnel

Other Effective Area-based Conservation Measures
Key Biodiversity Area High Conservation Value

Rangeland
Tsamdro

Significant Watershed
Potential Recharge Area
Payment for Ecosystem Services
Water Sources

Industrial

Manufacturing and Production
Service
Existing mines
Airport

Helipad O
Hydro Power Plants 
Hydro Power Waterways —

Basemap

Boundaries
International — —
Dzongkhag — —
Gewog — —
Rivers
Main river
Perennial
Terrain

Roads for different map scales

Highway 300k Thromde 50k

Highway 50k Thromde 25k

Highway 25k Thromde 5k

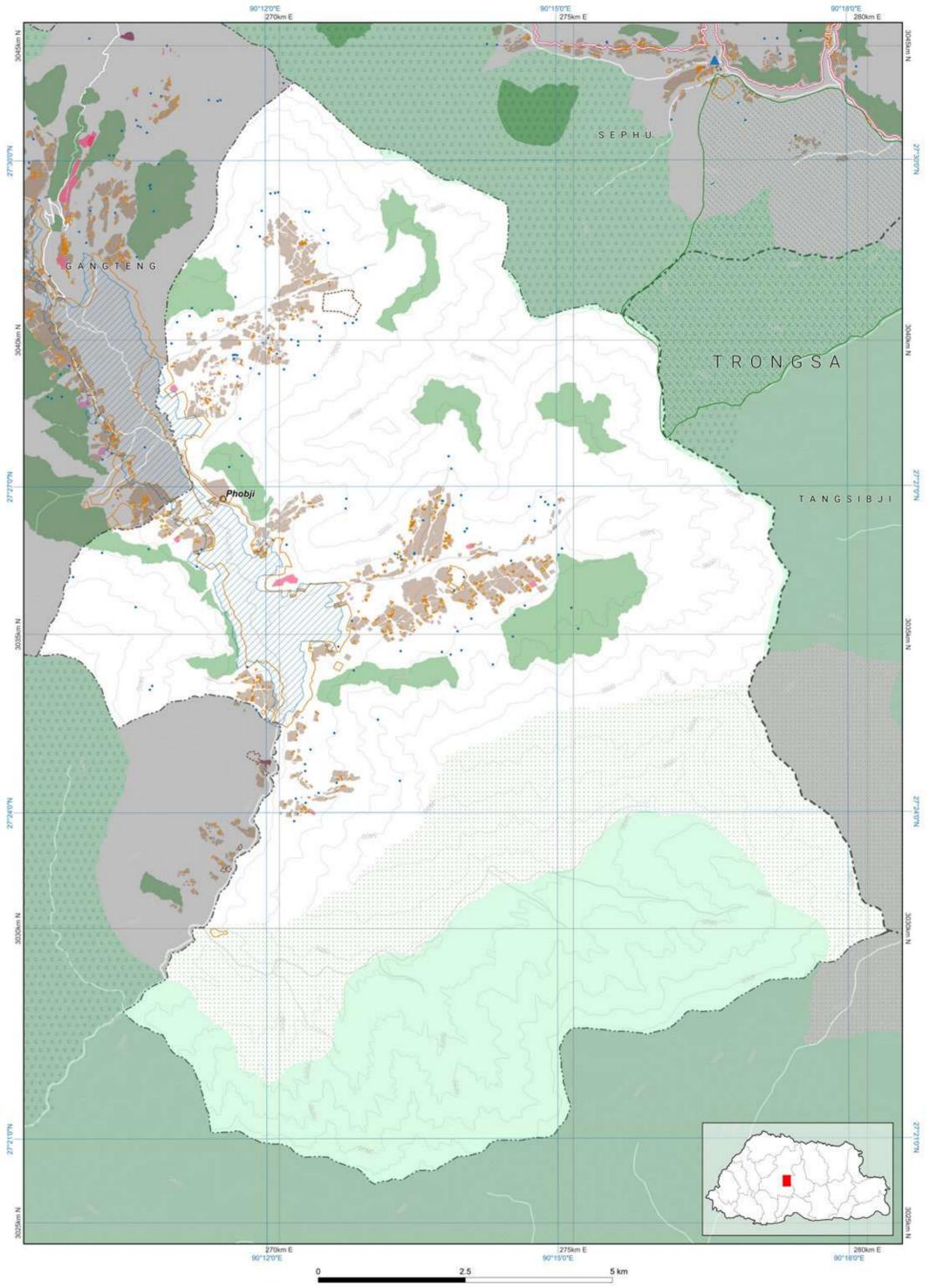
Highway 50k Thromde 25k
Highway 25k Access 5k
Dzongkhag 50k Industrial 5k
Dzongkhag 55k
Dzongkhag 55k
Dzongkhag 56k

## Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Phobji	1,039	1,082	2,121	96.0	22.3	421	4.7

## Data Ownership

Data Owner of the Map Content
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat



.01	ic / ii ca	
	Gewog	Rubesa
	Gewog code	1913
	Gewog area	39102.145
	Zone	Area
	Agriculture	1817.951
	Cultural Heritage	10.965
	Industrial	120.824
	NCA	256.942
	Rangeland	0
	Rural Settlement	608.557
	SFMA	13608.048
	Urban	0

# **Zone Conflict**

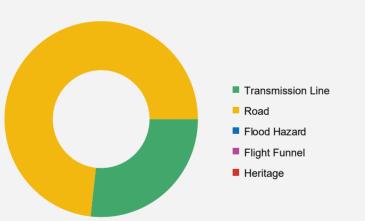
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	104.192	298.62	0	7.372	0.201	532.758	0
NCA	104.192	0	14.76	0	0	0	0.703	0
Agriculture	298.62	14.76	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	7.372	0	0	0	0	0	0	0
Industrial	0.201	0	0	0	0	0	0	0
Rural Settlement	532.758	0.703	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

							Rural	
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Settlement	Rangeland
Transmission Line	0	0	0	0	0	2.338	0	0
Road	0	0	0	0	0	0.853	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

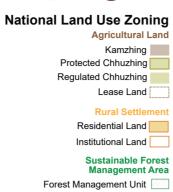
Buffer Zone	Area
Transmission Line	3.161
Road	8.658
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

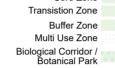
All areas are in Acres.

Wangdue Phodrang: Rubesa









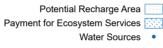


Outburst 1 1000 "	
Right Of Way / Bu	ffe
Heritage	
Road	

## Powerlines Flight Funnel Other Effective Area-based

Key Biodiversity Area	11
igh Conservation Value	1
-	







## Helipad O Hydro Power Plants A Hydro Power Waterways —

## Basemap

### Boundaries International --Dzongkhag - -Gewog ---

Perennial Terrain Contour

### Roads for different map scales Thromde 50k

5 ,	TITI OTTIGO OOK
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k <sup>≡</sup>
Ozongkhag 5k	

## **Data Ownership**

Highway 300k =

Data Owner of the Map Con	tent
Bhutan Power Corporation Lir Druk Holding and Investment	nited
Department of Agriculture Ministry of Agriculture and Liv	estock
Department of Energy Ministry of Energy and Natura	ll Resources
Department of Forests and Pa Ministry of Energy and Natura	
Department of Water Ministry of Energy and Natura	l Resources

Department of Surface Transport Ministry of Infrastructure and Transport

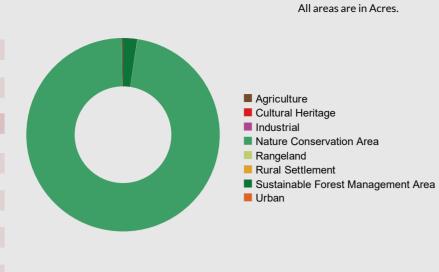
National Land Commission Secretariat

## Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)  Total Population Sex ratio Aging Index Number of household Mean Household size  Gewog / Throm Male Female Total									
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size		
Gewog / Throm	Male	Female	Total						
Rubesa	1,276	903	2,179	141.3	32.1	447	3.9		

# BJENA ATHANG DAGA Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page. The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

Gewog	Sephu
Gewog code	1914
Gewog area	273778.306
Zone	Area
Agriculture	580.299
Cultural Heritage	8.65
Industrial	8.847
NCA	258545.74
Rangeland	0
Rural Settlement	122.639
SFMA	6253.147
Urban	0



# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	1119.447	39.072	0	0	0	25.396	0
NCA	1119.447	0	172.708	0	4.308	7.9	60.453	0
Agriculture	39.072	172.708	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	4.308	0	0	0	0	0	0
Industrial	0	7.9	0	0	0	0	0	0
Rural Settlement	25.396	60.453	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

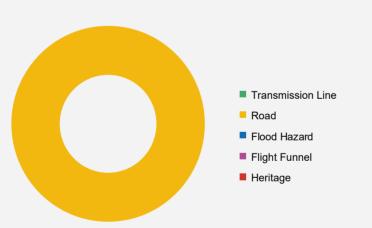
# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	163.091
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 



# **Map Legend**

Wangdue Phodrang: Sephu

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

**Rural Settlement** Residential Land Institutional Land

Forest Management Unit Community Forest **Cultural Heritage** 

Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone **Nature Conservation Area** 

> Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Wetland Ramsar Site Hazard and Risk

Rain Induced Flood Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

> Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Rangeland

Significant Watershed Potential Recharge Area Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production Existing mines Airport

> Helipad O Hydro Power Plants A Hydro Power Waterways ----

> > Basemap

Boundaries International --Dzongkhag - -Gewog ---Rivers Perennial Terrain

Contour Roads for different Highway 300k ==== Thromde 50k Thromde 25k

Highway 50k === Highway 25k Thromde 5k Highway 5k Dzongkhag 50k === Industrial 5k Dzongkhag 25k ==== Farm 5k ====

## **Data Ownership**

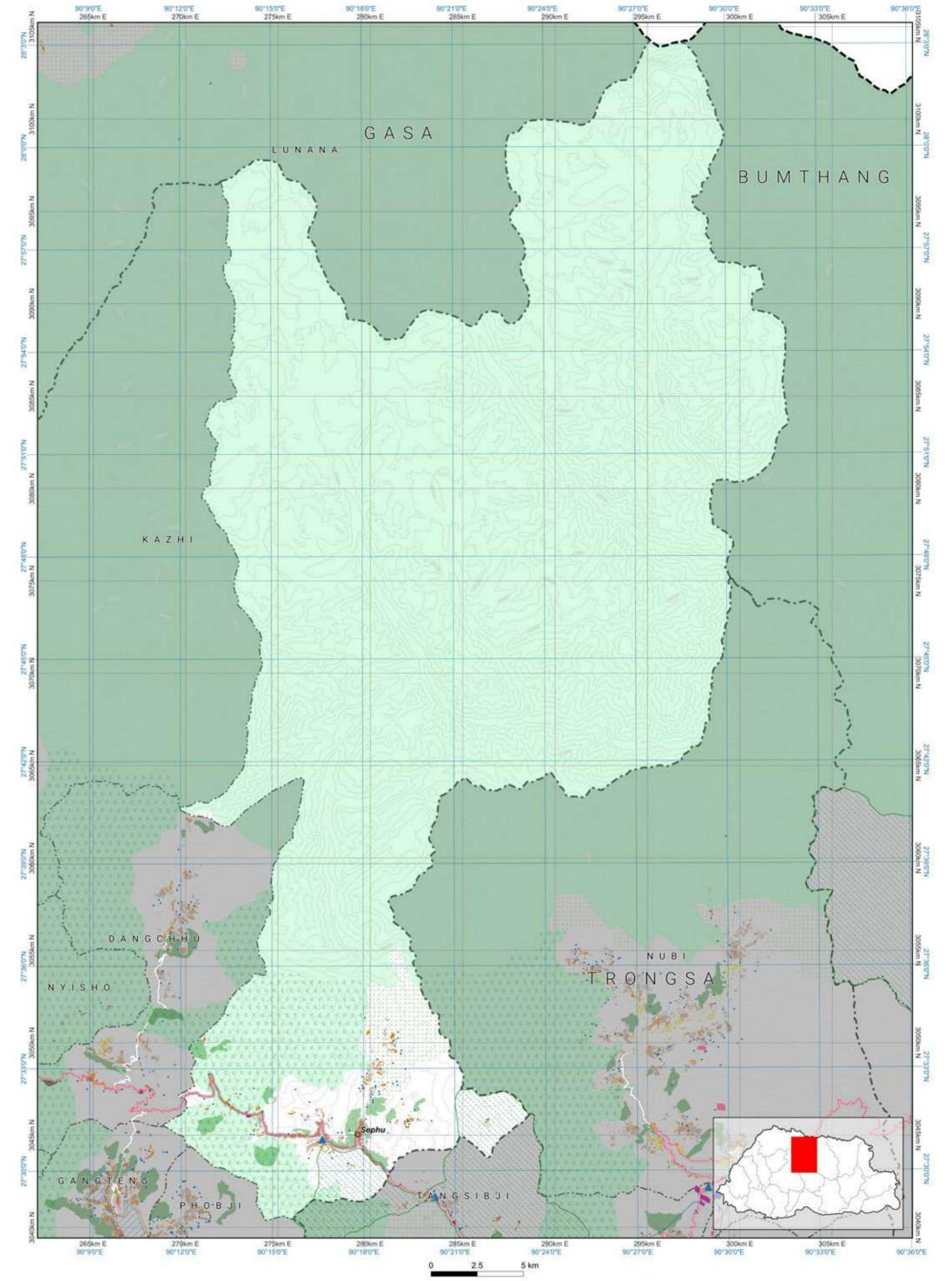
Data Owner of the Map Content Bhutan Power Corporation Limited Druk Holding and Investment Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

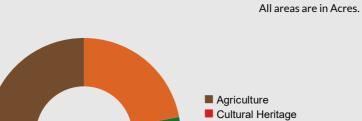
National Centre for Hydrology and Meteorology

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017) Total 1,729 102.5 421 3.7



	Gewog	Thedtsho
G	Sewog code	1915
C	Sewog area	4947.226
	Zone	Area
	Agriculture	953.41
Cultui	ral Heritage	43.426
	Industrial	13.975
	NCA	0
	Rangeland	0
Rural	Settlement	81.621
	SFMA	644.439
	Urban	492.342

**Zone Conflict** 



■ Nature Conservation Area

■ Sustainable Forest Management Area

Rangeland

Rural Settlement

## **National Land Use Zoning**

Agricultural Land	
Kamzhing	
Protected Chhuzhing	
Regulated Chhuzhing	
Loope Lond	

**Map Legend** 

# Residential Land

	Ins	stitutional Land	
		Sustainable Forest Management Area	
_			١

## Forest Management Unit Community Forest **Cultural Heritage**



## Urban Zone **Nature Conservation Area**

## Protected Area Core Zone Transistion Zone

Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

## Ramsar Site Hazard and Risk Rain Induced Flood

Glacier Lake Outburst Flood Right Of Way / Buffer Heritage \_\_\_\_

# Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

## Key Biodiversity Area High Conservation Value

## Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

## Manufacturing and Production Existing mines

Airport • Helipad O

## Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries International --

Dzongkhag - -Perennial

### Terrain Contour Roads for different map scales

Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k
ongkhag 25k ===	Farm 5k
zonakhaa 5k ——	

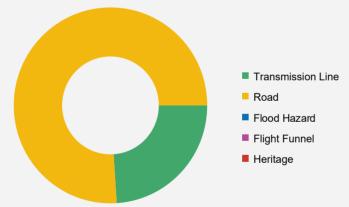
**Data Ownership** 

**RoW / Buffer Conflict** 

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	10.628	0	1.499	0	0	0	0.027	0
Road	0	0	6.084	0	0.013	1.144	0.998	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	17.861
Road	56.65
Flood Hazard	0
Flight Funnel	0
Heritage	0



## **Demographic Table**

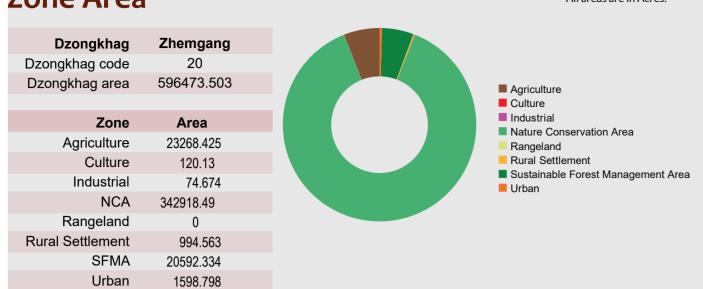
		Gev	vog wise K	ey Demographic	Indicators, 2017 ( So	urce: NSB, PHCB 2017)	
	Tota	l Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Thedtsho	1,861	1,513	3,374	123.0	15.6	769	3.8
Wangdue Phodrang	Town 4,728	4,226	8,954	111.9	9.6	2,104	3.9

## Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Ministry of Energy and Natural Resources Department of Culture and Dzongkha Development Ministry of Home Affairs Department of Air Transport Ministry of Infrastructure and Transport Department of Human Settlement Ministry of Infrastructure and Transport Department of Surface Transport Ministry of Infrastructure and Transport

National Land Commission Secretariat

# National Land Use Zoning 2023 Wangdue Phodrang: Thedtsho 89"51"0"E

## **Zone Area** All areas are in Acres.



## **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	6712.616	752.37	293.123	16.533	1.395	18.208	0
NCA	6712.616	0	6,414.61	138.485	13.102	6.996	353.405	0
Agriculture	752.37	6,414.61	0	18.66	0	0	0	0
Urban	293.123	138.485	18.66	0	16.013	0.158	38.891	0
Culture	16.533	13.102	0	16.013	0	0	0	0
Industrial	1.395	6.996	0	0.158	0	0	0	0
Rural Settlement	18.208	353.405	0	38.891	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Heritage	Industrial	Rural Settlement	Rangeland
Transmission Line	75.733	567.697	135.913	36.967	0	0.101	3.08	0
Road	194.347	559.837	69.773	0	0.27	0.103	10.38	0
Flood Hazard	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

•	
Buffer Zone	Area
Transmission Line	1063.373
Road	1266.449
Flood Hazard	0
Flight Funnel	0
Heritage	0

# **Map Legend**



Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines

> Helipad O Hydro Power Waterways -

Basemap

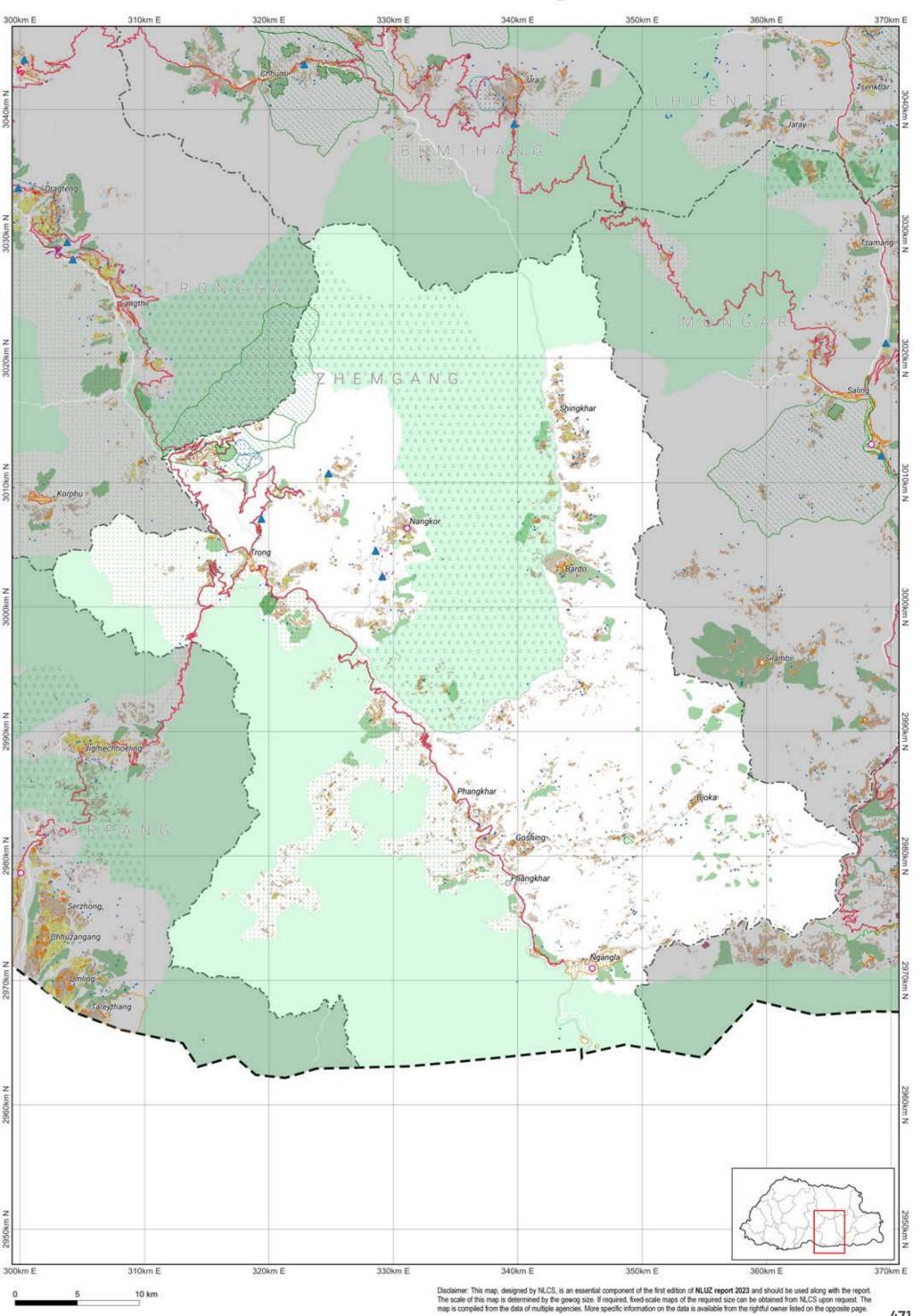
Boundaries International --

Dzongkhag - -Perennial

Highway 300k = Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

## Demographic Table

Dzongkhag Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
	Tot	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size	
Dzongkhag	Male	Female	Total					
Zhemgang	9,195	8,568	17,763	107.3	30.6	3,803	3.8	



Gewog	Bardo
Gewog code	2001
Gewog area	51238.457
Zone	Area
Agriculture	3962.635
Cultural Heritage	10.746
Industrial	0.501
NCA	25.27
Rangeland	0
Rural Settlement	110.342
SFMA	1774.775
Urban	0
one Conflic	t

## All areas are in Acres.

Agriculture

Industrial

Rangeland

Urban

Cultural Heritage

Rural Settlement

Nature Conservation Area

■ Sustainable Forest Management Area

# **Map Legend National Land Use Zoning**



## Residential Land Institutional Land

## Forest Management Unit Community Forest





## Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

## Hazard and Risk Rain Induced Flood

Right Of Way / Buffer Heritage \_\_\_\_

# Powerlines

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

## Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

## Hydro Power Waterways -Basemap

### Boundaries International --Dzongkhag - -

Perennial

# Terrain

lighway 300k ===	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k =
ongkhag 25k ===	Farm 5k =

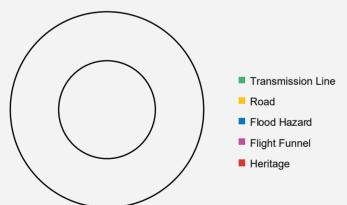
**RoW / Buffer Conflict** 

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 



## **Data Ownership**

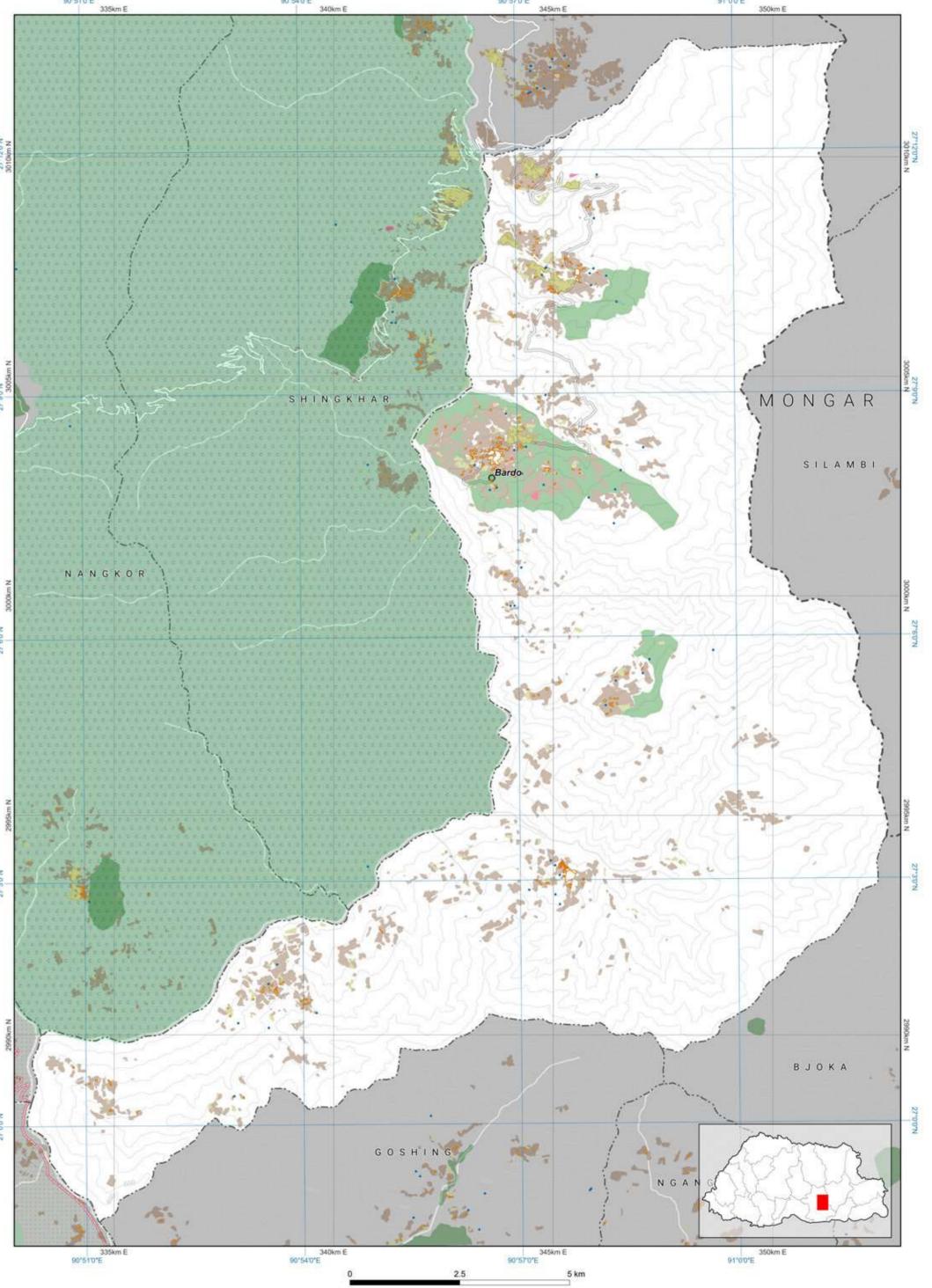
Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)							
	То	tal Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size
Gewog / Throm	Male	Female	Total				
Bardo	931	803	1,734	115.9	36.1	388	4.1



Data Owner of the Map Content
Department of Agriculture Ministry of Agriculture and Livestock
Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
National Land Commission Secretariat

# National Land Use Zoning 2023 Zhemgang: Bardo



on	e Area	
	Gewog	Bjoka
	Gewog code	2002
	Gewog area	47868.508
	Zone	Area
	Agriculture	1290.125
	Cultural Heritage	12.416
	Industrial	0.125
	NCA	0
	Rangeland	0
	Rural Settlement	56.038
	SFMA	2359.071
	Urban	0

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0	0	0	0	0	0
NCA	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	0	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0



**Map Legend** National Land Use Zoning Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land Residential Land Institutional Land Forest Management Unit Community Forest Religious Sites Heritage Village Heritage Conservation Zone Urban Zone Nature Conservation Area Protected Area Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park Ramsar Site Hazard and Risk

Rain Induced Flood Right Of Way / Buffer Heritage \_\_\_\_

Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

Significant Watershed Potential Recharge Area Payment for Ecosystem Services

Manufacturing and Production Existing mines Airport •

> Helipad O Hydro Power Plants A Hydro Power Waterways —

Basemap

Boundaries International --Dzongkhag - -

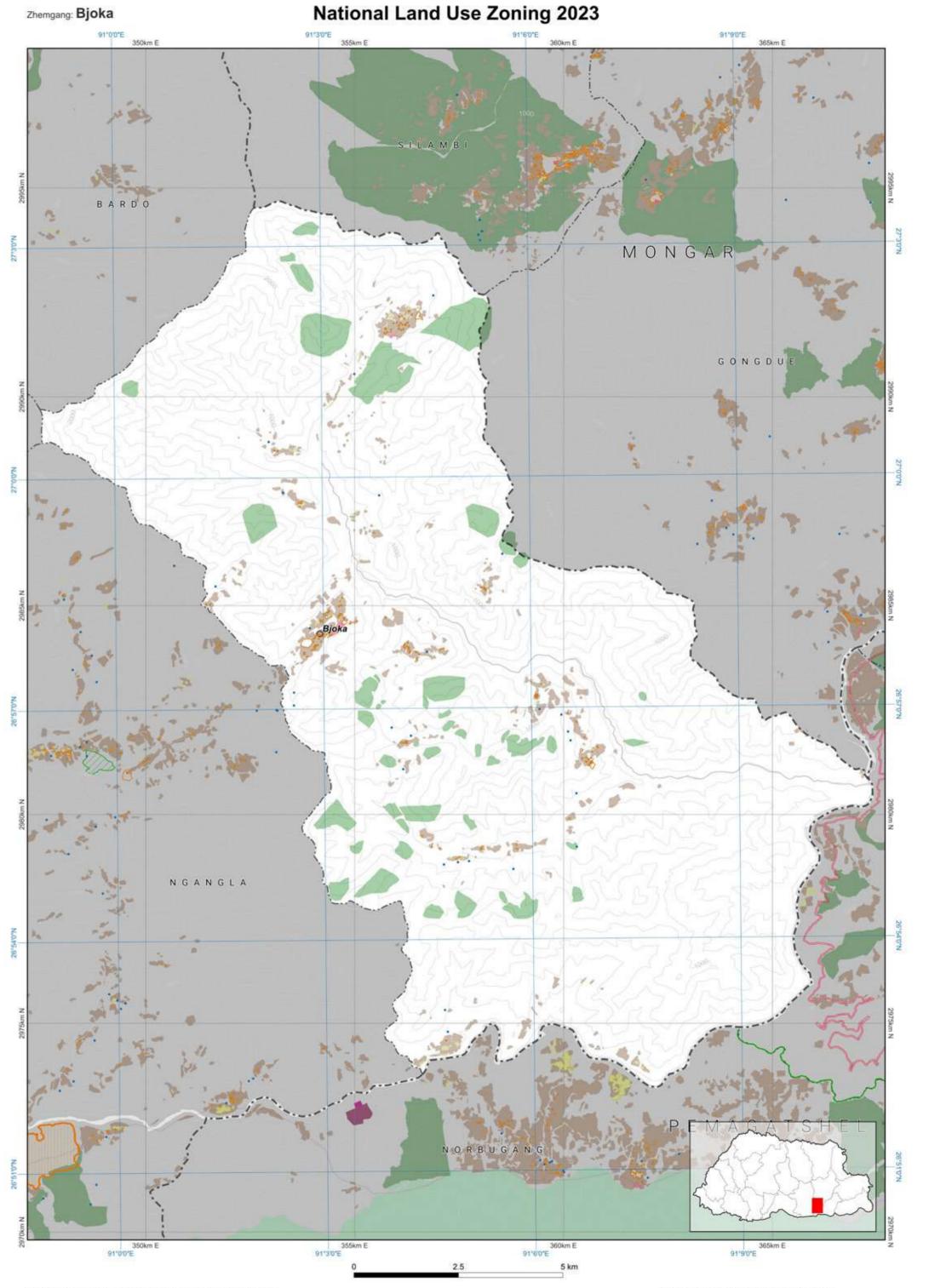
Highway 300k = Highway 50k === Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k =

# **Demographic Table**

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Gewog / Throm	To <i>Mal</i> e	tal Populatio	n Total	Sex ratio	Aging Index	Mean Household size	D.	
Bjoka	434	422	856	102.8	37.8	194	3.9	N

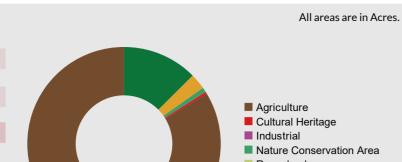
## **Data Ownership**

Data Owner of the Map Content
Department of Forests and Park Services  Ministry of Energy and Natural Resources
Department of Water dinistry of Energy and Natural Resources
lational Land Commission Secretariat



Gewog	Goshing
Gewog code	2003
Gewog area	24496.993
Zone	Area
Agriculture	2292.515
Cultural Heritage	9.835
Industrial	0.2
NCA	21.819
Rangeland	0
Rural Settlement	72.301
SFMA	344.024
Urban	0

**Zone Conflict** 



Rural Settlement

Urban

■ Sustainable Forest Management Area

# **Map Legend**

**National Land Use Zoning** Kamzhing Protected Chhuzhing Regulated Chhuzhing

Lease Land Residential Land

Institutional Land

Forest Management Unit

Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

**Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

Biological Corridor / Botanical Park

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

Manufacturing and Production Existing mines

Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

> Basemap Boundaries

International --Dzongkhag - -Perennial

Highway 300k ---Highway 50k ===

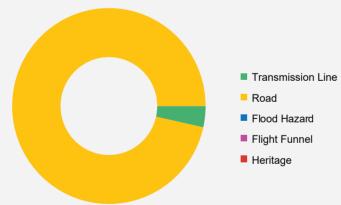
Highway 25k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k ===

# RoW / Buffer Area

Demographic Table

Buffer Zone	Area
Transmission Line	3.866
Road	106.92
Flood Hazard	0
Flight Funnel	0
Heritage	0

**RoW / Buffer Conflict** 



## **Data Ownership**

ata officer of the map content
epartment of Energy inistry of Energy and Natural Resources
epartment of Forests and Park Services inistry of Energy and Natural Resources
epartment of Water inistry of Energy and Natural Resources
epartment of Surface Transport inistry of Infrastructure and Transport
ational Land Commission Socratoriat

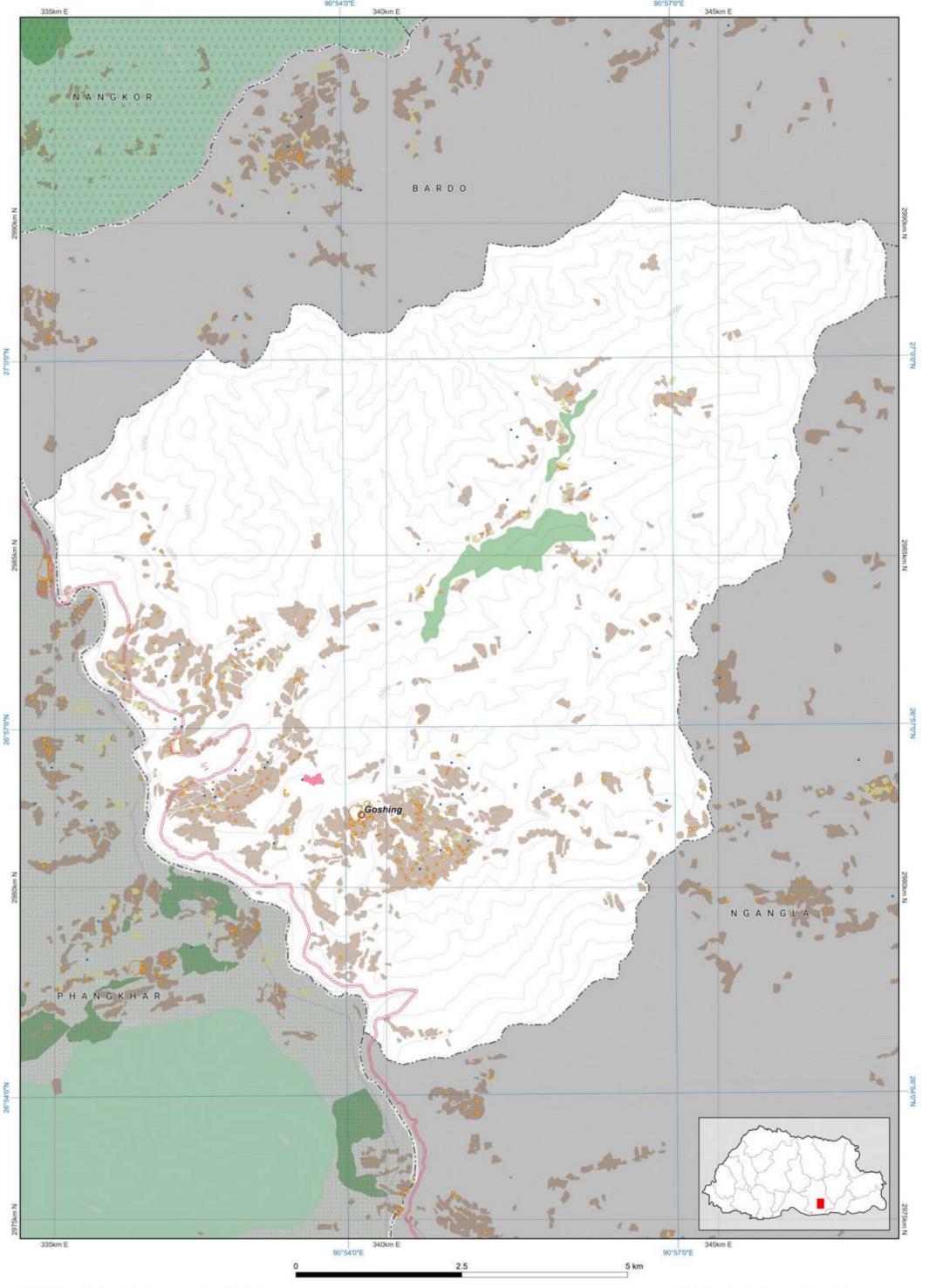
## Data Owner of the Map Content

336

3.8

# Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

## **National Land Use Zoning 2023** Zhemgang: Goshing



Zone Area		All areas are in Acres.
Gewog	Nangkor	
Gewog code	2004	
Gewog area	121355.541	- A missulture
		■ Agriculture ■ Cultural Heritage
Zone	Area	■ Industrial
Agriculture	4160.403	Nature Conservation Area
Cultural Heritage	45.614	Rangeland Rural Settlement
Industrial	54.315	■ Sustainable Forest Management Are
NCA	71971.438	■ Urban
Rangeland	0	
Rural Settlement	183.62	
SFMA	2069.868	
Urban	2.923	

# **Zone Conflict**

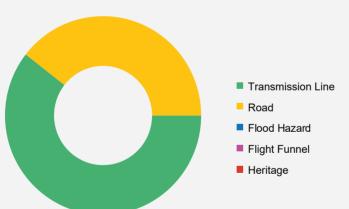
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	311.47	0.00	0	0	0	0	0
NCA	311.47	0	537.66	0	1.035	0	21.241	0
Agriculture	0.00	537.66	0	0	0	0	0	0
Urban	0.00	0	0	0	0	0	0	0
Culture	0.00	1.035	0	0	0	0	0	0
Industrial	0.00	0	0	0	0	0	0	0
Rural Settlement	0.00	21.241	0	0	0	0	0	0
Rangeland	0.00	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0.092	11.215	0	0	0.101	0.001	0
Road	3.731	0	4.050	0	0.088	0	0.522	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	112.104
Road	73.089
Flood Hazard	0
Flight Funnel	0
Heritage	0



## Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)								
Total Population Sex ratio Aging Index Number of household Me							Mean Household size	
Gewog / Throm	Male	Female	Total					
Nangkor	1,329	1,273	2,602	104.4	31.8	513	3.7	
Tingtibi Town	289	245	534	118.0	11.7	137	3.5	
a								

# The demographic statistics provided in the table above for Tingtibi Town encompass not only the area falling under the Nangkor gewog but also include the demographic statistics of the town area falling under the Trong gewog. The same statistics for Tingtibi town can be found under the Trong gewog.

# Map Legend

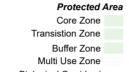




# Forest Management Unit

# Heritage Village





# Biological Corridor / Botanical Park

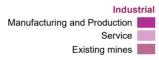
Hazard and Risk
Rain Induced Flood
Glacier Lake Outburst Flood
Right Of Way / Buffer
Heritage
Road

# Flight Funnel

Other Effective Area-bas Conservation Measur	
Key Riodiversity Δrea	

# High Conservation Value

- 1 - 1 - 1	Potential Recharge Area
	ayment for Ecosystem Services
•	Water Sources



Helipad O Hydro Power Waterways -

## Basemap Boundaries

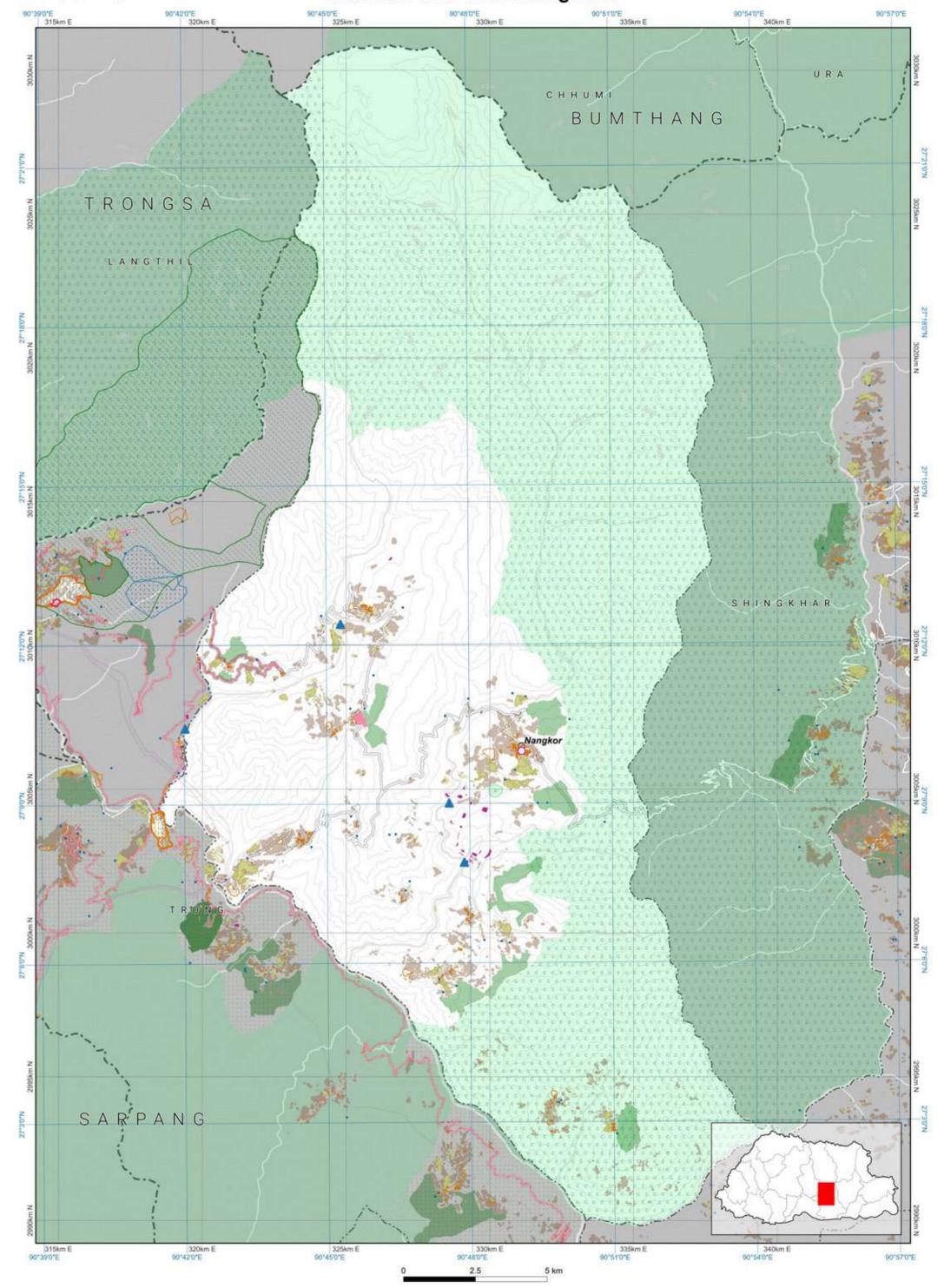
International --Dzongkhag - -

	Roads for different map scale
Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ====	Thromde 5k
Highway 5k	Access 5k
Dzongkhag 50k ===	Industrial 5k
Dzongkhag 25k ===	Farm 5k ==
Dzongkhag 5k	

## **Data Ownership**

Data Owner of the Map Content
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Department of Forests and Park Services Ministry of Energy and Natural Resources
Department of Water Ministry of Energy and Natural Resources
Department of Air Transport Ministry of Infrastructure and Transport
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport
National Land Commission Secretariat

## National Land Use Zoning 2023 Zhemgang: Nangkor



 <b>-</b>	
Gewog	Ngangla
Gewog code	2005
Gewog area	53089.489
Zone	Area
Agriculture	2754.946
Cultural Heritage	1.113
Industrial	2.138
NCA	7547.854
Rangeland	0
Rural Settlement	94.979
SFMA	949.543
Urban	1188.333

# **Zone Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	0	0.00	19.809	0	0	0	0
NCA	0	0	1.22	19.36	0	0	16.321	0
Agriculture	0.00	1.22	0	7.566	0	0	0	0
Urban	19.809	19.36	7.566	0	0	0	0.5	0
Culture	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0
Rural Settlement	0	16.321	0	0.5	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	4.862	0.013	23.057	33.112	0	0	0.107	0
Road	5.044	0	7.279	0	0	0	1.132	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

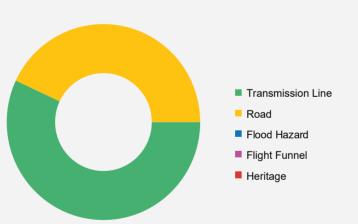
# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	100.49
Road	75.95
Flood Hazard	0
Flight Funnel	0
Heritage	0

**Demographic Table** 

385

800



# **Map Legend**

## **National Land Use Zoning**

All areas are in Acres.

■ Agriculture

Industrial

Rangeland

Urban

■ Cultural Heritage

Rural Settlement

Nature Conservation Area

■ Sustainable Forest Management Area



## Residential Land

## Institutional Land Forest Management Unit

# Community Forest



## Urban Zone **Nature Conservation Area**

### Protected Area Core Zone Transistion Zone Buffer Zone

Multi Use Zone Biological Corridor / Botanical Park

## Hazard and Risk Rain Induced Flood

Right Of Way / Buffer

Heritage \_\_\_\_

## Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area

High Conservation Value

## Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

## Manufacturing and Production Existing mines

Airport • Helipad O

## Hydro Power Plants A Hydro Power Waterways -

## Basemap Boundaries

International --Dzongkhag - -

## Perennial Terrain

# Roads for different

ignway oook	THIOHIUE SUK
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
ongkhag 50k ===	Industrial 5k

# **Data Ownership**

Dzongkhag 5k

Department of Air Transport Ministry of Infrastructure and Transport

Department of Human Settlement

Department of Surface Transport

Ministry of Infrastructure and Transport

## Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources Department of Forests and Park Services Ministry of Energy and Natural Resources Department of Water Ministry of Energy and Natural Resources

### Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017) Mean Household size 1,129 2,256 27.0 445

12.5

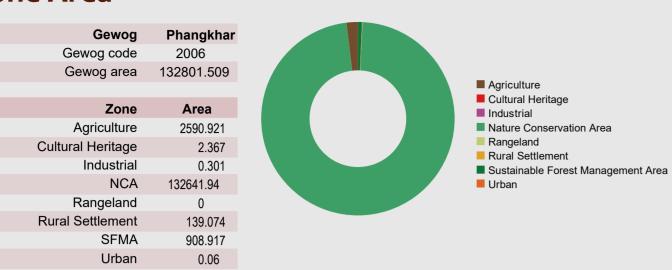
178

Ministry of Infrastructure and Transport National Land Commission Secretariat

# National Land Use Zoning 2023 Zhemgang: Ngangla NORBUGANG PEMAGATSHEL 350km E 91°0'0\*E 345km E 90°57'0°E

Disclaimer: This map, designed by NLCS, is an essential component of the limited edition of NLUZ Baseline report 2023 and should be used along with the report. More specific information on the data is available from the rightful owner listed on the opposite page.

91'3'0'E



# **Zone Conflict**

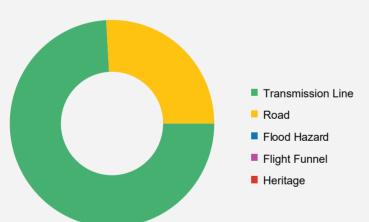
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	908.917	0.00	0	0	0	0	0
NCA	908.917	0	2,586.40	0.06	2.367	0.301	138.012	0
Agriculture	0.00	2,586.40	0	0	0	0	0	0
Urban	0.00	0.06	0	0	0	0	0	0
Culture	0.00	2.367	0	0	0	0	0	0
Industrial	0.00	0.301	0	0	0	0	0	0
Rural Settlement	0.00	138.012	0	0	0	0	0	0
Rangeland	0.00	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	1.705	107.242	24.197	0	0	0	0.497	0
Road	0	35.862	3.274	0	0	0	1.824	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Buffer Zone	Area
Transmission Line	110.279
Road	38.581
Flood Hazard	0
Flight Funnel	0
Heritage	0



# **Map Legend**

All areas are in Acres.

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

# Residential Land

Institutional Land

## Forest Management Unit Community Forest **Cultural Heritage**

Religious Sites Heritage Village Heritage Conservation Zone

## Urban Zone **Nature Conservation Area** Protected Area

Core Zone Transistion Zone Buffer Zone Multi Use Zone

## Biological Corridor / Botanical Park Wetland Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

## Powerlines Flight Funnel

Other Effective Area-based Conservation Measures Key Biodiversity Area High Conservation Value

# Tsamdro

Significant Watershed Potential Recharge Area

## Payment for Ecosystem Services Water Sources •

Industrial Manufacturing and Production

### Existing mines Airport • Helipad O

Hydro Power Plants A Hydro Power Waterways -

## Basemap Boundaries

International --

Dzongkhag - -Gewog ---Perennial

## Terrain Roads for different

Farm 5k

Highway 300k —— Thromde 50k Highway 50k === Thromde 25k Highway 25k Thromde 5k Highway 5k Dzongkhag 50k = Industrial 5k Dzongkhag 25k

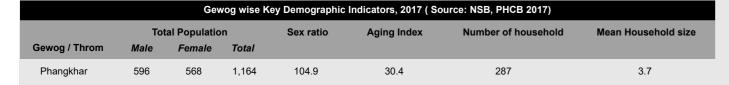
## **Data Ownership**

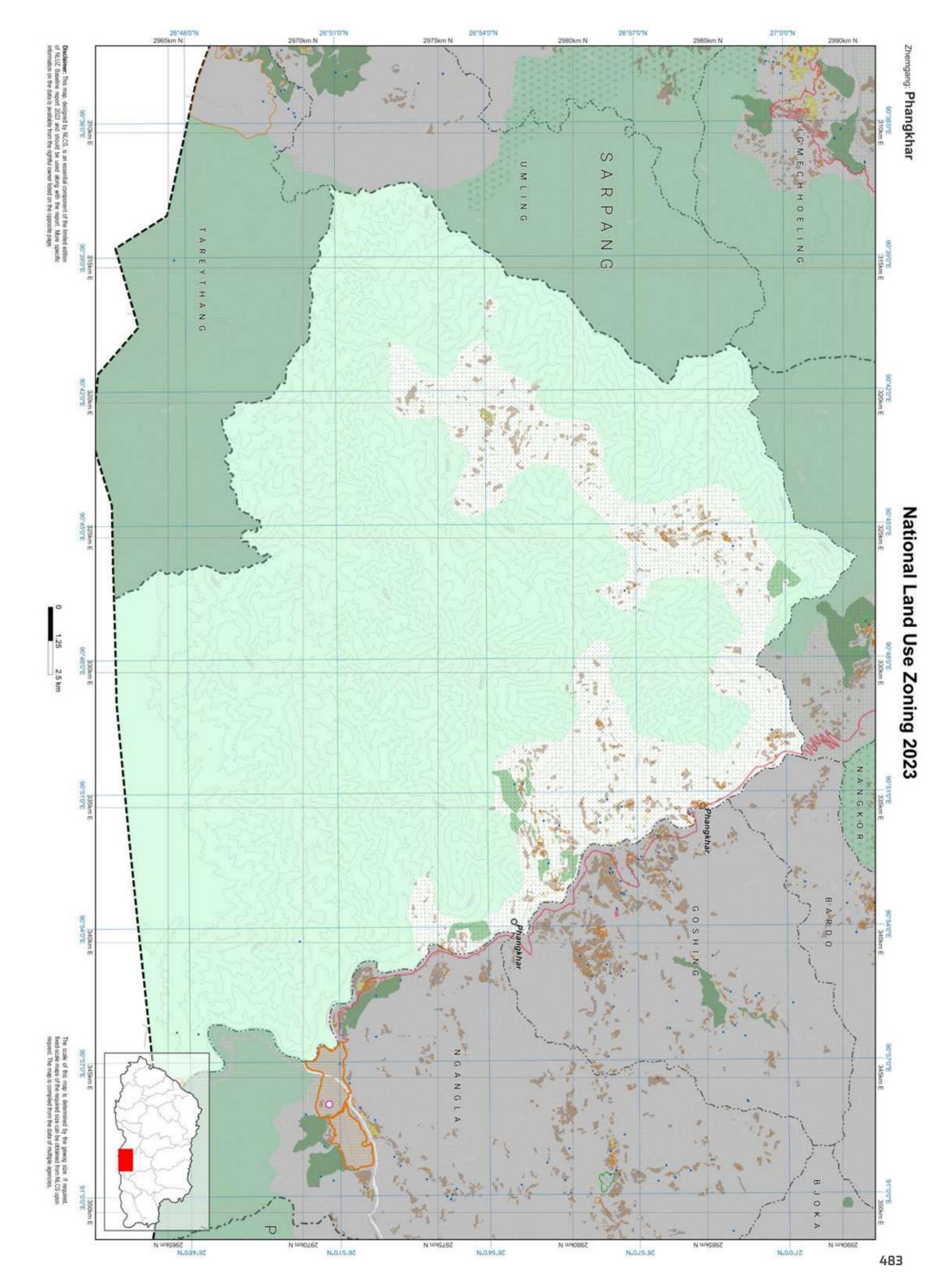
Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Energy Ministry of Energy and Natural Resources

Department of Forests and Park Services Ministry of Energy and Natural Resources

Department of Water Ministry of Energy and Natural Resources Department of Human Settlement Ministry of Infrastructure and Transport

Department of Surface Transport Ministry of Infrastructure and Transport National Land Commission Secretariat





Zone Area		All areas are in Acres.
Zone Agriculture	Shingkhar 2007 76052.026 <b>Area</b> 2813.976	<ul> <li>Agriculture</li> <li>Cultural Heritage</li> <li>Industrial</li> <li>Nature Conservation Area</li> <li>Rangeland</li> </ul>
Cultural Heritage Industrial NCA	10.338 0.25 59219.31	Rural Settlement  Sustainable Forest Management A  Urban
Cultural Heritage Industrial NCA Rangeland Rural Settlement SFMA	0 59.05 712.655	
Urban	0	
Zone Conflict		

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	712.655	0.00	0	0	0	0	0
NCA	712.655	0	926.54	0	4.293	0.25	15.279	0
Agriculture	0.00	926.54	0	0	0	0	0	0
Urban	0	0	0	0	0	0	0	0
Culture	0	4.293	0	0	0	0	0	0
Industrial	0	0.25	0	0	0	0	0	0
Rural Settlement	0	15.279	0	0	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

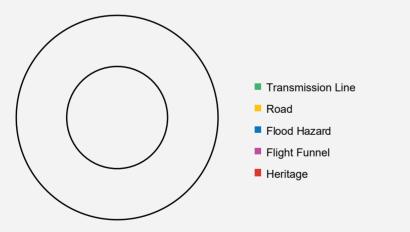
# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# RoW / Buffer Area

Buffer Zone	Area
Transmission Line	0
Road	0
Flood Hazard	0
Flight Funnel	0
Heritage	0

Demographic Table



# **Map Legend**

# **National Land Use Zoning**

Kamzhing Protected Chhuzhing Regulated Chhuzhing Lease Land

Zhemgang: Shingkhar

BUMTHANG

## Residential Land Institutional Land

Forest Management Unit

## Community Forest **Cultural Heritage** Religious Sites

Heritage Village Heritage Conservation Zone Urban Zone

### **Nature Conservation Area** Protected Area Core Zone

Transistion Zone Buffer Zone Multi Use Zone Biological Corridor / Botanical Park

# Ramsar Site

Hazard and Risk Rain Induced Flood Glacier Lake Outburst Flood

Right Of Way / Buffer Heritage \_\_\_\_

## Powerlines Flight Funnel

Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

## Significant Watershed

Potential Recharge Area Payment for Ecosystem Services

Water Sources • Manufacturing and Production

Existing mines Airport

### Helipad O Hydro Power Plants A Hydro Power Waterways -

Basemap Boundaries

International --Dzongkhag - -Gewog ---Perennial

ighway 300k ====	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k =
ongkhag 50k ===	Industrial 5k

# Dzongkhag 25k

## **Data Ownership**

## Data Owner of the Map Content Department of Agriculture Ministry of Agriculture and Livestock Department of Forests and Park Services

National Land Commission Secretariat

	Ministry of Energy and Natural Resources
d size	Department of Water Ministry of Energy and Natural Resources

# 3.4

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)

# The scale of this map is determined by the gewog size. If required, fixed-scale maps of the required size can be obtained from NLCS upon request. The map is compiled from the data of multiple agencies.

BARDO

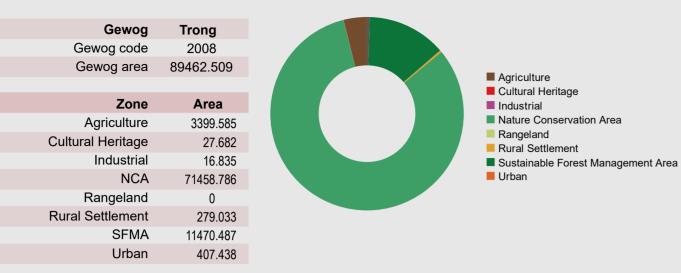
MONGAR

SALING

**National Land Use Zoning 2023** 

URA

# 355km E 91°3'0'E



## **Zone Conflict**

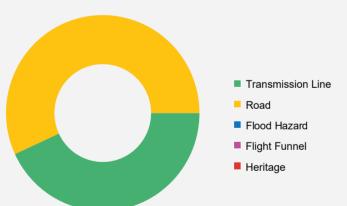
	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
SFMA	0	4778.756	752.29	273.28	16.532	1.395	18.206	0
NCA	4778.756	0	2,362.21	119.047	5.405	6.444	162.52	0
Agriculture	752.29	2,362.21	0	11.091	0	0	0	0
Urban	273.28	119.047	11.091	0	16.012	0.158	38.387	0
Culture	16.532	5.405	0	16.012	0	0	0	0
Industrial	1.395	6.444	0	0.158	0	0	0	0
Rural Settlement	18.206	162.52	0	38.387	0	0	0	0
Rangeland	0	0	0	0	0	0	0	0

# **RoW / Buffer Conflict**

	SFMA	NCA	Agriculture	Urban	Culture	Industrial	Rural Settlement	Rangeland
Transmission Line	69.167	459.871	77.443	3.854	0	0	2.475	0
Road	185.572	522.963	41.644	0	0.182	0.103	5.071	0
Flood Hazard Zone	0	0	0	0	0	0	0	0
Flight Funnel	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0

# **RoW / Buffer Area**

Area
736.633
971.908
0
0
0



## Demographic Table

Gewog wise Key Demographic Indicators, 2017 ( Source: NSB, PHCB 2017)											
	Tot	al Populatio	n	Sex ratio	Aging Index	Number of household	Mean Household size				
Gewog / Throm	Male	Female	Total								
Trong	1,546	1,422	2,968	108.7	28.4	584	3.7				
Tingtibi Town	289	245	534	118	11.7	137	3.5				
Zhemgang Town	1,153	1,024	2,177	112.6	14.1	422	3.6				
Disclaimer:											

# The demographic statistics provided in the table above for Tingtibi Town encompass not only the area falling under the Trong gewog but also include the demographic statistics of the town area falling under the Nangkor gewog. The same statistics for Tingtibi town can be found under the Nangkor gewog.

# Map Legend

All areas are in Acres.



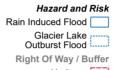






**Nature Conservation Area** 





Heritage \_\_\_\_ Powerlines

## Flight Funnel Other Effective Area-based Conservation Measures

Key Biodiversity Area High Conservation Value

## Significant Watershed Potential Recharge Area

Payment for Ecosystem Services Water Sources •

## Manufacturing and Production Existing mines

Airport • Helipad O Hydro Power Plants A

## Hydro Power Waterways -

## Basemap Boundaries

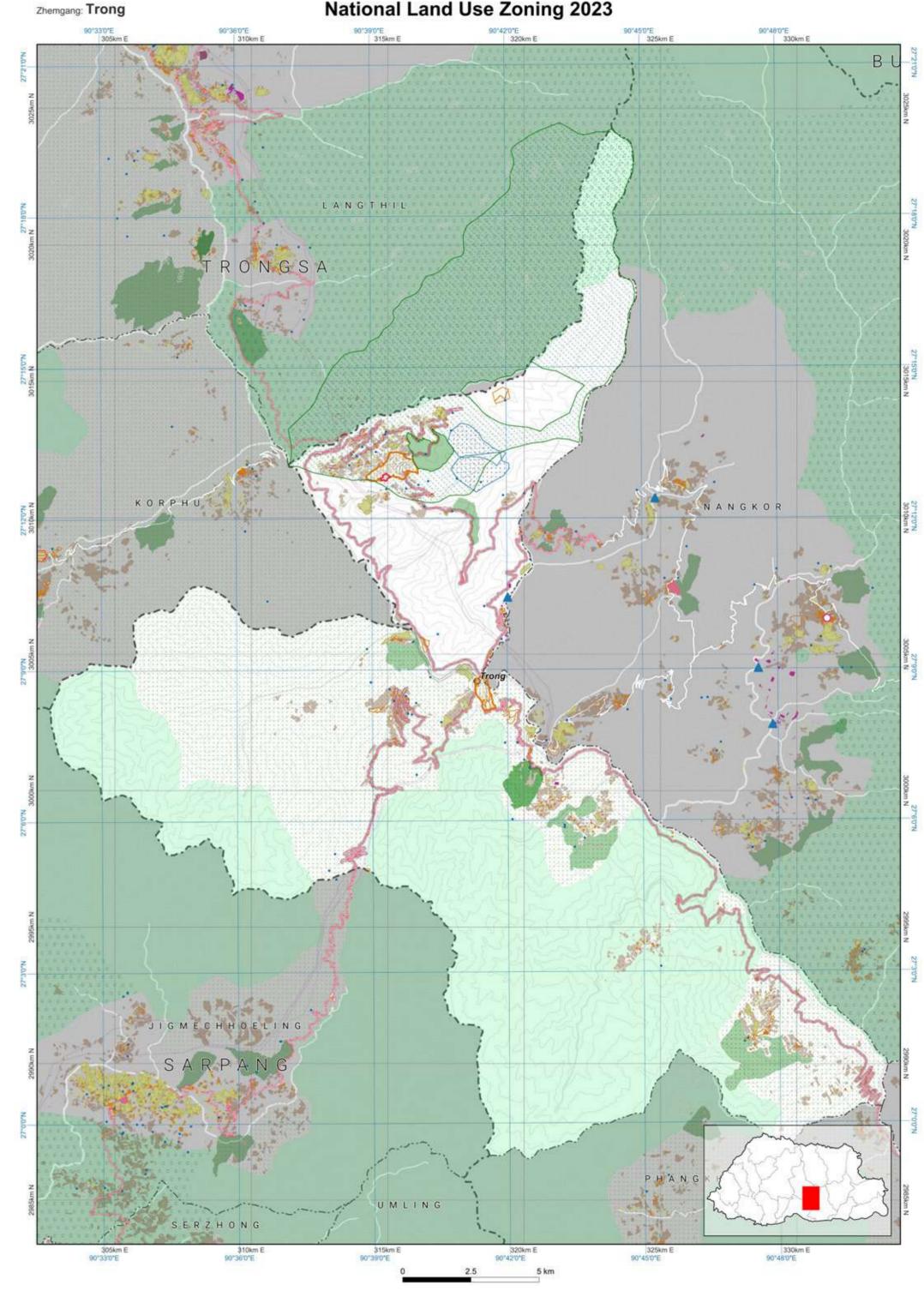
International --Dzongkhag - -Perennial Terrain

## Contour Roads for different

Highway 300k ——	Thromde 50k
Highway 50k ===	Thromde 25k
Highway 25k ===	Thromde 5k
Highway 5k	Access 5k
zongkhag 50k ===	Industrial 5k =
zongkhag 25k ===	Farm 5k ≡
Dzonakhaa 5k —	

## **Data Ownership**

•
Data Owner of the Map Content
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Department of Agriculture Ministry of Agriculture and Livestock
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Department of Water Ministry of Energy and Natural Resources
Department of Culture and Dzongkha Development Ministry of Home Affairs
Department of Human Settlement Ministry of Infrastructure and Transport
Department of Surface Transport Ministry of Infrastructure and Transport

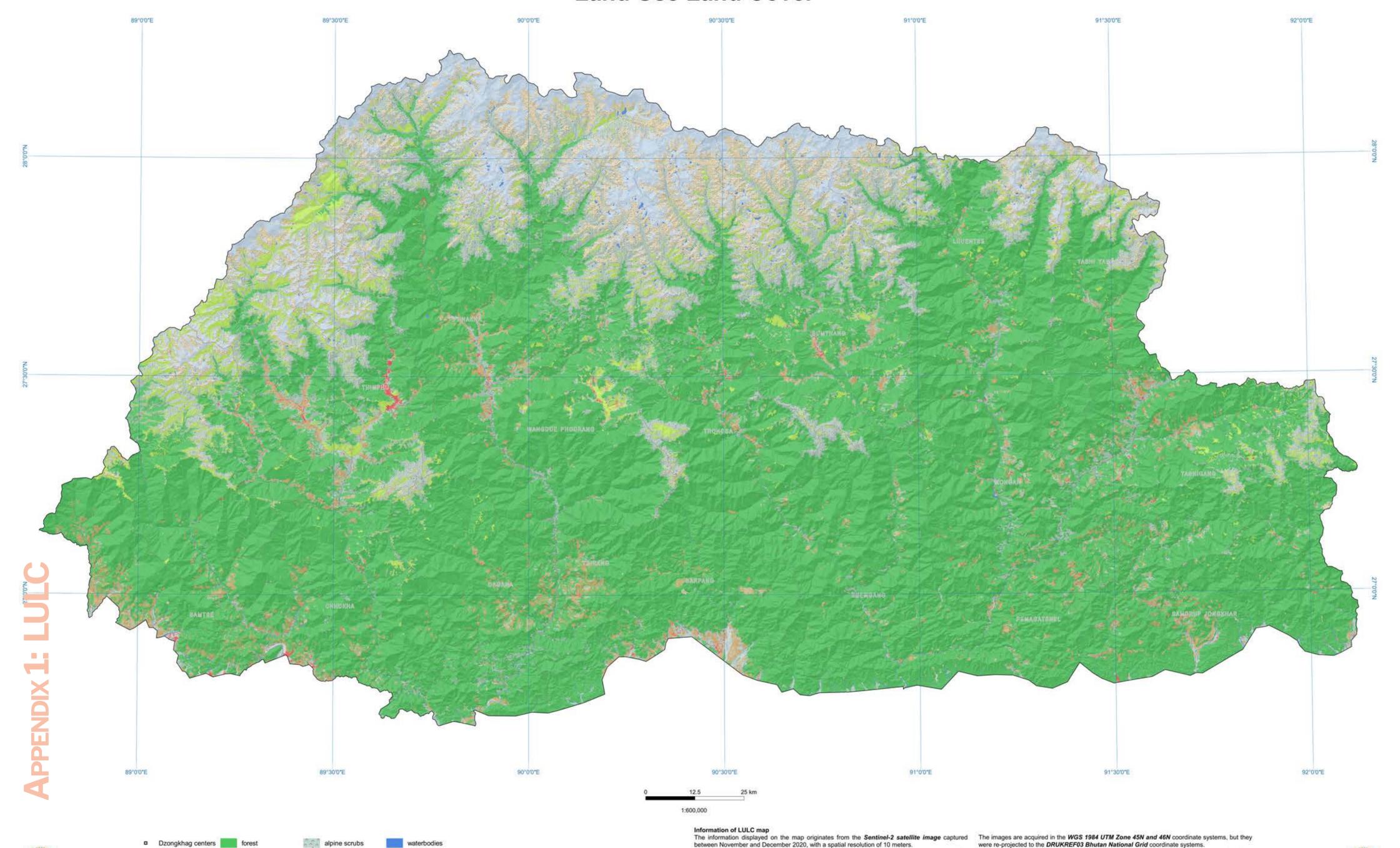


# **PART III**

# APPENDIX AND REFERENCES

A Baseline Report on National Land Use Zoning of Bhutan August 2023

# **Land Use Land Cover**



© NLCS 2023

builtup

non-built-up

landslides

morraines

rocky outcrops

agricultural land

shrubs

snow and glaciers

sandy bank

The information of LULC map

The information displayed on the map originates from the Sentinel-2 satellite image captured between November and December 2020, with a spatial resolution of 10 meters.

Prior to visualization, the data underwent pre-processing in the Sen2Cor processor, a part of the Sentinels Application Platform (SNAP). This pre-processing involved converting the Level-1C radiance data (top-of-atmosphere) to Level-2A surface reflectance data (bottom-of-atmosphere).

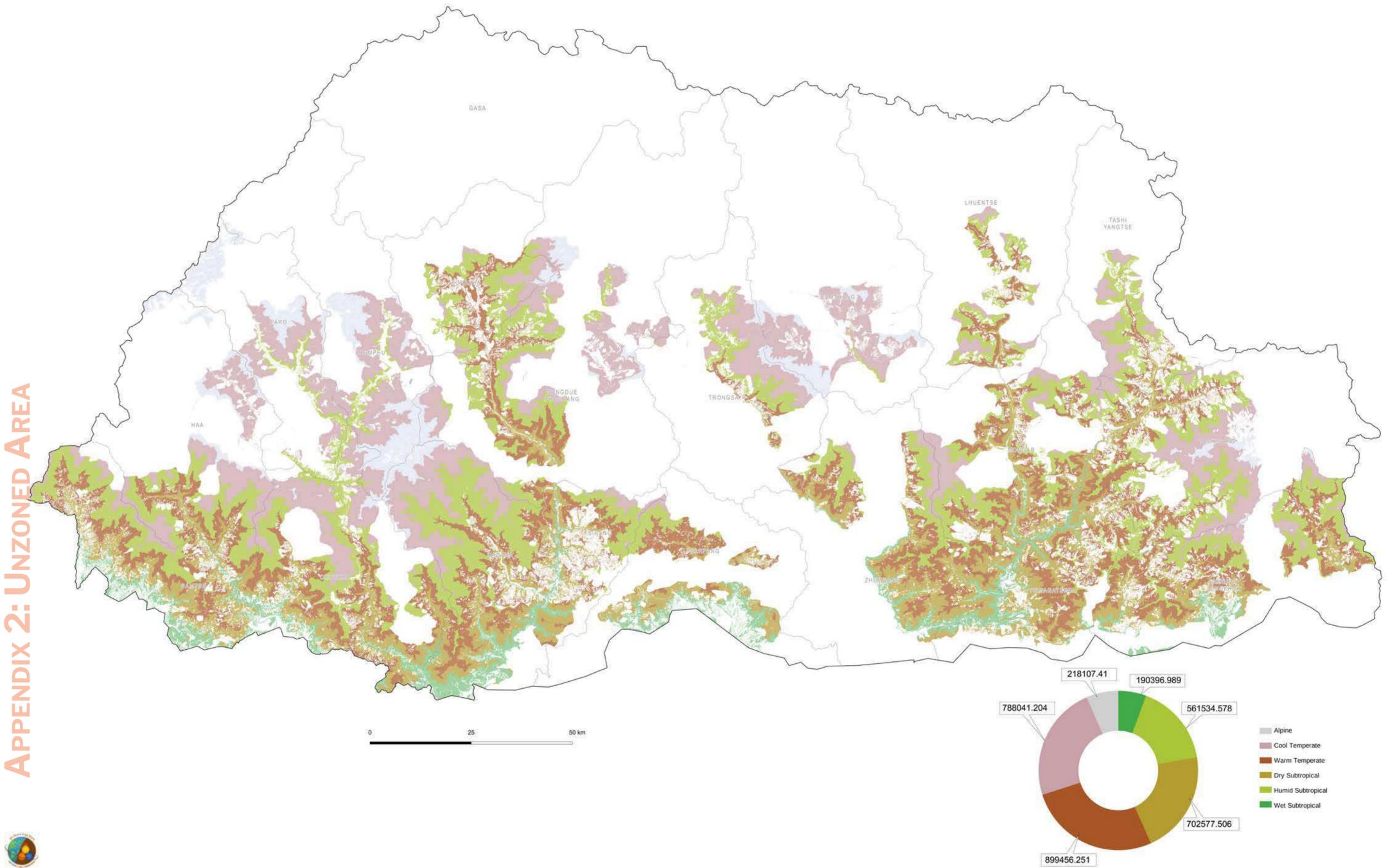
The images are acquired in the WGS 1984 UTM Zone 45N and 46N coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems, but they were re-projected to the DRUKREF03 Bhutan National Grid coordinate systems.

It is essential to note that the boundaries and names depicted on this map are based on information provided by the respective responsible agency, and they maintain the sole source of truth for this data. The geographic information contained within this map does not hold any legal connection to laws, rules, or regulations concerning land use or land ownership. NLCS disclaims any liability for errors that may arise due to user interaction with this map.

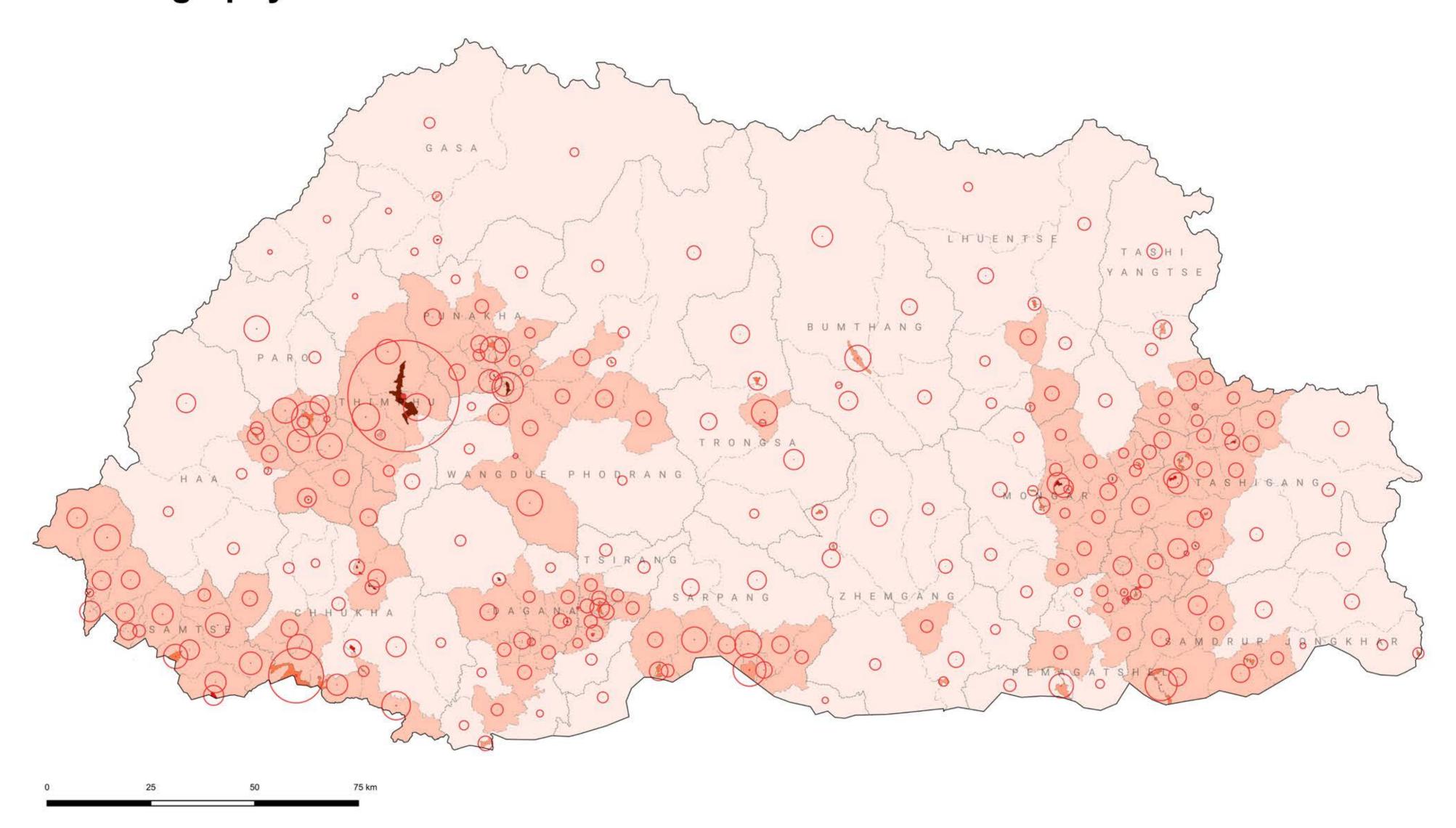


A Baseline Report on National Land Use Zoning of Bhutan

# **Unzoned Area**



# **Demography of Bhutan**



## Administrative Boundaries Population Density

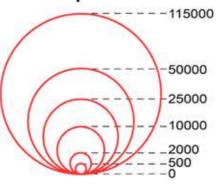
---- International
---- Dzongkhag
--- Gewog

--- Thromde

0.00 - 0.049 0.05 - 0.99 1.00 - 4.39 4.40 - 9.99 10.00 - 12.99 13.00 - 16.99

17.00 - 25.00

## **Total Population**



Source: Population & Housing Census of Bhutan, 2017 National Report National Statistics Bureau of Bhutan

Royal Government of Bhutan PO Box No 338 Thimphu, Bhutan www.nsb.gov.bt

Note: The demography map of Bhutan is prepared by NLUZ TWG, NLCS using the data produced by NSB.





					Metadat	ta						
	Data Identifi	cation Information		Contact	Information	Data Quality	Date Info	rmation	Mode of Acquisition		Reference Estem	Distribution
SI No	Title	Abstract	Status	Custodiar	Point of Contact	Horizontal Accuracy (m)	Acquisition Date	Last Update	Instrument/ Method	Original	Transformed	d Data Format
1		Extracted ownership and land type based on the cadastral map and thram DB. Generalised and reclassified the land type to land use with reference to other available data and satellite images. The data serve as a reference for all spatial planning. Ground truthing is required for some of the reclassified land use.		DoSAM, NLCS	tpelden@n- lcs.gov.bt	0.1	2008 onwards	19/01/2023	ToS/RTK	DrukRef 03	DrukRef 03	Shapefile
2	tion Value		landscape project)	DoFPS		Not applicable as data was processed using other Fundamental data.	2023	2023	HCV screening and field validation	DrukRef 03	DrukRef 03	Shapefile
	and Mining Area	This zone is identified as having the potential to contain economically viable mineral deposits and an area that is covered under a mining lease. Therefore, any development of mining activity in the future would be within this zone only.	•	DGM	namgaydor- ji@moenr.gov.b	<35 ot	Since 1961	01/06/2022	handheld GPS,	GCS Everest WGS 1984, DrukRef 03	,DrukRef03	Shapefile
4	Ecosystem Service(PES)	It is a "pay- for - performance" approach to financing the conservation of natural resources whereby Ecosystem Service (ES) providers receive payments [economic incentives] from ES beneficiaries/users that are conditional on specific conservation performance. The common types of PES schemes are: •Water- shed services: mainly on the protection and conservation of water resources for drinking, irrigation and hydropow- er generation; • Biodiversity protection: PES for biodiversity protection (e.g., protection of habitats for rare species like Black-necked Crane). • Scenic/landscape beauty: PES scheme on scenic/landscape beauty which is potential for ecotourism. • Carbon sequestration: PES for regulating services such as carbon sequestration. • Bundled Ecosystem services: Sometimes two or more ES can be combined and transact- ed as a package (e.g., biodiversity protection	updated	DoW	dgyalt- shen@moenr.g ov.bt	5-10	2010	2023	Delineated in Google Earth Pro	DrukRef03	DrukRef03	Shapefile
5		with scenic beauty or watershed services with carbon sequestration). Registered rangelands	Continuously	NLCS	sphuntsho@n-	10	2020	2022	Tsamdro Mobile	WGS84		Shapefile
		(either as TUT or on lease) which are actively used by highlanders for grazing purpose	updated		lcs.gov.bt				Арр			

	Metadata											
		cation Information	01.1		Information		Date Info		Mode of Acquisition	Sys	stem	stribution
SI No	Title	Abstract	Status	Custodian	Point of Contact	Horizontal Accuracy (m)	Acquisition Date	Last Update	Instrument/ Method	Original	Transformed	Data Format
6	Potential Recharge Area	The potential recharge areas (PRA) were identified in some of the drying water sources for intervention to revive and maintain sustainable flow of spring used for drinking and irrigation purposes. These polygons are delineated in a Google Earth Pro after thorough study on Hydrogeology and the analysis of the 3D conceptual layout of the study sites which are drawn using CoralDraw software and the combination of Google Earth Pro. These areas are critical since the aquifers are located within it. Since the science is quite new to the country the identification of PRA has just started in recent years. The identification and mapping will be a continuous process and will be done on a need basis.		DoW	dgyalt- shen@moenr.g ov.bt	5-10	2018	2023	Delineated in a Google Earth Pro	WGS84	WGS84	Shapefile
7	Water sources	These are the point data recorded above the water tapping point, inventory of water sources currently used for drinking, irrigation and commercial purposes by our people in all the 20 Dzongkhags.	Continuously updated	DoW	dgyalt- shen@moenr.g ov.bt	<10	2021	2023	GPS	DrukRef03	DrukRef 03	Shapefile
8	Existing and Under Construction Hydropower Plants	Contains the point data of the dam and Powerhouse locations and line data of the tunnels	Continuously updated	DoE	utsher- ing@moenr.gov bt	10	2012	22/06/2023	Total station, GNSS, DGPS, Satellite imageries, Google earth Handheld GPS	WGS 84	DrukRef03	Shapefile
9	Mini Hydel	Contains the point data of mini hydel	Completed	BPC	utsher- ing@moenr.gov bt	10	2003	30/12/2022	Handheld GPS	WGS 84	DrukRef03	Shapefile
10	PowerLine and RoW Buffer		Continuously updated	DoE	utsher- ing@moenr.gov bt	10	2016	2019	DEM, Google Earth and Satellite Imageries	WGS 84	DrukRef03	
11	Power System Master Plan 2040 sites	The 155 hydropower potential sites	Completed	DoE	utsher- ing@moenr.go\ bt	10	2019	2019	Digitized from 1:50000 topo base map	WGS 84	DrukRef03	
12	Urban_Boundary	Thromdes and Boundaries 2nd July 2010 has been used as the basis of the Zone. However, there are few settlements which have expanded their boundaries, and also new planned settlements that have been approved and implemented on the ground too. For these settlements, their latest boundaries have been used. In the perspective zones all the planning boundaries have been used.	On-going On-going	DHS	ds- ingye@moit.go .bt	<35 v	2010			DrukRef 03	DrukRef03	



	Metadata											
	Data Identifi	cation Information		Contact		Data Quality	Date Info	rmation	Mode of Acquisition	-	teference D	istribution
SI No	Title	Abstract	Status	Custodian	Point of Contact	Horizontal Accuracy (m)	Acquisition Date	Last Update	Instrument/ Method	Original	Transformed	Data Format
13		Extracted from the Road Inventory of the department. National highways inventory is given by DoST and other types of roads are included from NLC digitization. The surveys were done from 2016 till 2019 using GPS mounted on the survey vehicle which posed multiple challenges. Accurate data from the ROMDAS survey could be shared in coming years. Accuracy of the buffer of 50 ft. is compromised and not be considered fully from this zonation map and Physical verification will be required.		DoST	thinleywangc- huk@moit.gov. .bt, drchhet- ri@moit.gov.bt	5-10	2016 Onwards. (October to December)	2023 yet to be completed	Dashcam is mounted on the windscreen of a vehicle to record the view of the road pavement condition which has its time reference tallied with the GPS logger used for collecting coordinates. The video data is assessed and then processed in excel & GIS. From 2022, ROMDAS (Road Measurement and Data Acquisition System, 2023) is used.		DrukRef03	Shapefile
14	Protected Chhuzhing	Contiguous cluster of chhuzhing plots within 10 meter distance from each other with a combined total area of 10 acres and above located at an altitude of 2500 meters or below.	Completed	DoA	twangdi@- moal.gov.bt, tshetendor- ji08@gmail.con dtashi@- moaf.gov.bt	0.1 1	February 2023	June 2023	Processed by buffering and clustering reclassified cadastral chhuzhing data provided by NLCS.	DrukRef 03	DrukRef 03	Shapefile
15	Regulated Chhuzhing	Chhuzhings apart from protected chhuzhing with a cluster area less than 10 acres or located above an altitude of 2500 meters		DoA	twangdi@- moal.gov.bt, tshetendor- ji08@gmail.con dtashi@- moaf.gov.bt	0.1	February 2023	June 2023	Based on the cadastral data from NLCS.	DrukRef 03	DrukRef 03	Shapefile
16	Religious sites	Contains 65 religious sites	Completed	DoCDD	sangaycho- den6005@g- mail.com ysamdrup@mo ha.gov.bt	3-5	4/1/2023	22/6/23	Acquired from cadastral map and digitized.	DrukRef 03,WGS 84	DrukRef 03, WGS 84	Shapefile
17	NyeAtlas	NyeAtlas data contains the spatial location and attribute data of the heritage/religious sites in the country.	Completed	DoSAM	ctshering@n- lcs.gov.bt	<10	2016	2018	Handheld GPS (Trimble GoXT)		DrukRef03	Shapefile
18	Geographical Names	Contains spatial information with standardized names for the dzongkhag, gewog, chiwog, and villages of Bhutan.	On-going	DoSAM	ctshering@n- lcs.gov.bt	<10	2017	2023	Handheld GPS and Google earth	DrukRef03	DrukRef03	Shapefile
19	DEM/SRTM	CartoDEM is developed by Indian Space Research Organization (ISRO). It is derived from the Cartosat-1 stereo payload and seamless homogenous DEM is produced by TIN modeling of irregular DEM, interpretation for regular DEM generation and automatic strip to strip mosaicing		NLCS	pwangda@n- lcs.gov.bt	10m			Satellite Imagery	WGS 1984	DrukRef03	Shapefile
20	Contour	The contour layer contains the elevation information covering the entire Bhutan with a 40 m contour interval generated from 50K Topo.	Completed	NLCS	pwangda@n- lcs.gov.bt	40m	1991	NA	Topo basemap	DrukRef03	DrukRef03	Shapefile
21	Heritage Village	Contains one heritage village of Nabji.	Completed	DoCDD	sangaycho- den6005@g- mail.com ysamdrup@mo ha.gov.bt	3-5	April,2023	22/6/23	Acquired from cadastral map and digitized.	Drukref03,W GS 84	DrukRef 03, WGS 84	Shapefile

	Metadata											
	Data Identifi	cation Information		Contact	Information	Data Quality	Date Info	rmation	Mode of Acquisition	•	Reference D stem	istribution
SI No	Title	Abstract	Status	Custodian	Point of Contact	Horizontal Accuracy (m)	Acquisition Date	Last Update	Instrument/ Method	Original	Transformed	Data Format
22	Heritage conservation zone	Contains 65 conserva- tion zones and buffer zones of Registered Heritage sites which were prepared aligning the ownership and land type based on the cadastral map. Buffer zone for Changangkha has been provided with a scientific approach but the buffer zone for other heritage sites is still under discussion.		DoCDD	sangaycho- den6005@g- mail.com ysamdrup@mo ha.gov.bt	3-5	April, 2023	22/6/23	Acquired from cadastral map and digitized.	Drukref03,W GS 84	DukRef 03, WGS 84	Shapefile
23	Industrial Parks (IP)	Dol, MoICE is envisaged to promote balanced regional development and enhance growth of the rural economy to have socio-economic activity in cost effective manner by promoting manufacturing and production industries. IP will further create favourable environments for the private sector development through the provision of basic infrastructures.	Continuously updated	Dol	ugyendor- ji1@moice.govbt/ kchoki@moice. gov.bt		NLCS shared data to Dol since 2016	Fix legal boundary	TOS carried out by NLCS	Drukref03	Drukref03	Shapefile
24	Proposed Potential Industrial Park	These are the potential sites to promote industries in future as and when needed. These sites are identified in consensus with a multi sectoral team composed of members from relevant department/agencies. Some of proposed sites in Samtse are Upper Dhamdum (including jersey farm), Norbugang and Daurpani.	On-going	Dol	ugyendor- ji1@moice.gov- .bt/ kchoki@moice. gov.bt		2023	2023	Boundary survey with help of RTK was carried out by Land Section of Samtse Dzongkhag and LMD/DoLAM/N- LCS		Drukref03	Shapefile Shapefile
25	Glacial Lake Outburst Flood/ Rainstorm Flood Hazard Map	This flood hazard map has been developed using Hydrodynamic models like HEC RAS. Such models are developed in Amo Chhu, Thim Chhu, Punatsangchhu, Chamkhar Chhu and Mangde Chhu river basin. However, some of earlier developed inundation/ hazard maps are currently being reviewed in collaboration with JICA. So a more recent and updated hazard map has been provided here, while a similar map for other river basins will be provided once updated with the recent version.		NCHM	hwrs-d@nchm.gov.br	0.1 t	2021	2021	Used Satellite Image and Image acquired through UAVs	DrukRef03	Drukref03	Shapefile
26	Glacier Map of Bhutan	Bhutan glacier Inventory (BGI) has been published using Sentinel-2 image	Completed	NCHM	csd@nchm.gov .bt	<i>y-</i> 0.2	2021	2021	Mapping Carried out using Sentinel-2 Imagery	WGS84	Drukref03	Shapefile
27	Glacial Lake Map of Bhutan	Bhutan glacial Lake Inventory (BGI) has been published using Sentinel-2 image	Completed	NCHM	csd@nchm.gov .bt	<i>y-</i> 0.2	2021	2021	Mapping Carried out using Sentinel-2 Imagery	WGS85	Drukref03	Shapefile



	Metadata											
	Data Identifi	cation Information		Contact	Information	Data Quality	Date Info	rmation	Mode of Acquisition	•	Reference stem	Distribution
SI No	Title	Abstract	Status	Custodian	Point of Contact	Horizontal Accuracy (m)	Acquisition Date	Last Update	Instrument/ Method	Original	Transforme	ed Data Format
28	Forest Management Unit	The objective of the spatial organization of the FMU is to sub-divide the FMU in order to the preparation and implementation of annual activities.  Delineation of Boundary, Blocks, compartment and sub-compartments is carried out using Google earth pro and QGIS by navigating to the area of interest and permanent natural features.		DoFPS	ara- i@moenr.gov.b	5-10 t	1977	2023	Delineated on topographic map and google earth following natural features		Drukref03	Shapefile
29	Key Biodiversity Area	KBAs are home to critical populations of the world's threatened species. By mapping and protecting KBAs, we can ensure the conservation of the largest and most important populations of these species – and give them a real chance of survival. Identifying KBAs involves taking a global view of species conservation. The conservation sites are identified based on the rarity of species in their own country, even if the species is widespread in other countries. Applying the KBA criteria ensures that the global population of a species is assessed and the most important populations for that species as a whole are identified, including maintaining the genetic variation needed to adapt to a changing planet		DoFPS	ara-i@moenr.gov.b	10	2023	2023	Acquired using handheld GPS and SW Map	Drukref03	DrukRef03	Shapefile
30	Ramsar Site	These wetlands are wetlands of International importance. It was named after the city of Ramsar in Iran, where the convention was signed in 1971.	Completed	DoW	dgyalt- shen@moenr.g ov.bt.	5-10	2013	2015	GPS	DrukRef03	DrukRef03	Shapefile
31	Flood Hazard map	Hazard may be defined as a source of potential harm or a condition that may cause loss of life or initiate any failure to the natural, modified or human systems	r	DHS	ds- ingye@moit.go .bt	V			Available data compiled from the official publication of the concerned agency. Raster files were vectorized.		DrukRef03	Shapefile
32	Helicopter Landing Spots	Location of helicopter landing sites which have been validated against movement records obtained from Druk Air-Helicopter Services	Continuously updated	DoAT	sangaytenzin@ doat.gov.bt/n- rinchen@do- at.gov.bt	-10	2023	2023	Captured from Helicopter V2 Tracking System	WGS84	Drukref03	Shapefile
33	Flight Funnel Map for Paro International Airport	Flight funnel map prepared by the BCAA & DHS, MoIT for the protection of the flight funnel area from uncontrolled construc- tion.	Completed	DoAT	sangaytenzin@ doat.gov.bt/n- rinchen@do- at.gov.bt	-0.2	2021	2022	GNSS RTK & ToS by DHS Surveyors	Drukref03	Drukref03	Shapefile



Zones/ Buffers	Permissible	Permissibility in Zones/Buffers  Non-permissible	Legal References	Agencies Responsible
Heritage Conservation Zone	Any works only after submission of an application to the Dzongkhag Administration or Dzongkhag Thromde Administration in accordance with the procedures stipulated in the rules and regulations.	Demolition, alteration, extension or renovation of a Registered or Designated Heritage Building, or existing building in the Important Cultural Site, the Registered Archaeological Site, or the conservation zone of a Registered or Designated Heritage Building, unless approved by the Department of Culture.  Collection of archaeological remains from a Registered Archaeological Site.	Draft Cultural Heritage Bill of Bhutan, 2016	Department of Culture and Dzongkha Development.
Heritage Buffer Zone	Development activity in a buffer zone of a Designated Heritage Building or of an Important Cultural Site in compliance with the development control regulations and seeking a development permit from the Dzongkhag Administration or Dzongkhag Thromde Administration.  Maintenance and improvement of a highway, Dzongkhag roads, Farm roads and Thromde roads.	No person shall without approval or without any lawful authority or excuse: (1) Make a ditch or excavate a road; (2) Remove any soil or turf from any part of a road, except for the purpose of maintaining and improving a road; (3) Deposit anything including construction materials whatsoever on a road so as to damage the road; (4) Move or cause to move a self propelled machine or equipment or any machine or equipment having wheels of metal tracks to ply on a carriageway of a road.	Draft Cultural Heritage Bill of Bhutan, 2016	Department of Culture and Dzongkha Development.
Road and Buffer RoW	The Department or a Local Government may in relation to maintenance or improvement of roads, carry out any or all of the following works:  (1) Widening of roads or a part of or a section of it;  (2) Leveling of roads;  (3) Constructing or removing walls, structures, barriers, ducts, etc on the side of roads;  (4) Cutting off corners;  (5) Roundabouts or T-junction at crossroads or junctions for regulating the movement of traffic;  (6) Preventing obstruction to line of sight;  (7) Prescribing improvement line for widening streets;  (8) Planting of trees, grass verges etc;  (9) Lighting of roads or delegating it to a power or electricity authority;  (10) Provision of drains on roads and for erection of barriers etc to prevent surface water from flowing on to it or on to private lands;  (11) Interfering or carrying out of any works that affect drains, barriers etc;  (12) Filling of roadside ditches; (13) Protecting roads against hazards of nature;  (14) Diverting watercourses for carrying out improvement works upon issuance of clearance from the National Environment Commission;  (15) Any other road maintenance or improvement activity as deemed necessary by the Road Authority.  Plant, retain or maintain trees, shrubs, plants, grass or shrubs upon approval.  (1) Erect flag poles and other structures only outside the carriageway of a road for the purpose of displaying decorations;  (2) Make slots in such a road for the purpose of erecting the structures; and  (3) Remove any structure erected or slot made in pursuance of paragraph (1) or (2) above	Construction of road humps on any road unless authorized or approved of the Department or the concerned Local Government in accordance with the rules and regulations.  Painting, inscription or affixation of any picture, letter, sign or other mark upon the surface of a road or upon any tree, structure on or in a road unless approved by the Department or a Local Government.  No footway, footpath or walkway of a street shall be damaged or caused to be damaged by or in consequence of any excavation or by carrying out any works on a land adjoining such street.  Obstruction of free passage of traffic along a road, footways, footpaths and walkways.  Erect a structure or a fence, or plant a hedge on a road, footways and footpaths.  Park any vehicle on a carriageway of a road or a street or a part of a road or a street which is not authorized for parking.  Construction of any building/house or any structure within the right of way Construction of a basement under any road or street.  Construct or erect and maintain such channels, gutters or pipes to prevent water from the roof or any other part of the premises from falling on the road or persons using the road.  Quarrying, logging and any other activity to the detriment of a road unless approved	Road Act of Bhutan, 2013 Road Rules and Regulations, 2013	Principal Agency; Department of Surface Transport, MoIT  Supporting Agency; Local Government, Royal Bhutan Police, Bhutan Construction and Transport Authority
Transmission line's RoW	Construction of any structures such as dwellings for human and animal, storage facilities, and any other activities beyond the overhead electrical conductor clearance specified in the Safety Code may be permitted by the Authority on a case-by-case basis.  Agricultural activities such as farming, crop, fruit and fodder cultivation shall be allowed after fulfilling the electrical clearance specified in the Safety Code, and amendments thereof.	Construction of any structures such as dwellings for human and animal, and storage facilities directly below the electrical conductor shall not be allowed unless permitted by the Authority and case-by-case basis	Safety Code (Amendment) 2021  Draft Guidelines on Right of Way for Power Lines	Department of Energy  Electricity Regulatory Authority  Bhutan Power Corporation Limited  National Land Commission  Secretariat
Flight Funnel Zone	NA	Construction of any structures shall be subjected to height limitation imposed by the Flight funnel & ICAO requirements	Flight Funnel Map - Paro Int. Airport Prepared by BCAA & DHS	, Paro Dzongkhag, Wangchang Gewog, Department of Air Transport, Bhutan Civil Aviation Authority
Protected Chhuzhing	Paddy cultivation during the paddy season and any other crops before and after the season	Conversion to other land use to category	NA	Department of Agriculture
Regulated Chhuzhing	Paddy cultivation (if owners are interested) and other crops	Construction	NA	Department of Agriculture

Zones/ Buffers	Permissible	Permissibility in Zones/Buffers Non-permissible	Legal References	Agencies Responsible
PA Core Zones	Scientific research and habitat management	All anthropogenic disturbances including timber extraction and NWFP collection	FNCA 2023, FNCRR 2017, and PA Zonation guideline 2020.	Department of Forest and Park Services
Transition Zones	The protection status of this zone should be at par with that of the core zone with regulated exceptions during seasonal use for the purpose of exercising traditional/legal community rights that shall include but not limited to the following; Cordyceps collection Collection of NWFP Seasonal grazing Use of traditional/ancient trails Seasonal collection of fuelwood	Infrastructure development Timber extraction NWFP collection Quarrying Developmental activities Encroachment and illegal settlements	FNCA 2023, FNCRR 2017, and PA Zonation guideline 2020.	Department of Forest and Park Services
Buffer Zones	Authorized timber extraction of local use Authorized timber extraction and infrastructure development Ecotourism activities and other traditional and cultural practices. These activities will be permitted upon approval from DoFPS	Quarrying, commercial logging and construction of infrastructure without proper permits and approval Poaching or hunting of wildlife, damage or disturbance to cultural and natural heritage, encroachment and illegal settlements.	FNCA 2023, FNCRR 2017, and PA Zonation guideline 2020.	Department of Forest and Park Services
Multiple Use Zones	All permissible activities inside Core, Buffer and Transition Zones including timber extraction, quarrying for rural use by the local inhabitants, and developmen- tal activities such as ecotourism.	Hunting or poaching of wildlife Unauthorized developmental activities.	FNCA 2023, FNCRR 2017, and PA Zonation guideline 2020.	Department of Forest and Park Services
Biological Corridors	All permissible activities under protected areas (Buffer and transition zones)	Hunting and poaching. Unauthorized developmental activities.	FNCRR 2017	Department of Forest and Park Services
Community Forests	Sustainable harvesting of timber and NWFP following approved management plans.  Agroforestry and sustainable farming practices that promote soil conservation and biodiversity.  Community-based ecotourism activities that generate income for member groups while preserving the forest.  Environmental education and awareness programs  Community development projects within the forest area	Unauthorized commercial logging Overexploitation or sustainable harvesting of resources Encroachment and illegal settlements Hunting or poaching	FNCA, 2023 & FNCRR 2017, (Amendment 2020-2021)	Department of Forest and Park Services Community Forest Managemen Group
Forest Management Units (FMU)	Sustainable timber harvesting based on approved management plans and regulations Forest restoration and reforestation initiative to enhance forest cover and ecosystem services Wildlife conservation efforts, including habitat management and monitoring of threatened taxa.	Unauthorized land conversion Illegal logging and hunting	FNCA, 2023 & FNCRR 2017, (Amendment 2020-2021)	Department of Forest and Park Services Natural Resources Developmen Corporation Limited
Key Biodiversity Areas (KBAs)	Scientific research and monitoring of biodiversity Conservation and restoration efforts to protect rare and endangered species	Unauthorized infrastructure development or conversion or land conversion Habitat destruction or fragmentation Pollution or degradation of water bodies	FNCA, 2023 & FNCRR 2017, (Amendment 2020-2021)	Department of Forest and Park Services
Critical Watershed	Scientific research Watershed/springshed management activities	Any detrimental activities (anthropogenic disturbance)	Water Act of Bhutan, 2011 & FNCRR 2017	Department of Water Department of Forest and Park Services Local Governments
Potential Recharge Area	Regulated use of timber, NWFPs and grazing Implementation of recharge enhancement measures (trenching, biological measures, etc)	Any activities that are detrimental to the health of recharge areas (constructions of road, mining, commercial logging, etc)	Water Act of Bhutan, 2011	Department of Water Department of Forest and Park Services Local Governments
Payment for Ecosystem Services	Regulated use of timber, NWFPs and grazing Implementation of conditional conservation activities agreed between Ecosystem Service Provides and Ecosystem Service beneficiaries	Any activities that are detrimental to the health of ecosystem/ catchment/ watersheds	Water Act of Bhutan, 2011	Department of Water Department of Forest and Park Services Local Governments
Water sources	Conservation and protection activities to enhance water discharge/groundwater recharge. Surveys and research activities	Extraction of resources (mining, logging, etc) Alteration of land use Construction of roads Waste disposal and other pollutants	Water Act of Bhutan, 2011 and, FNCA, 2023	Department of Water Department of Forest and Park Services Local Governments
Ramsar Sites	Biodiversity survey and research Wise use of services based on wetland management plan	Change in the ecological character of the wetlands Diversion of the rivers or any other streams from its natural course Construction of structures, dykes (flood protection walls), roads or any other developmental activities that will have an adverse impact on the condition of the wetlands Draining of the marshes, dredging, and mining Dumping of waste and other pollutants Any other activities that contradict with conservation of wetlands	Water Act of Bhutan, 2011, FNCRR 2017 & Ramsar Convention, 1971	Department of Water Department of Forest and Park Services Local Governments
Rural Settlement Zone	Any form of development to benefit the community and the people.	Not defined	Local Government Act 2014	Local Government and allied Ministry



Zones/ BuffersPermissibleLegal ReferencesAgencies ResponsibleRangelandGrazing and allied activitiesRegulated infrastructure layout and thoroughfare as Kidu after nationalization with Land Act 2007Tsamdro Use Thram (TUT), granted as Kidu after nationalization with NLCSDepartment of Livestock & NLCSStrategic Development Zones (SDZ)Defined activities as per spatial planning SDZBeyond development controls and regulation within SDZZone specific controlsDefined sectorsIndustrial ZoneAll activities categorized under both Manufacturing and Production Industry, and Service IndustryNAAs per office order issued by Ministry on 1994Department of Human Settle			Permissibility in Zones/Buffers		
Strategic Development Zones (SDZ)  Defined activities as per spatial planning SDZ  Beyond development controls and regulation within SDZ  Defined activities controls  All activities categorized under both Manufacturing and Production Industry, and Service Industry  All activities categorized under both Manufacturing and Production Industry, and Service Industry  SDZ  As per office order issued by Ministry on 1994  Department of Industry	Zones/ Buffers	Permissible	Non-permissible	Legal References	Agencies Responsible
Zones (SDZ)  Industrial Zone  All activities categorized under both Manufacturing and Production Industry, and Service Industry  SDZ  As per office order issued by Ministry on 1994  Ministry on 1994	Rangeland	Grazing and allied activities	Regulated infrastructure layout and thoroughfare	as Kidu after nationalization with	
Manufacturing and Production Industry,  and Service Industry	• ,	Defined activities as per spatial planning	,	Zone specific controls	Defined sectors
Urban Zone All activities defined NA NA NA Department of Human Settle	Industrial Zone	Manufacturing and Production Industry,	NA		Department of Industry
Orban Zone An activities defined the Department of Human Settle	Urban Zone	All activities defined	NA	NA	Department of Human Settlem

## LIST OF STAKEHOLDERS

	List o	f Stakeholders Engaged and Served as TWG Members
	SI	Agencies
Π	1	Department of Agriculture, MoAL
	2	Department of Forest and Park Services, MoENR
	3	Department of Human Settlement, MoIT
	4	Department of Energy, MoENR
	5	Department of Air Transport, MoIT
	6	Department of Geology and Mines, MoENR
	7	Department of Culture and Dzongkha Development, MoHA
	8	Department of Industry, MoICE
	9	Department of Local Governance and Disaster Management, MoHA
	10	Department of Surface Transport, MoIT
	11	Department of Water, MoENR
	12	National Centre for Hydrology and Meteorology, NCHM
	13	National Statistical Bureau, NSB
	14	World WildLife Fund (WWF)
	15	REDD+
	16	JICA

## NLUZ WORKING GROUP

## **E**XECUTIVE **C**OORDINATOR

Tshering Gyaltshen Penjor, Secretary

## National Land Commission TWG

- 1. Gonpo Tenzin, Coordinator (11608000669)
- 2. Chencho Tshering, Admin Coordinator (108070013)
- 3. Tika Chettri, Technical Coordinator (11208001124)
- 4. Pema Wangda, TWG (11502000494)
- 5. Chencho Nedup, TWG (10703000995) 6. Chhoki Wangmo, TWG (11410004511)
- 7. Dendup Tshering, TWG (10904002861)
- 8. Dorji Phuntsho, TWG (11107002971)
- 9. Kuenzang Lhamo, TWG (11505000507)
- 10. Yeshey Wangmo, TWG (11512002119)

## EXPERT

Wim Feringa, Visualization

## Managerial/Technical Advisors

- 1. Geley Norbu, DoLAM Director (10710000359)
- 2. Chokila, DoSAM (10711001891)
- 3. Samdrup Dorji, GID (11107004730)
- 4. Lobzang Tobgye, Topo (11107003217)

## CROSS-AGENCY TWG

- 1. Dawa Tashi, DoA (11507000727)
- 2. Dorji Gyaltshen, DoW (11107001400)
- 3. Namgay Dorji, DGM (11607001987)
- 4. Sangay Choden, DoCDD (11504004047)
- 5. Sangay Tenzin, DoAT (10810001796)
- 6. Sonam Tshewang, DLGDM (10504000026)
- 7. Thinley Wangchuk, DoST (11502001844)
- 8. Tsheltrim Dorji, DoFPS (10608001080)
- 9. Tshering Duba, NCHM (10704000614)
- 10. Ugyen Dorji, Dol (11102000372)
- 11. Ugyen Tshering, DoE (11401001198)
- 12. Dawa Singye, DHS (11401001186)

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A Baseline Report for the National Land Use Zoning (NLUZ) means, a baseline inventory of geospatial data with an overview report of the NLUZ exercises, based on the defined objectives and scope; context and background; Fit-For-Purpose approach and methodology; and parameterization and analysis. This intends to serve as starting point for assessing and measuring various parameters and spatial considerations related to national land uses. It provides a snapshot of the current conditions, status, and characteristics of land and land based resource benchmarks, against which the progress and impacts can be measured over time.

This shall form as a basis and valuable tools for monitoring and evaluating the progress of land use initiatives at national level, tracking changes over time, and making informed decisions based on the location intelligence and spatial decision support system.





