



## **Draft National Human Settlements Policy of Bhutan**

**Ministry of Works and Human Settlement**

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## **I. Introduction**

Bhutan continues to undergo rapid socio-economic change and progress. While these changes manifest in the enhanced welfare of people, they also lead to challenges that the country is not fully prepared to deal with. Some of the main challenges are adverse impacts of development on the environment and cultural landscape, climate change induced risks, rural-urban migration, housing shortage especially in urban centres and increased exposure to disaster risks.

Bhutan has a very rich environment and bio-diversity. In view of its fragile mountain eco-system, strong environmental preservation ethics and focus on agriculture, only a limited amount of land is available for human settlements. Further, Bhutan is located on a geologically sensitive area and the country is vulnerable to multiple natural hazards such as earthquakes, floods and landslides. Given the increasing development programmes and projects, there is competing demand for land and infrastructure services.

Climate change could impact the country's fragile eco-system, and thereby the resources and human settlement spaces. Many rivers originate from glacial lakes, melting of which would put the settlements downstream to Glacial Lake Outburst Flood (GLOF) risks. Parts of the country may be subject to heat stress, tropical diseases and loss or depletion of food due to incremental temperature rise and extreme weather patterns while other parts would face migratory shifts of human settlement, biodiversity, pests and diseases induced by climate change. There are also evidences of water sources shrinking or drying up in many areas.

Bhutan is urbanizing rapidly. Bhutan 2020 projects that 50% of the population would be living in urban areas by 2020. Population and Housing Census of Bhutan (PHCB) 2005 found that 31% of the population was living in urban areas then compared to 20% in 2000 and 15% in 1995. Population Perspective Plan of Bhutan 2010 projects that the country's population would double by 2045, taking 2005 as the base year. Emerging trends show that there is huge movement of people from rural to urban centres, mainly from eastern to western regions. Such skewed congregation of population in one or two regions will have adverse impacts on the sustainability of the receiving centres and their ability to provide adequate services.

Traditionally, housing shortage was not a critical issue because of the social safety net provided by the community. Villagers, relatives and neighbours came together and provided support and help for any house construction in a village. However, with the change in economy and settlement structures, most urban centres are faced with shortage of affordable housing. Residential buildings and land marked for residential development are often changed to other uses creating mismatch between demand, provision and uses. Rental costs, consequently, are high leading to over-crowding and occupancy of sub-standard dwelling units. There are also issues of lack of housing at places of employment and vice-versa.

The layout and characteristics of traditional settlements, as elements of culture, tradition and heritage, give a unique cultural landscape. However, the rapid pace of new developments has risks of adverse impacts on the settlement patterns. New designs are introduced in rural settings which often are not compatible with the function and character of the existing settlements. Development interventions like the construction of roads, water supply schemes and the public institutions influence development of settlements.

Planning, generally, is believed to be possible only with the support of adequate legislation. In the absence of a specific human settlement planning legislation, planning in Bhutan is carried out with support of incidental provisions in other laws. But now with greater diversity

and intensity of development, planning processes risk facing further complications in the absence of appropriate legislation.

Lack of a holistic human settlements policy and appropriate legislation add to the challenges. Therefore, the National Human Settlements Policy of Bhutan aims to promote an integrated approach to settlements planning and development.

## **II. Vision and mission**

### **a. Vision**

The vision of the National Human Settlements Policy is:

*To promote development of environmentally sustainable, culturally vibrant, economically strong and highly live-able human settlements.*

### **b. Mission**

The mission of the National Human Settlements Policy is to:

- Promote a hierarchy of settlements and community vitality through an integrated approach to development of settlements.
- Ensure preservation of the natural state and quality of environment, conservation of the ecology and avoid pollution.
- Ensure preservation of tradition, culture, historic structures and sacred sites, promotion of vernacular architecture and building systems.
- Ensure that human settlements are not located in disaster prone areas and developments incorporate disaster resilient features.
- Promote equitable access to, sharing of and rational use of resources in human settlement planning and development.
- Enable access to safe and affordable housing for all citizens and promote home-ownership.
- Facilitate coordination and cooperation among various agencies engaged in provision of public services and infrastructure facilities.
- Enable adoption of relevant legislation, guidelines, standards, appropriate strategies and actions plans to promote integrated and sustainable human settlements.
- Establish appropriate institutional and legal framework for implementation of the policy and institute a comprehensive, inclusive and participatory planning system.

### III. Guiding principles

Human settlement encompasses many sectors such as land, environment, infrastructure services, housing, employment, economy, climate change, disasters, culture, and heritage. It is important to recognize the linkages and to ensure that they are adequately addressed. Therefore, a number of policies, strategies, good practices and emerging issues and trends form the basis of this policy document:

- a. The **principles of GNH** that seek a balanced approach to enhancing economic development, environmental conservation, cultural preservation and good governance.
- b. The concept of **regionally balanced and equitable development** and other development policies especially with regard to population growth and movement.
- c. **Poverty alleviation** through efforts like improved settlement areas, better employment opportunities, reduced disaster risks and provision of basic services.
- d. **Climate change** impacts that could have adverse effects for the country's socio-economic development, natural environment and human settlements and livelihoods.
- e. **Disaster risk reduction and management** as the country is prone to multiple natural disasters like GLOFs, floods, landslides and seismic hazards.
- f. Mainstreaming **gender and special needs** into human settlements planning and developments.
- g. **Development trends and issues** that emerge because of the rapid progress that Bhutan is making both as a society and as an economy.

## **IV. Policy statements**

### **1. Settlement system**

Traditionally, settlement system consisted of villages and settlements around administrative centres and monastery complexes. Patterns and forms of settlements were mostly shaped by the availability and layout of the land, availability of resources, safety and security of settlements, etc. However, with the start of modern development, new forms of settlements based on trade and commerce developed. Some of the historical factors have become less relevant because of access to new markets and improved infrastructure services. Given the importance of human settlements, as living spaces and as essential elements of the cultural landscape, they need to be developed as parts of an integrated system.

#### **1.1 Hierarchy of settlements**

Settlement system in Bhutan comprises of villages, Throms and Thromdes interconnected by a network of footpaths, mule tracks, roads and airports. Some new developments, within and outside traditional settlements, tend to either not follow or disturb the hierarchy of settlements. Increasingly new towns and settlements are coming up outside the existing urban centres. These developments often have adverse impacts on the traditional settlements which, both as home to the majority of the population and as important features of the cultural landscape of Bhutan, need to be promoted.

#### **Policy objective: Promote different hierarchies of settlements**

**Policy statement 1.1.1:** Establish settlements of different hierarchies - villages, Throms and Thromdes based on population density, revenue generation and services offered and promote the growth of settlements of different sizes.

**Policy statement 1.1.2:** Promote development of medium and smaller sized settlements that are harmonious with the natural topography, geographic locations and environment and enable promotion of Bhutanese tradition and culture.

#### **1.2 Patterns and forms of settlements**

Traditional settlements generally follow a typical form. First there is the forest which in most cases is the watershed too. Then there is the village temple below which are the settlements with farm houses and the farms. In settlement areas, houses are generally located on the least productive land. Houses could be either clustered or scattered depending on the topography of the land. Size of population, patterns of development and their response to the local conditions give each settlement a unique character. However, modern development brought in the phenomenon of urbanization and new forms of settlements which often do not follow the traditional principles. Rapid, unplanned developments also take place outside urban areas, especially in peri-urban and semi-urban areas. Such trends of development are detrimental in many aspects - with adverse impacts for land use and services, environmental sustainability, future development, preservation of cultural identity, etc.

#### **Policy objective: Preserve the essence and concepts of traditional settlements**

**Policy statement 1.2.1:** Require all developments to obtain prior approval from an appropriate agency and subject proposals for development of human settlements to a system of review to ensure they adhere to planning principles and development standards.

**Policy statement 1.2.2:** Prepare development plans for all major settlements and development guidelines for smaller settlements and villages with specific provisions for management and administration of peri-urban and semi-urban areas.

### **1.3 Local factors of settlement planning**

Traditional villages are home to Bhutan's tradition, culture and architecture. Local building materials and indigenous knowledge and skills in construction passed down through generations of carpenters, masons and craftsmen provide unique characteristics to the built environment. Factors such as lifestyles and farming practices of local communities have significant influences on the types of settlements. Further, forms and patterns of settlements are also derivatives of and response to topography, geographic location, vegetation, environment and climatic conditions. Development interventions may have negative impacts on the relevance of some local factors of construction. However, given Bhutan's strong focus on promotion of culture, it is imperative to promote developments that are not only responsive to the local conditions but also reflect the local tradition and culture.

**Policy objective: Promote settlements as a physical form of Bhutan's culture**

**Policy statement 1.3.1:** Preserve traditional village settlements including monuments, heritage structures and cultural sites and promote patterns of settlements that reflect regional identities and respond to climatic conditions.

**Policy statement 1.3.2:** Incorporate indigenous knowledge and cultural values in new settlements by integrating such features as architecture, community spaces, landscape and the surrounding environment.

### **1.4 Level of settlement planning and development**

Because of the difficult terrain and scattered geographic locations, settlements in Bhutan often have different access to infrastructure services and amenities. This difference, in turn, leads to different levels of development which are observed not only between urban and rural settlements but also amongst urban centres and rural settlements and their peripheral areas. Such variations in development and socio-economic opportunities could be one of the factors leading to rural-urban migration. While it is expected that the levels of development between any two settlements cannot be exactly equal or same, efforts must be made to ensure that they are equitable and of comparable value.

**Policy objective: To ensure balanced and equitable development of settlements**

**Policy statement 1.4.1:** Develop a national human settlements strategy that identifies different settlements of various categories, each capitalizing on its comparative advantages and their potential to promote regionally balanced development.

**Policy statement 1.4.2:** Ensure integrated development of settlements in proximity of one another by harmonizing their developments as a part of a valley development or a regional development plan or as a subsidiary to a growth centre.

**Policy statement 1.4.3:** Provide all settlements with basic infrastructure services and enhance accessibility and connectivity between adjacent settlements to facilitate efficient transportation, communication and sharing of infrastructure and facilities.

## **2. Planning**

Planning for any purpose sets direction and priorities. In human settlement sector, planning is necessary to identify the most suitable locations for human settlements. It promotes a balanced and sustainable approach to development as it enables designation of land uses for various purposes including preservation and conservation. Further, it is important to establish a consistent and a transparent planning system to ensure that various actors and stakeholders know exactly how the system functions. This would help monitor and address issues of speculative development, un-planned and illegal settlements and constructions in disaster prone areas and restricted sites. The system would also provide an overall framework and guidance to the public sector agencies involved in programmes related to human settlement.

### **2.1 Planning system**

Currently, planning processes are mostly driven by individual initiatives and practices. This often leads to different planning approaches in different areas which point to an urgent need for a planning system. Therefore, a 3-tier planning system is proposed. At the national level, national land use and zoning plan will provide general direction. Next would be a regional development plan that could span over whole or parts of two or more Dzongkhags. The third level of planning would be preparation of valley development plan, structure plan or a Local Area Plan (LAP) within a LG. The national land use plan will necessarily have to be prepared at the central level while the others would be prepared by respective Local Governments (LG) with assistance, review or monitoring by the Ministry in charge of human settlement, depending on the capacity of the respective LGs.

#### **Policy objective: Institute a comprehensive planning system**

**Policy statement 2.1.1:** Institute a 3-tier planning system comprising of the following where a lower level plan shall give due consideration to higher level plans where they exist and process for a comprehensive plan review if the provisions contradict:

- a. National level land use plan.
- b. Regional level development plan covering two or more Dzongkhags.
- c. Dzongkhag level development plans which could be either one or a combination of a valley development plan, a structure plan and LAPs.

**Policy statement 2.1.2:** Authorize a community, local government or the Ministry in charge of human settlements or a combination of such entities to initiate the plan preparation process for a village, specific area, Throm, Thromde, Dzongkhag or a region.

**Policy statement 2.1.3:** Establish a clear procedure for identification, designation and release of land, including conversion of land uses, for human settlement planning and development.

**Policy statement 2.1.4:** Require conduct of public hearings at appropriate stages of plan preparation, endorsement and approval.

### **2.2 Land use zoning**

Bhutan is a small country with a total area of only 38,394 sq kms of which most are under forest cover, sensitive environment areas or steep terrain. Records with the MoAF show that

only around 8% of the total land is used for cultivation and human settlements occupy only 1% of the land. The Constitution requires that at least 60% of the total land be maintained as forest. Bhutan also places strong emphasis on protection of the environment, conservation of cultural and heritage sites and food self-sufficiency. On the other hand, a number of development projects are planned to promote socio-economic development which would require new settlement areas. Therefore, it is necessary to zone the total land area for different land uses to make optimal use of the physical spaces and natural resources.

**Policy objective: Ensure optimal use of physical space and sustainable use of natural resources**

**Policy statement 2.2.1:** Prepare a comprehensive national land use plan that capitalizes on the potential and comparative advantages of specific areas, locations and regions.

**Policy statement 2.2.2:** Prepare land use and zoning maps that zones the country into settlement and non-settlement areas including environmental and protected areas.

**Policy statement 2.2.3:** Recognize that not all land within a settlement area must be zoned for development. There shall be areas zoned for no or limited construction and areas zoned for conservation.

### **2.3 Planning units**

Zoning of the country into settlement and non-settlement areas and the national land use plan provide clear picture of the broad land use types and the location of these land uses. However, dedicated planning interventions are required for specific planning areas. For the purpose of planning and management, especially for phasing of development and systematic release of land, the planning area needs to be divided into planning units whose boundaries shall be marked in coordination with relevant stakeholder agencies.

**Policy objective: Establish clear delineation of various settlement areas**

**Policy statement 2.3.1:** Create planning units of appropriate sizes out of the areas zoned for settlement along boundaries that are convenient to establish and manage for the purpose of planning and development.

**Policy statement 2.3.2:** Designate the Ministry in charge of human settlement to identify and establish municipal boundary for declaration of Thromdes in coordination with relevant stakeholder agencies.

### **2.4 Planning techniques**

In the past land for urban development was mobilized through acquisition, serviced with infrastructure and allotted to business license holders. This method was seen as 'unfair' as the original owners who usually happened to be farmers were displaced from their lands. Then in the 1990s the concept of 'land pooling' was introduced wherein the landowners contribute a certain percentage of their land for provision of infrastructure and services and retain the remaining portions. The basic principle of this technique is that while the plot areas are reduced, the overall value remains equal or is increased because of the provision of services and amenities. This technique, though more acceptable to the land owners, is not applicable in every planning situation. In some instances, guided land development is called for.

## **Policy objective: Adopt planning techniques best suited to specific planning areas**

**Policy statement 2.4.1:** Select a planning technique based on a multi-criteria analysis factoring in, amongst others, topography, average plot sizes, number of landowners and the proportion of developed and vacant plots.

**Policy statement 2.4.2:** Ensure the following general conditions in dealing with land mobilized for planning by various planning techniques:

- a. In land acquisition, land will be acquired and disposed off in accordance with the established procedures and for the purpose for which it was acquired.
- b. In land pooling, consider all land 'pooled' as belonging to the contributing landowners and re-distribute the land, including disposition of 'residual land', in consultation with the contributing landowners.
- c. In guided land development, obtain consent of the landowners.

**Policy statement 2.4.3:** Facilitate use of a combination of existing planning techniques or introduction of new techniques as deemed necessary for a specific situation, with preference for land pooling in preparation of LAPs where possible.

## **2.5 Appropriate technology**

Bhutan has a fragile mountain eco-system and it is also vulnerable to numerous natural disasters such as earthquakes, GLOFs, floods, landslides, etc. Careful planning of settlements and design of structures can reduce risks of disasters to a large extent. Use of appropriate technology can also promote cost and energy efficiency. This in turn will lead to environmental sustainability that is a major focus area of Bhutan's development initiatives.

## **Policy objective: Enable adoption of appropriate technology in development of settlements**

**Policy statement 2.5.1:** Incorporate technologies and designs in planning and development of settlements that:

- a. Reduce vulnerability to risks such as earthquakes, landslides, floods, fires and windstorms.
- b. Ensure sustainability of infrastructure services.
- c. Improve performance of infrastructure services and structures with regard to environmental sustainability.

## **2.6 Development control regulations**

The success of a plan depends not just on the plan itself but also on the efficiency of its implementation. A spatial development plan designates different land uses which allow constructions in some areas while it restricts development in others. A set of rules which has the objective of giving form to the planning objectives is referred to as Development Control Regulations (DCR). A plan cannot be implemented without a clearly defined DCR. However, while the DCR is an important implementation tool, it is only one of the many that must be employed. Other tools like fiscal and tax measures, preferential provision of infrastructure services, development subsidies and incentives must be employed in tandem with the DCR.

**Policy objective: Ensure proper implementation of development plans**

**Policy statement 2.6.1:** Adopt DCR as a part of every development plan, and issue broad development guidelines and regulations for all areas falling outside designated planning areas or Thromde boundaries.

**Policy statement 2.6.2:** Address issues of limited development rights or desired developments through enactment of relevant legislation and adoption of other appropriate implementation mechanisms.

### **3. Housing**

Shelter is a basic human need and housing is an important aspect of human settlement with impacts on both economy and social welfare. Traditionally, housing shortage was not a critical issue. This could be attributed to the safety net provided by the community and the use of local work force and building materials. Existing legislation and policies recognize the primacy of housing provision. A national housing policy was adopted in 2002 to help address housing issues. However, with the diversification of economy and growth and movement of population, housing has become a serious issue, especially in urban centres. Housing market has also become more complex leading to a need for review and update of the existing policies and an improved system.

#### **3.1 Housing framework**

The current National Housing Policy was adopted in 2002. Because of changes in housing scenario, the policy does not capture the full extent of housing. This leads to its inadequacy and it fails to address the housing issues fully. Further some policy provisions were not fully complied with either for lack of capacity with implementing agencies or conflicts with other related policies. Policy statements are also not assertive enough. Therefore, the National Housing Policy 2002 needs to be revised and updated to better address both existing and emerging housing issues.

#### **Policy objective: Develop an appropriate housing framework**

**Policy statement 3.1.1:** Develop an appropriate housing framework to address current and emerging housing issues with focus on but not limited to the following:

- a. Harmonization of the housing policy with various aspects of this policy and other relevant policies and strategies.
- b. Ensuring basic shelter and safe and affordable housing for all and promotion of home ownership.
- c. Establishment of a housing industry and market for creation of housing units and employment generation.
- d. Role of public agencies in provision and management of housing, particularly those that are commercially viable.

#### **3.2 Housing market**

Housing market is a critical component of an economy and often reflects the state of national economy. However, Bhutan's housing market is yet to develop fully. To start with, the government initiated with the construction of public housing, mainly to accommodate civil servants. This function has now been mostly corporatized. Private individuals were also encouraged to provide housing through provision of land and housing loan facilities. Unfortunately, the current practice of owners building their own houses has often resulted in sub-standard houses, construction delays and wasteful resource utilization. Still the role of government is not to engage itself in commercial housing projects. Rather, it should create an enabling environment for a self-functioning housing market. But the government will still

need to take responsibility for low income housing and other projects that are not commercially viable.

**Policy objective: Create an enabling environment for a well functioning housing market**

**Policy statement 3.2.1:** Create enabling environment for housing industry, promote professional real estate developers, and limit the role of public agencies to provision and management of only subsidized public housing for the lowest income group.

**Policy statement 3.2.2:** Promote housing finance mechanisms especially for middle and low income housing and for housing projects that focus on green building technologies, use of locally produced building materials and building systems that are resource efficient.

**Policy statement 3.2.3:** Establish an agency to document and maintain a proper inventory of housing stock, transactions and costs in the country.

**Policy statement 3.2.4:** Formulate appropriate strategies, legislation and guidelines to regulate the emerging trends in the housing market such as sale and ownership of apartments and condominiums.

### **3.3 Housing accessibility**

Traditionally, accessibility to housing was not an issue. Every family owned farmhouses. However, with the start of modernization, people moved to off-farm activities, mainly in towns. This movement of population created shortage of housing in urban centres while there are vacant houses in rural areas. The shortage is more severe for lower income groups. Despite initiatives aimed at public housing and release of land for housing in urban centres, access to affordable housing is still a challenge. Policy interventions in terms of creating enabling environment need to be firmed up. Housing stock also has direct relation to accessibility. It is a concern that an increasing number of residential buildings are converted to institutional and commercial uses reducing housing stock and causing incompatible uses.

**Policy objective: Enhance accessibility to affordable housing**

**Policy statement 3.3.1:** Mandate housing projects to dedicate a fixed % of the housing stock for lower income groups and people with special needs and incentivize projects that exceed this minimum % set.

**Policy statement 3.3.2:** Create a system of preferential housing loan and a fast track land release and land use conversion for construction of residential buildings and monitor their uses including control on conversion to other uses.

**Policy statement 3.3.3:** Regulate housing stock and the corresponding housing market to ensure that rental costs do not exceed 35% of average household income of residents in any particular settlement or urban centre.

### **3.4 Home ownership**

Rental housing is a fairly new term in Bhutan's context. With the start of modern development and change in economy, people gradually shifted to off-farm activities. This shift in occupations required change of place of residences, mainly to urban centres, where most residents live in rented apartments. Experiences have shown that people's wellbeing, economy and their self-esteem improve if they live in self-owned houses. Therefore, home ownership should be promoted with appropriate fiscal and other schemes.

**Policy objective: Promote and create an enabling environment for home-ownership**

**Policy statement 3.4.1:** Make every household, irrespective of place of residence or census registration, eligible for subsidies on building materials including subsidized timber for their first house construction with incremental taxes and levies for additional houses.

**Policy statement 3.4.2:** Provide subsidy in terms of housing loan, transfer tax and other levies for purchase and/or ownership of the first house or apartment unit with incremental taxation for additional house and/ or apartment unit ownership.

**Policy statement 3.4.3:** Develop appropriate housing schemes for all sections of society and financial mechanisms to enable potential buyers to avail housing loan against their provident funds and other saving schemes.

**Policy statement 3.4.4:** Provide subsidized rental public housing for people in lowest quarter of income group who shall be identified through prescribed screening procedure and whose household incomes and earnings shall be assessed periodically.

## 4. Culture

Characteristics of traditional settlements are influenced as much by spiritual inclinations of people as they are by the layout of land, access to sunlight, wind direction, connectivity, accessibility to drinking water, safety and security. Building materials available in a locality also have major influence especially on the built environment. Each village is a custodian of a set of unique cultural practices and customs that in turn are derivatives of various factors that condition the lifestyles of local people. These customs and cultural practices not only shape the cultural landscape that people can identify with but they are also storehouse of indigenous knowledge, skills and practices.

### 4.1 Traditional village settlements

Traditional village settlements provide a unique character and identity to Bhutan's landscape. Most villages exhibit typical forms which are often shaped by customary norms and construction practices prevalent in a village. These practices range from designation of land uses to location and orientation of buildings, building heights, drainage and waste disposal and use of common spaces. Introduction of modern development have impacted some aspects of these systems but many features are significant especially in terms of sustainable development. It is important to preserve traditional village settlements and incorporate their salient features in new developments.

**Policy objective: Promote the essence and characteristics of traditional village settlements**

**Policy statement 4.1.1:** Initiate documentation and research to study the principles and indigenous knowledge applied in development of traditional village settlements, and promote their incorporation in new settlements.

**Policy statement 4.1.2:** Promote preservation of traditional village settlements that have unique character or historical significance.

**Policy statement 4.1.3:** Respect customary beliefs and development norms prevalent in a community or village when new developments are proposed in that community or village.

### 4.2 Traditional styles, materials and methods of construction

The traditional architecture of Bhutan makes ingenious use of locally available materials - mud, stone, wood and bamboo. It is also known for its sense of proportions. Besides physical form and functions, traditional buildings have inherent and explicit cultural significances. Architecture forms an inseparable part of the unique identity of Bhutan's cultural landscape. Therefore, it is imperative that the vernacular architecture is promoted. This is relevant, particularly now when introduction of new materials and methods of constructions, which are not always compatible with the natural landscape and environment, challenge the indigenous practices. The practice of issuing of standard building designs by various public and corporate agencies need to be reviewed as it often leads to development of structures that are not compatible with the natural and cultural landscape of a particular settlement.

**Policy objective: Promote vernacular architecture and indigenous craftsmanship**

**Policy statement 4.2.1:** Institute a fast track approval system and incentivize building proposals that use local materials and/ or traditional materials and methods of constructions.

**Policy statement 4.2.2:** Encourage public institutions and corporate offices to promote site specific designs and drawings for their establishments around the country.

### **4.3 Heritage and sacred sites**

Bhutan's snowcapped mountains, lush green forests and river systems form beautiful landscapes, scenic views and sight lines. Against this background people developed a heritage of unique architecture and built environment. Further, the country has numerous sacred sites and structures - nyes, dzongs, lhakhangs, goenpas and chhoetens that have spiritual and cultural significances. The natural and built environment together with sacred sites and monuments form the cultural landscape of Bhutan. Protection and promotion of various aspects of the cultural landscape is important as a way of life and for the culture-based tourism that the country promotes.

#### **Policy objective: Conserve and promote heritage and sacred sites**

**Policy statement 4.3.1:** Carry out an inventory of and map structures that have historical, cultural and/ or architectural significance.

**Policy statement 4.3.2:** Protect the sanctity of heritage, historic, cultural and sacred sites by ensuring adequate setbacks and compatible land and building uses including building forms and characters.

**Policy statement 4.3.3:** Ensure that new developments do not obstruct or alter scenic views and significant sight lines.

## **5. Environment, climate change and disaster**

Bhutan has a rich but ecologically fragile environment. Therefore, protection of environment is important for conservation of bio-diversity, livelihood of the farming population and national economy that depends largely on hydro-power generation. Proper land use planning and management can contribute significantly to reducing environmental pollution which is directly linked to climate change. Climate change could, in turn, impact Bhutan's environment in many ways leading to increased vulnerabilities and exposure to disaster risks. Further, studies have shown that women and children are the groups most affected by impacts of climate change and disasters.

### **5.1 Environmental protection**

Bhutan has always placed environmental conservation at the centre of its developmental strategy. It is important to not only protect the natural environment but also to ensure that development interventions are carried out in an environmentally sensitive and sustainable manner. All major development projects should be subject to Strategic Environment Assessment (SEA) or Environment Impact Assessment (EIA) as applicable to ensure that there is no adverse impact on the environment or that appropriate mitigation measures are carried out. In certain instances it is possible to plan and implement projects around sensitive areas with appropriate impact mitigation measures. It is necessary to address major environmental issues in development sites and settlement areas like excessive earth excavation, muck disposal, diversion of water courses and impervious ground surfacing.

#### **Policy objective: Ensure environmental sustainability and ecological diversity**

**Policy statement 5.1.1:** Protect environmentally sensitive areas, including bio-diversity hot-spot areas identified in national land use plan and in settlement areas as no construction zones.

**Policy statement 5.1.2:** Mandate SEA or EIA for all major human settlement and other development projects to avert and/or mitigate adverse impacts to the natural and built environment.

**Policy statement 5.1.3:** Endeavour to reclaim rivers, streams and other sensitive environmental elements that have been lost to or are encroached upon by developments, as promulgated by the concept of eco-cities.

### **5.2 Water resource management**

Traditionally, watersheds were protected because of people's respect for nature. This is complemented by Bhutan's strong environmental ethics. But increased levels of development, like commercial logging, construction of roads that could disturb watershed or divert ground water flow and excessive water tapping, pose threat to water resources. There are many incidences of water sources either shrinking or drying up. While Bhutan has a high per capita water share, there are localized and seasonal water shortages both for drinking and agricultural purposes. Therefore, there is a need to improve the efficiency of water usage, especially in human settlements, by promoting innovative concepts like water sensitive urban design and waste water management techniques.

**Policy objective: Preserve watershed and promote efficient use of water resources**

**Policy statement 5.2.1:** Protect and manage watershed areas to safeguard the water resources for consumption, farming and conservation of eco-systems.

**Policy statement 5.2.2:** Maintain appropriate buffer areas for rivers and major streams and avoid channelization to allow historic flow speeds.

**Policy statement 5.2.3:** Promote water sensitive urban design concepts and eco-efficient water infrastructure.

### **5.3 Climate change**

Bhutan is located in the Himalayas and it is one of the countries that are most vulnerable to impacts of climate change. Rise in atmospheric temperature is reported to lead to retreat of glaciers in northern Bhutan which in turn will impact many settlements downstream due to potential GLOFs. Further, due to incremental temperature rise and extreme weather patterns, the country may be subject to heat stress, outbreak of tropical diseases, loss/ depletion of food and water resources. Such changes will have immense implications for environment, human lives and settlements.

**Policy objective: Mitigate factors leading to climate change**

**Policy statement 5.3.1:** Promote research on impacts of climate change on environment, hydropower sector, health, agriculture, human settlement, etc.

**Policy statement 5.3.2:** Promote low-emission, carbon-resilient development through green architecture and use of energy efficient infrastructures.

**Policy statement 5.3.3:** Promote efficient public transport system and eco-friendly modes of transport.

### **5.4 Waste management**

Management of wastes is one of the main challenges in developing human settlements. Traditionally, waste was not a major issue because of organic nature of most waste products, its low volume and low density of settlements. In settlement areas too, other than the building footprint, there was no practice of impervious paving. With the change in human consumption and the nature of wastes, its management has become a serious issue. Further, change in house construction practices has led to more surface runoff resulting in soil erosion, siltation of rivers and reduced ground water re-charging.

**Policy objective: Ensure proper management of wastes to reduce environmental impact**

**Policy statement 5.4.1:** Identify appropriate solid waste disposal site or treatment mechanism with appropriate site as part of selection of site for development of urban centres or other developments.

**Policy statement 5.4.2:** Avoid direct discharge of waste water into natural streams and rivers.

**Policy statement 5.4.3:** Incorporate innovative urban planning and design features in development of storm water drainage infrastructure that allows for removal of pollutants and slows flow speed of waste waters.

## **5.5 Disaster risk reduction and management**

Bhutan is prone to multiple natural hazards. Firstly, it is located on a geologically sensitive area and the entire country is vulnerable to seismic hazards. Secondly, Bhutan has many rivers that originate from glacial lakes in the high Himalayas and most settlements located within these river basins are prone to GLOFs. Thirdly, the country's fragile mountain ecosystem together with increasingly erratic weather patterns often results in flash floods and landslides. There are also increasing incidences of fire accidents and windstorms. Further, inadequacies in design and sub-standard construction practices could greatly increase vulnerability to disasters which in turn could lead to loss of lives, properties and damages to infrastructures.

### **Policy objective: Reduce vulnerability to disaster risks**

**Policy statement 5.5.1:** Carry out risk assessment for river basins with potential GLOF risks and geo-technical studies for all settlement sites, prepare geo-hazard maps, demarcate no construction zones and carry out mitigation measures where required.

**Policy statement 5.5.2:** Develop building codes, design standards and guidelines for disaster resilient designs and development of human settlements.

**Policy statement 5.5.3:** Institute a system of mandatory risk insurance.

## **6. Socio-economic development**

Human settlements and socio-economic developments are linked to each other. People need employment where they live or they would move to places where they can find work. There is need to develop one in proximity of the other. It is also necessary to create employment opportunities outside urban areas to mitigate increasing rate of rural-urban migration. Community and farm-based tourism is one of the most appropriate employment sectors. Further, skills in local arts and crafts, vernacular architecture and locally produced building materials should be promoted for employment generation and conservation of traditional village characters which in turn would attract more tourists.

### **6.1 Population growth and distribution**

Population Perspective Plan of Bhutan 2010 estimates that despite fall in population growth rate, total population of Bhutan would double by 2045, taking 2005 as the base year. Current trends show that population would be concentrated mostly in larger urban centres and predominantly in western regions of the country. Location of public, corporate and private offices have immense impact on the congregation of population. There are also concerns over population boom in settlements because of mega-projects which often displace local people but the population drops drastically immediately after completion of the projects.

#### **Policy objective: Develop settlements appropriate for expected population growth**

**Policy statement 6.1.1:** Locate growth centres and economic hubs strategically to promote equitable and regionally balanced development.

**Policy statement 6.1.2:** Encourage location of institutes and new public and corporate offices or NGOs outside the existing larger towns to minimize congestion and stress on infrastructure and natural environment.

**Policy statement 6.1.3:** Ensure that mega-projects have minimal impacts on the established settlements and that appropriate rehabilitation programs are developed as a part of detailed project report for livelihood and properties of the households affected.

### **6.2 Community based tourism**

Tourism industry makes significant contribution to national revenue and also provides direct and indirect employment opportunities. However, tourism is limited to certain locations and benefits of tourism do not necessarily reach local communities. Development of community and farm-based tourism would broaden tourism market and offer economic opportunities to local communities. Some of the activities that could be promoted are eco-tourism, home-stay programmes, handicrafts and textiles, community festivals, agro-industries and food products, farming experiences, etc. Communities selected for tourism should be, first, provided with basic skills development and capacity building training in tourism and hospitality related activities.

#### **Policy objective: Facilitate community and farm-based tourism for local communities**

**Policy statement 6.2.1:** Promote specific village settlements and places of interest as tourist destinations for creation of employment and market opportunities for local communities.

**Policy statement 6.2.2:** Provide basic tourist infrastructure and amenities within villages and sites selected for community tourism.

**Policy statement 6.2.3:** Provide basic skills and capacity development training for local communities.

### **6.3 Employment generation**

PHCB 2005 mentions employment as one of the main reasons for movement of people. This movement of population, mostly from rural to urban areas, causes skewed population distribution which is detrimental to country's development objectives, environmental health of urban settlements and the efficient use of public infrastructure services provided in rural areas. It is generally men who move in search of employment leaving behind women, children and elderly exposing them to risks and vulnerabilities. There are also issues of village houses remaining vacant while urban centres face acute housing shortage. These problems could be resolved to a large extent by creating employment opportunities closer to villages. It is also important to revive and promote traditional skills and create employment opportunities in local construction market and commercial production, value-addition and branding of local agriculture and agro-food products.

**Policy objective: Create employment opportunities closer to place of residence**

**Policy statement 6.3.1:** Promote indigenous arts and craftsmanship, and facilitate production of handicraft to complement farm-based income.

**Policy statement 6.3.2:** Develop a certification system for skilled traditional artisans and promote their employment in villages.

**Policy statement 6.3.3:** Introduce working environment that enables individuals to live and work from homes.

### **6.4 Local construction industry**

Bhutan has economic and employment opportunities in the construction industry. But most construction materials and technology are imported. Most employment opportunities also go to expatriate workers. Import of materials, technology and skilled labour for some construction works cannot be completely avoided. But there are many areas, especially in construction of houses, where local building materials and labour force can be employed. Use of local materials and works force should be facilitated and incentivized for their potential to provide stimulus to local and national economy. Local labour force will also have a better understanding of the vernacular architecture thereby leading to preservation of Bhutan's tradition and culture.

**Policy objective: Provide stimulus to the local economy**

**Policy statement 6.4.1:** Encourage use of local building materials and local labour force both for public and private construction projects.

**Policy statement 6.4.2:** Withhold specific material subsidies and procedural exemptions granted to constructions in rural areas if proposed developments use imported materials and methods of constructions.

**Policy statement 6.4.3:** Discourage import of building materials, fittings and fixtures that have equivalents products produced within the country.

## **7. Infrastructure services**

Land becomes suitable for any form of settlement only through provision of infrastructure. It is also through provision of infrastructure services that the value of land appreciates. Further, value of land and property is enhanced by existence or provision of social services and amenities.

### **7.1 Physical infrastructure services**

Provision of infrastructure services not only makes a site appropriate for development but a set of basic infrastructure services is necessary for convenience of residents. Therefore, any proposal for settlement or development should first establish existence of or possibility of future provision of water, accessibility, electricity and waste management. Considering the high capital cost involved in provision of these services, their long term sustainability and to ensure equitable development, the beneficiaries, especially those residing in urban areas, should pay a part of the cost in addition to user charges and fees. Such a mandatory payment would also encourage landowners to develop serviced land rather than speculate on it.

#### **Policy objective: Ensure provision of integrated basic infrastructure services**

**Policy statement 7.1.1:** Establish existence of or possibility for provision of infrastructure services, particularly water services, for any new human settlement projects or extension to existing human settlements.

**Policy statement 7.1.2:** Provide the basic minimum infrastructure services of water, access roads, electricity, and solid waste and sanitary disposal system for any human settlement project considering needs of vulnerable groups, including those with special needs.

**Policy statement 7.1.3:** Ensure provision of integrated and shared infrastructure for water to all settlements that can technically be serviced by a common supply line.

**Policy statement 7.1.4:** Require beneficiaries of an infrastructure project to contribute a part of the cost of infrastructure provision as a development or betterment charges.

### **7.2 Social infrastructure services**

Social infrastructure services like schools, health and RNR centres, recreational areas, etc, are important aspects of development. Therefore, government's efforts in this sector should be sustained. Though the establishment of these social infrastructures is generally guided by cost-benefit analysis, given the difficult terrain and scattered nature of settlements, it is sometimes necessary to provide these services despite the sub-optimal population served. In human settlement sector, it is important to note that the location of these public institutions often have 'spinoff' effect. Often they lead to development of new settlements around them. Designs and styles of constructions also influence developments in the surrounding areas.

#### **Policy objective: Ensure provision of adequate social infrastructure services**

**Policy statement 7.2.1:** Develop a planning standard for Bhutan to guide provision of infrastructure services and public amenities commensurate with the population density and level of development.

**Policy statement 7.2.2:** Consider the influence of establishment of public institutions on settlement patterns and construction styles in areas in proximity to the proposed locations of these service centres.

**Policy statement 7.2.3:** Ensure provision of community spaces and recreational areas to promote community vitality.

## **8. Institutional and legal framework**

Many agencies are charged with different activities related to planning, development and management of human settlements. Well intentioned but often isolated efforts by different sectors lead to waste ful utilization of resources and cause inconvenience to the public. There often are discords between agencies at different levels due to unclear division of roles and responsibilities. Many issues could be attributed to the lack of appropriate legislation.

### **8.1 Institutional framework**

The complexity of issues related to human settlement planning indicates a need to constitute an independent agency to review matters related to settlement planning and development. This agency would be the highest decision making body on human settlements, especially in terms of prioritization of programmes and allocation of resources. There is also need for an expert committee to deliberate on the technical aspects of planning issues. Further, incidences of an increasing number of development related disputes reflect the need for a dispute resolution tribunal or a fast-track court to consider such cases.

**Policy objective: Institute an appropriate mechanism to review human settlement issues**

**Policy statement 8.1.1:** Establish an appropriate institution to:

- a. Review and approve human settlement development plans.
- b. Carry out periodic review of the National Human Settlements Policy.
- c. Deliberate on issues related to human settlements.

**Policy statement 8.1.2:** Ensure a clear definition of roles amongst various agencies and at different levels including decentralization of authority and division of responsibilities.

**Policy statement 8.1.3:** Constitute a tribunal or a fast-track court to consider, negotiate and resolve disputes and cases on land use and settlements planning and development.

### **8.2 Legal framework**

Absence of legislation specific to spatial and human settlement planning constrains many of the development initiatives and interventions. Currently, legal support for planning is drawn from the related clauses and provisions of the Land Act and the Local Government Act. However, these legislations fail to serve purposes specific to settlement planning since the Land Act was drafted with focus on land while the LG Act mainly pertains to municipal administration and management. There are also conflicting provisions amongst acts relevant to human settlement planning which creates confusion among stakeholders and leads to delay in the process.

**Policy objective: Establish and strengthen the spatial planning system**

**Policy statement 8.2.1:** Enact a Spatial Planning Act which shall:

- a. Regulate all plan preparation, implementation and administration.
- b. Prescribe the levels and categories of plans to be prepared.
- c. Recommend planning techniques to be adopted, as appropriate.

**Policy statement 8.2.2:** Adopt relevant regulations, guidelines and standards identified in this policy to ensure harmonization of provisions of various legislations, policies, strategies and publications related to human settlement planning and development.

## V. Implementation framework

The policy outlines directives for settlement development. These directives are intentionally expressed in general terms so that the policy remains valid for a considerable time.

The principal agencies involved in the implementation of the policy are the Ministry of Works and Human Settlement (MoWHS), Ministry of Agriculture and Forests (MoAF), National Land Commission, National Environment Commission and the Local Governments. The **MoWHS** as the ministry in charge of human settlements shall be the principal **implementing agency** and the Cabinet shall issue policy coordination directives where and when necessary.

It is imperative that **institutional arrangements** are made with clear delineation of roles and designation of responsibilities for different agencies both at the national and local levels. Participation of the **private sector agencies and individuals**, especially in functions that are complementary to the public agencies, should be facilitated.

**Regulatory frameworks and strategic plans** need to be developed to support the policy implementation. Further, **operational guidelines** need to be framed to facilitate realization of the policy objectives. It would be important to issue **manuals for practitioners** to guide settlement planning and development.

For effective implementation, capacity needs assessments followed by capacity development programmes at different levels are to be carried out. It is important to ensure that authorities and responsibilities are delegated only after the relevant capacities are developed at the agency that receives the authorities and responsibilities being delegated.

An important aspect of the policy is **land use zoning and mapping** of protected zones and settlement/ development areas. The main objective of such plans and maps is to bring the protected zones and development areas identified by different sectors on a common platform and propose a harmonized approach to the use of land and land-based resources. The Ministry in charge of human settlement shall develop human settlements in line with the afore-mentioned land use plans and zoning maps.

Given the unprecedented socio-economic progress and change that Bhutan is witnessing, there would be immense pressure on the human settlement sector. Therefore, there is urgent need for a coherent policy supported by adequate and appropriate legislations, strategies and guidelines. All human settlements should be developed strictly as per the framework provided by this policy, though it must also be recognized that **reviews** would be necessary if some of the conditions and assumptions change.

## Definitions

**Betterment charge:** A levy that beneficiaries of a specific project are required to pay to cover a part of the cost of the project (value added tax on the property).

**Development:** Any change to the use of land, subdivision of land or development of sites or erection or alteration of structures.

**Guided land development:** A planning technique adopted mainly in developed areas, where land corridors of infrastructure services are created along the plot boundaries with equal or negotiated contribution by the participating landowners.

**Landscape area:** A non-settlement area marked, primarily, for preservation and conservation – environmental areas, sacred sites, farmlands, protected settlements, etc.

**Land pooling:** A planning technique which redefines ownership of land so that the plots are reconfigured in a way more appropriate for development and the plot areas are reduced by a proportionate amount to create infrastructure corridor and service plots.

**Local building materials:** Building materials available or produced in a particular locality. In a broader sense they also refer to building materials produced within the country.

**Peri-urban area:** An area immediately outside the boundary of an urban area or Thromde.

**Planning unit:** An area bounded by natural landmarks or administrative boundaries and designated for the purpose of settlement planning and development.

**Pooled land:** A land that is created through the contribution of the landowners participating in a land pooling scheme and it belongs to that community of landowners.

**Project town:** A town that develops as a result of a project like the hydro-power project or an industrial estate development.

**Public hearing:** A public consultation meeting where view and inputs of the stakeholders on a development scheme are sought.

**Residual land:** Land left over after redistribution of the pooled land to the contributing landowners in a land pooling scheme.

**Semi-urban area:** An area that is pre-dominantly rural but that has some urban facilities or an area that is ‘newly’ urbanizing.

**Setback:** Distance between the plot boundary and the outer edge of the building or the distance between buildings within a plot.

**Settlement area:** An area marked for development of settlement – commercial, residential, institutional, industrial, etc.

**Throm:** An urban centre where the majority of the residents are engaged in non-farming activities. It may refer to a Gewog Throm or a small town.

**Thromde:** An urban centre designated as a Thromde by the act of the Parliament of Bhutan.

**Traditional materials:** Earth, stone, timber and bamboo, and earth and wood based paints that were traditionally used in vernacular architecture.

**Village:** A defined traditional settlement or a distinct group of houses in a rural area.

**Vulnerable groups:** Groups that face a higher risk of poverty and social exclusion than the general population and includes minorities, migrants, disabled people, the homeless, elderly people and children.