

Planning Urban Development

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Background of Comprehensive National Development Plan Project

The Ministry of Works and Human Settlement formulated the Comprehensive National Development Plan for Bhutan 2030 (CNDP), a project spearheaded by the Gross National Happiness Commission, with technical support from the Japan International Co-operation Agency (JICA), from 2017 to 2019. The process involved more than 40 officials from both central and local governments, along with 17 Japanese experts, who worked together during the project period to review and analyse more than 170 policies, strategies, acts, and regulations.

The CNDP's vision for promoting regionally balanced development, and reducing disparity between urban and rural areas, is to ensure a middle path towards sustainable development, and to enhance GNH in Bhutan. The objective of regional development is to bring out the potential advantage of a region and thereby reduce migration of population. It does not imply making every region¹ similar or balanced in the same way. CNDP proposed an overarching national land use plan for sustainable land management and for balanced development for regularising limited arable land in Bhutan.

Learning from Japan's experience of formulating a series of long-term development plans, the CNDP focuses on the creation of a desirable economy, society, and environment through strategies such as rural revitalisation, a holistic service delivery system, strengthening regional capacity, and urban management schemes.

Problem Statement

As per the Population and Housing Census of Bhutan 2017, CNDP projected that more than half the population of Bhutan will be living in urban areas by 2030. Urban areas will, therefore, need to prepare for increasing migrants and population expansion, with strategies to provide a suitable living environment, well-organised public services, and employment opportunities.

¹ The four regions of Bhutan are: Western, central western, central east and eastern region.

The majority of the rural Bhutanese population contributes to improving Bhutan's food security and economy through agriculture and livestock. But the availability and comparatively lower cost of Indian goods and livestock produce discourage the rural population from continuing their farming and livestock activities. With limited options for alternate economic activities, many of the rural population are moving to the urban areas of Bhutan.

This trend of rural-urban migration is already affecting the rural economy, with a shortage of farm labour and increasing proportion of elderly people in rural areas, which stands at 6% in 2015 as compared with 5.9% in 2005. The decline in the rural population, particularly youths, is likely to continue unless major interventions are put in place to revitalise it.

In urban areas, the increased population adds immense pressure on existing services and infrastructures, such as health, education, transportation, water, waste and the natural environment, which negatively affect the natural ecosystem and socio-economic structures. Negative impacts such as unplanned and haphazard structures, increasing unemployment, unmanageable waste, and water issues are already being seen across urban centres in Bhutan.

Current demographic patterns in the country indicate that settlements are sporadically emerging along highways, because of their potential for economic opportunities and access to basic infrastructure. Such random settlements, if not planned properly, will lead to haphazard development, thereby reducing the effectiveness of planned settlements. Such random settlements not only increase the need to develop and maintain services and infrastructure,² but also create an eyesore by degrading the serene natural landscape of lush green vegetation along highways, and increasing our vulnerability to disasters such as landslides.

Apart from towns identified³ as urban areas by the National Statistics Bureau (NSB), most commercial towns are legally still considered rural, with rural tax systems. Vibrant towns should be prioritised for development, and a change in urban tax or special fees applied to proceed with urban development that is financially endorsed. Similarly, the 20 *thromdes* (municipality) endorsed by Parliament in 2015 should be prioritised to

² Services and infrastructure facilities refer to utilities such as roads, water and electricity, as well as, institutional services such as education, health and government services, etc.

³ There are 60 census towns listed for PHCB by National Statistics Bureau (NSB).

create self-governing *thromdes* based on the growth of population, economy, and vibrancy.

With the erratic process of urbanisation, the existing strategies for land use plan and land policies have failed to contain irrational urban expansion. Therefore, primary farmlands, ecologically sensitive regions, and water resources have not been protected. Considering the rapid growth in urban areas and out-migration from rural areas, one of the CNDP's objectives is to promote diversity in urban and rural areas by creating a National Capital Region (NCR), Linked Urban Centres (LUC) and Urban Management Areas (UMA).

National Capital Region

The NCR, as proposed in the CNDP, refers to the region in proximity to the capital city, Thimphu. Paro, Punakha, and Wangdue Phodrang *dzongkhags*⁴ are directly connected to Thimphu by the national highway. Their proximity to Thimphu makes it possible to integrate them into the NCR. The objective of creating such a region is to reduce development pressure in Thimphu, and to share urban functions, so it can help moderate population influx and rapid urbanisation in Thimphu. The CNDP's projection shows that the population of the four *dzongkhags* of the NCR will increase to 39.8% in 2030, even with policy intervention to encourage regional development in areas other than the capital region.

There are adequate infrastructure and services for the current population within the NCR, but the rapid increase of population in the NCR will make it difficult for efficient co-ordination and management. Examples are problems related to transport services, such as increasing traffic jams and insufficient public transport accessing the outskirts settlements.

The NCR is conceived to be suitable for electric cars with quick charging stations. The electrification of public transportation and bus rapid transit can be implemented to take advantage of the larger population and urbanisation. Green technology for waste treatment, water supply, electric transportation with autonomous cars and developing renewable energy, such as hydro/wind/solar power, are recommended to be installed to achieve the NCR vision, which is to create “an innovative and green capital region”. Attempts to promote travel, conventions and exhibitions related to

⁴ *Dzongkhag* can also be referred to as a district, a state or a prefecture.

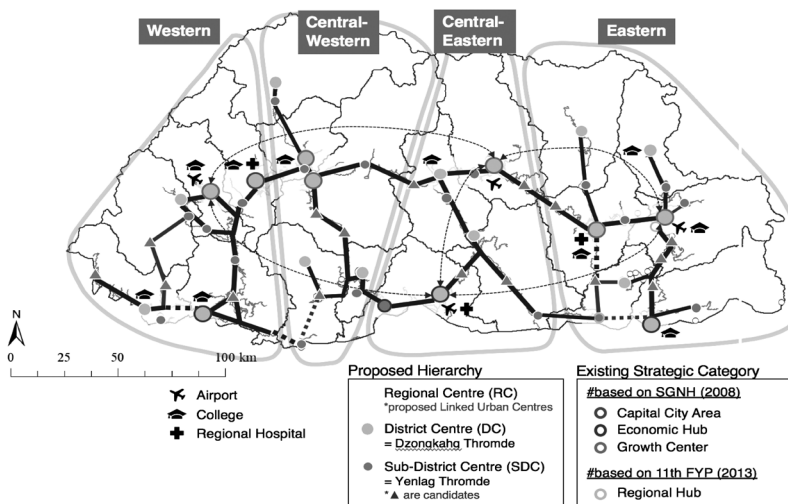
green technology should be made to other regions as well. Additionally, it would attract investment from developed nations if the NCR is promoted as a “living lab” for green technology to the world.

Linked Urban Centre

The LUC is a concept in which a combination of two towns creates a centre where social services, markets and institutional facilities are combined to deliver a holistic service for the region. For instance, the proposed Samtse-Phuntsholing LUC is to be created as a “centre of trading and industrial gateway to India”, and to serve the population of *dzongkhags* in the vicinity. Similarly, the Sarpang-Gelephu LUC is envisioned as a “logistic hub for import-export products” along with the promotion of tourism to utilise the airport in Gelephu.

The concept of the LUC is to utilise capital investment for those facilities which are placed in different locations. Besides, the LUCs are expected to be the employment centres of the region to promote regional economic development and also enable the promotion of development outside the NCR.

CNDP has proposed the creation of five LUCs and a NCR as regional centres, as illustrated in Map 1.



Map 1. The proposed hierarchical National Service Network map. Source. CNDP

The LUC would establish a regional centre to provide effective social services and markets to sustain living standards. Therefore, to make these regional centres vibrant and regulatory, there is a need to formulate regulatory developmental plans for the proposed five LUCs and the NCR, with various development alternatives to promote socio-economic development for these centres.

Urban Management Area

The NCR and LUCs will serve a region by forming regional centres, but they do not prevent the haphazard urban expansion in the periphery of urban boundaries and along the highways. For this, CNDP proposes the creation of UMA to manage urban growth. The UMA is a plan to co-ordinate the development of cities and towns towards desired patterns of growth. Areas outside the urban boundaries would be designated as urban management areas by demarcating urban growth boundaries to limit unplanned development. The UMA is proposed to be managed and administered by the *thromdes* (municipality).

The benefits of UMA is primarily to contain urban sprawl and to maximise the use of infrastructure within the *thromde* area. Secondly, undeveloped plots within the designated *thromde* are to be developed, and when the urban area is saturated, the urban boundary would extend towards the UMA in a phased manner. This would bring down the maintenance cost of infrastructure outside the *thromde* area, as well as improved efficacy in providing services, such as waste collection, water services, public transport, and in making the city pedestrian oriented.

Regulating the UMA can boost the revenue of a *thromde* to improve services and facilities. For example, the Kabesa area in Thimphu could have preserved its rural agricultural setting if the concept of UMA was applied in the initial stages of preparing the Thimphu structure plan. Additionally, the government did not have to provide the services and infrastructure there, and the residents could have been residing within the *thromde* boundary, paying urban taxes.

Conclusion

The implementation, co-ordination and administration of the proposed NCR, LUCs and the UMA pose a significant challenge as it includes

two or more towns that would require co-ordinating and functioning for holistic service delivery. Therefore, development of regulatory plans for these areas is needed to ease implementation.

The implementation of holistic services will require a functional amalgamation of infrastructures in various regional centres. Even more effort will be required to administer the effective functioning of the centres. It is important to provide a decentralised environment, so that each service providing institution in the centres can focus on its functional, rather than locational, aspects. Additionally, the CNDP outlines various strategies to develop a transport system which links the entire country with a road network consisting of east-west and north-south highways, with further linkages to air transport and advanced means of transport, such as the use of drones for service delivery to highland and unreachable areas.

The CNDP recommends the identification of envisaged functions of towns using local resources to their unique comparative advantage. For example, Bumthang's availability of flat land, vibrant cultural landscape and diverse ecology, are well suited as a centre for promotion of organic farming, dairy products and cultural heritage sites. It also recommends the creation of liveable and vibrant urban areas with a suitable design for each town to maintain its local characteristics. The study should also establish how each town will provide services in its administrative and surrounding areas, to overcome the challenging conditions of dispersed settlements with small populations. As part of the implementation of the CNDP, JICA will start a project for the formulation of the regional plan for the Sarpang-Gelephu LUC, which will look at preparing a detailed land use, service delivery and infrastructure development plan.

The National Key Result Area (NKRA) 15 of Sustainable Human Settlements under the 12th Five-Year Plan highlights the implementation of the CNDP as one of the strategies to achieve the NKRA. For the proposed large-scale interventions to be successful, it will need a co-ordinated approach, involving multiple stakeholders across different sectors.

The government is always emphasising the importance of co-ordination for efficiency and effectiveness of investments. All relevant ministries and agencies, including local governments and development partners, will need to work together, sometimes out of their comfort zones, to achieve the larger vision of the 12th Five-Year Plan of a "Just, Harmonious and

Sustainable Society through Enhanced Decentralisation”. The CNDP also recommends that the private sector, non-profit organisations and local residents will actively participate towards the creation of a vibrant area. The Gross National Happiness Commission will co-ordinate and monitor the progress of implementing the CNDP with relevant organisations.

Initially, a lot of effort is required to update reliable information, institutional setup, improve technical capacity, data collection and sharing. To take a co-ordinated and sustainable approach to urbanisation, real-time visual tools like GIS are needed to develop a national spatial data infrastructure and to adopt a scientific approach. A fully functional national spatial data infrastructure would provide the ideal platform for a co-ordinated and collaborative approach towards improving urbanisation in Bhutan.

Finally, a 21st Century Economic Roadmap, the long-term strategic document currently being formulated, has the same timeline for implementation, ie, by 2030. The goal of the roadmap is to look at creating a dynamic and high-income economy, with comprehensive strategies driven by technological advancement and interventions. The 72 recommendations and strategies in CNDP aim to bring about balanced development that leads towards sustainable social and economic development. The overall objective of the economic roadmap and the CNDP is people-centric, to enhance GNH in Bhutan.

The CNDP can be downloaded from the website of the Gross National Happiness Commission at: https://www.gnhc.gov.bt/en/?page_id=3800