

# **JICA's Cooperation for Spatial Planning in Developing Countries**

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# **Composition of presentation**

- 1. What is JICA?**
- 2. JICA's cooperation for National Comprehensive Development Plan (NCDP) : Case of Bhutan**
- 3. What are to be addressed?**
- 4. What are values to cooperate for NCDP**

# 1. What is JICA?

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- **Japan International Cooperation Agency (JICA) is a Japanese government agency implementing Official Development Assistances (ODA) to developing countries.**
- **JICA provides technical cooperation as well as grants and loans to implement development projects.**
- **As a kind of technical cooperation, JICA supports to formulate master plans for development such as an urban development plan, regional development plan and National Comprehensive Development Plan (NCDP).**
- **JICA is cooperating to formulate NCDP in Bhutan, and will start in Mongolia.**

## 2. JICA's Cooperation for NCDP (Bhutan Case)

### (1) Composition of NCDP (Draft)

#### *Vol. I: EXAMINATION OF EXISTING CONDITIONS AND IDENTIFICATION OF DEVELOPMENT ISSUES*

- Ch. 1 Introduction *Reviewing existing*
- Ch. 2 Envisaged Vision of Existing *policy*  
National Policy and Plan for Bhutan
- Ch. 3 Natural Environment of Bhutan
- Ch. 4 Socioeconomic Conditions of Bhutan
- Ch. 5 Spatial Pattern and Environmental Conditions of Bhutan *Reviewing*
- Ch. 6 Social Development *facts of*
- Ch. 7 Analysis of Gross National Happiness *the country*
- Ch. 8 Characteristics of Dzongkhag (Provinces) *Identifying issues*
- Ch. 9 Development Issues of Bhutan
- Ch. 10 Strategic Environmental Assessment *Inclusive decision making on selection of development scenario*

#### *Vol. II: COMPREHENSIVE DEVELOPMENT PLAN*

- Ch. 11 Vision and Objectives *Presenting Vision*
- Ch. 12 National Spatial Plan *Targeted spatial structure*
  - 12.1 Strategies for National Spatial Planning
  - 12.2 National Spatial Structure
  - 12.3 National Land Use Plan
  - 12.4 Specification of Cities, Towns and Main Villages
- Ch. 13 General Guidance for Rural Development *Sectoral policy*
- Ch. 14 General Guidance for Industrial Development *directions*
- Ch. 15 General Guidance for Transportation System *Priority programs & projects*
- Ch. 16 Priority Projects of Priority Sectors
- Ch. 17 Recommendations for the Implementation of the CNDP

*Issues and recommendation on schedule, budget, legislation etc.*

## **2. JICA's Cooperation for NCDP (Bhutan Case)**

### **(2) Logical approach to identify and address issues**

Major issue: Migration

**Accelerating migration from villages to the Capital Region**

Difficulty in sustaining villages and  
providing all migrants with good job & living condition

**Balanced development to mitigate the migration**

Creation of “decent Capital Region” + Development of “regional urban center” + “good access from villages to urban center within region”

**But any town will not be able to be the Second Capital**

National minimum to be ensured by the national government +  
Regional development taking comparative advantages into consideration

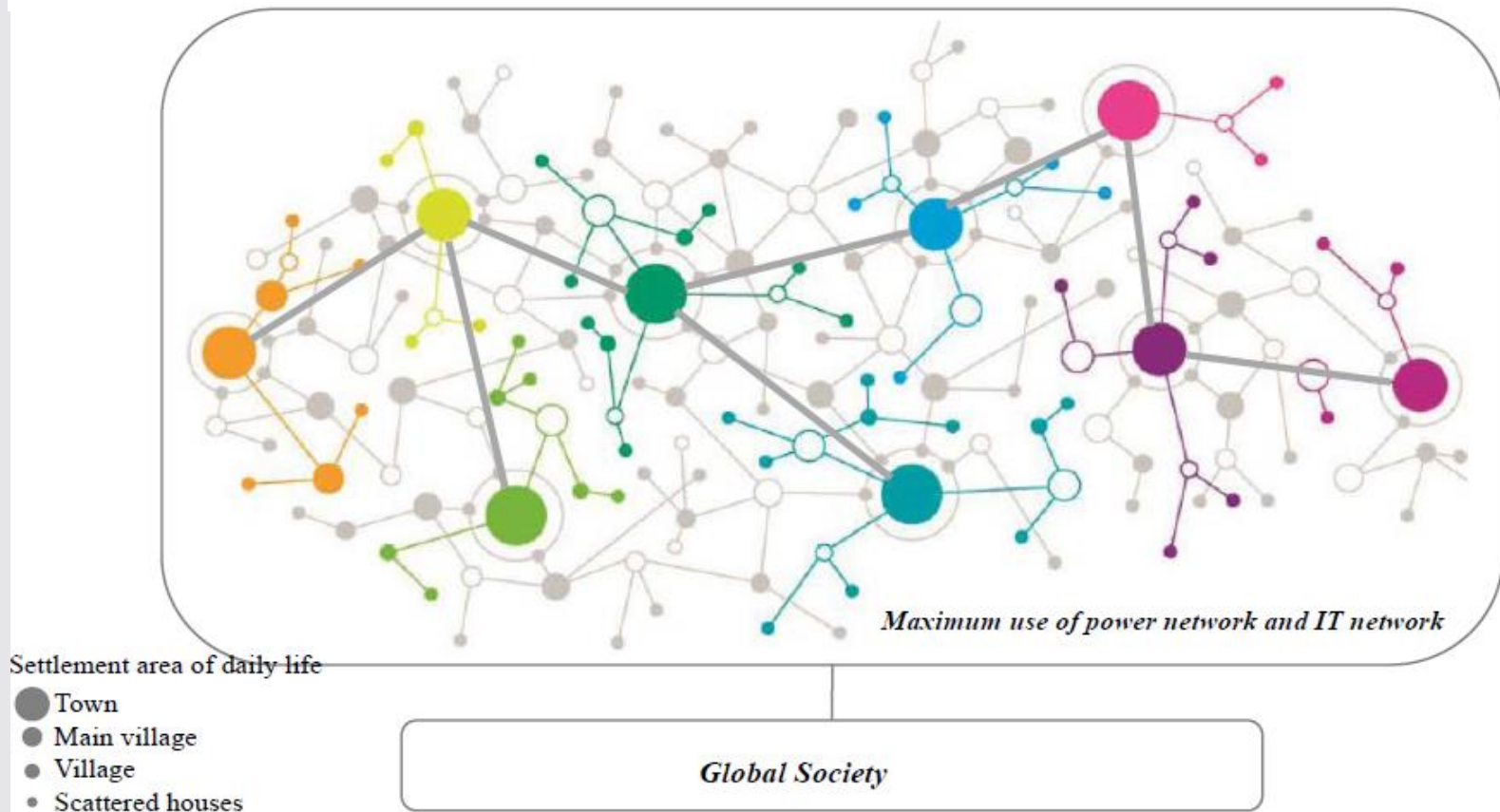
**Settlement Area with Effective Network  
& Outward-Oriented Economy**

## 2. JICA's Cooperation for NCDP (Bhutan Case)

### (3) Targeted Spatial Structure

- Growth Centers & networks, Hierarchy of Cities & Towns
- Similar concept to the recent “National Spatial Strategy” in Japan

#### Image on spatial structure (Hub and Network)



## 2. JICA's Cooperation for NCDP (Bhutan Case)

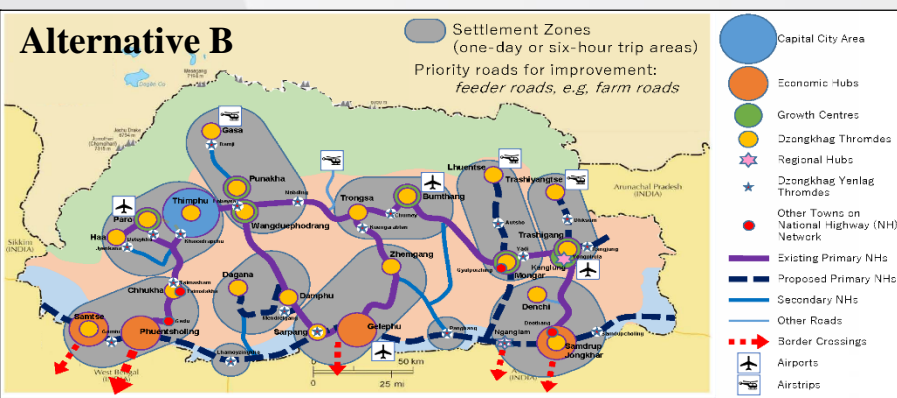
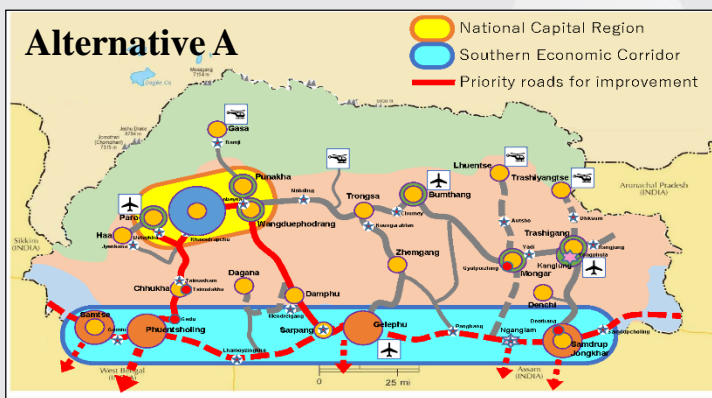
### (4) Selection of development scenario among alternatives

	Planning framework: (Population (P) and Economic Activity (EA))	Food self-sufficiency	Economy	Society	Transport	Spatial Structure	Land use
<b>Alternative A</b>	Accept the concentration of P and EA in advanced regions (ARs) in the west and south	Aim at 50% food self-sufficiency ratio (FSSR)	Promote industries with comparative advantages <sup>1</sup> (main), collective industrial strength <sup>2</sup> (sub), and self-sufficient industries <sup>3</sup> (sub)	Pursue a progressive society that promotes development and self-fulfillment, e.g., aggregate advanced higher education (HE) facilities and medical treatment (MT) in selected areas	Prioritize the expansion of the trunk transport system (TTS), e.g., second international airport, a southern, east-west highway, a new north-south highway	Organize the development of ARs, e.g., the capital region (Paro, Thimphu, Punaka and Wangdue) and the Southern Economic Corridor	Regulate land use in ARs to avoid the over-concentration of P and EA
<b>Alternative B</b>	Promote the nationwide dispersion of P and EA (or try to maintain the status quo)	Aim at 70% FSSR	Promote industries with comparative advantages <sup>1</sup> (sub), collective industrial strength <sup>2</sup> (sub), self-sufficient industries <sup>3</sup> (main)	Prioritize education and social life, e.g., traditional community life and culture	Prioritize the improvement of local access roads, e.g., the blacktopping of farm roads	Organize nationwide Settlement Zones, i.e., based on daily/weekly/seasonal living space	Promote urban and village development in a manner that reflects the local culture and landscape
<b>Alternative C</b>	Promote the dispersion of P and EA among eastern and central Growth Centres	Aim at 60% FSSR	Promote industries with comparative advantages <sup>1</sup> (sub), collective industrial strength <sup>2</sup> (main), self-sufficient industries <sup>3</sup> (sub)	Pursue a moderate society, balancing progress with protection, e.g., improve physical access to more advanced services within each Dzongkhag, including HE and MT	Prioritize the improvement of the existing TTS, e.g., widening and improving the alignment of PNHS and SNHS	Develop major urban growth centres in the eastern and central regions	Promote efficient and intensive land use to facilitate the inflow of P and EA
<b>Alternative D</b>							
<b>Alternative E</b>							
<b>Alternative F</b>							
<b>Alternative G</b>							

A: Growth centers development

C, D, E, F, G: Mixture

B: Rural development



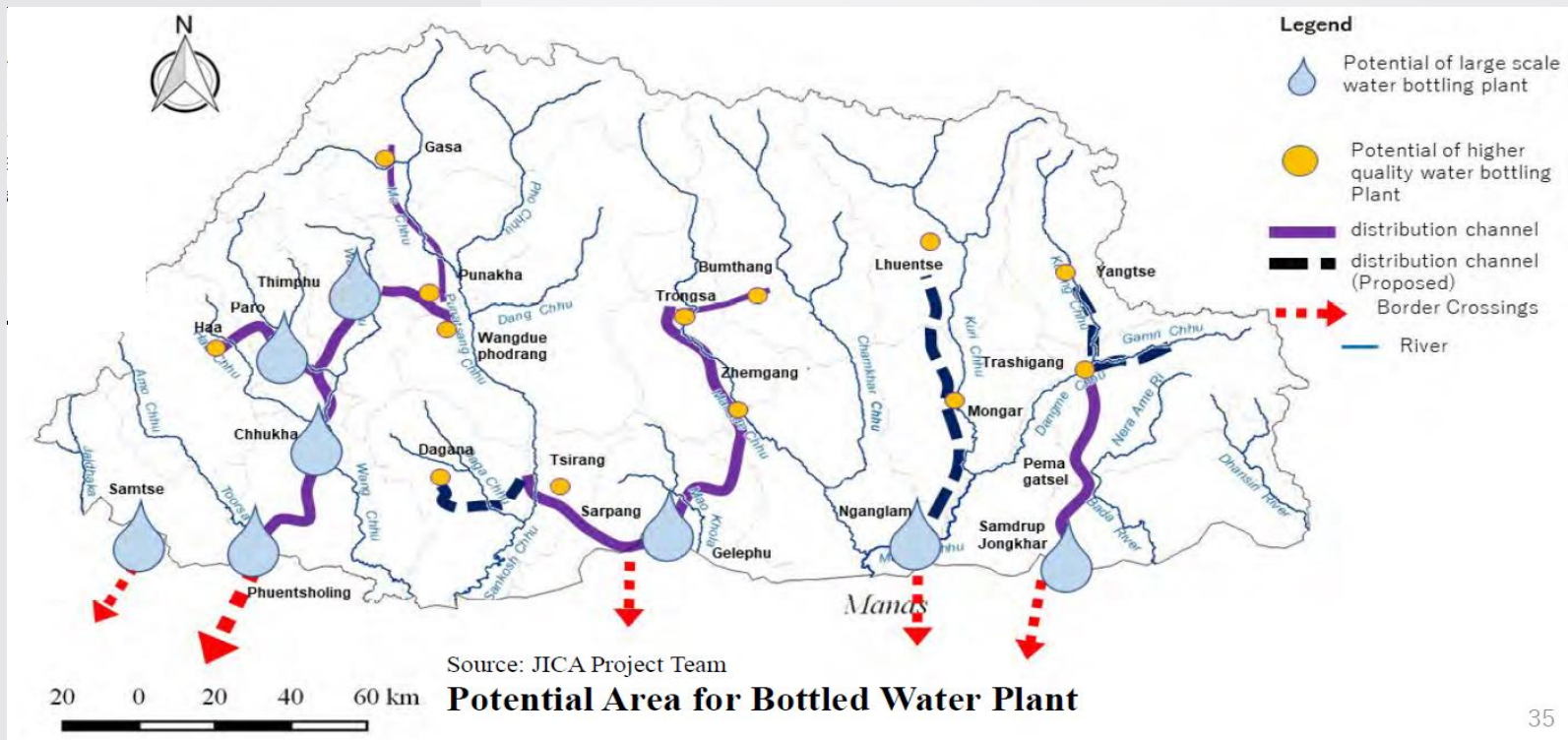
## 2. JICA's Cooperation for NCDP (Bhutan Case)

### (5) Development Program

#### ① Creation of Water Business Promotion Area

Promotion of export-oriented business to appeal Bhutan as Clean Country”

- ✓ Water production: 36 million m<sup>3</sup>/year
- ✓ Sales in Bhutan: 0.95 million m<sup>3</sup>/year
- ✓ Sales in India: 16 million m<sup>3</sup>/year (500~750 million BTN)
- ✓ Sales in other countries: 20.05 million m<sup>3</sup>/year



## 2. JICA's Cooperation for NCDP (Bhutan Case)

### (5) Development Program

#### ② Creation of Holistic Tourism Network

#### Promotion of Gate Town other than Thimphu

- Taktsang Lhakhang

- Phobjikha

- Trekking

- Local Industry

- Paper making

- Spa and wellness

- Special bread without rice flour

- Incense

- Dairy products

- Local beer

- Local Industry

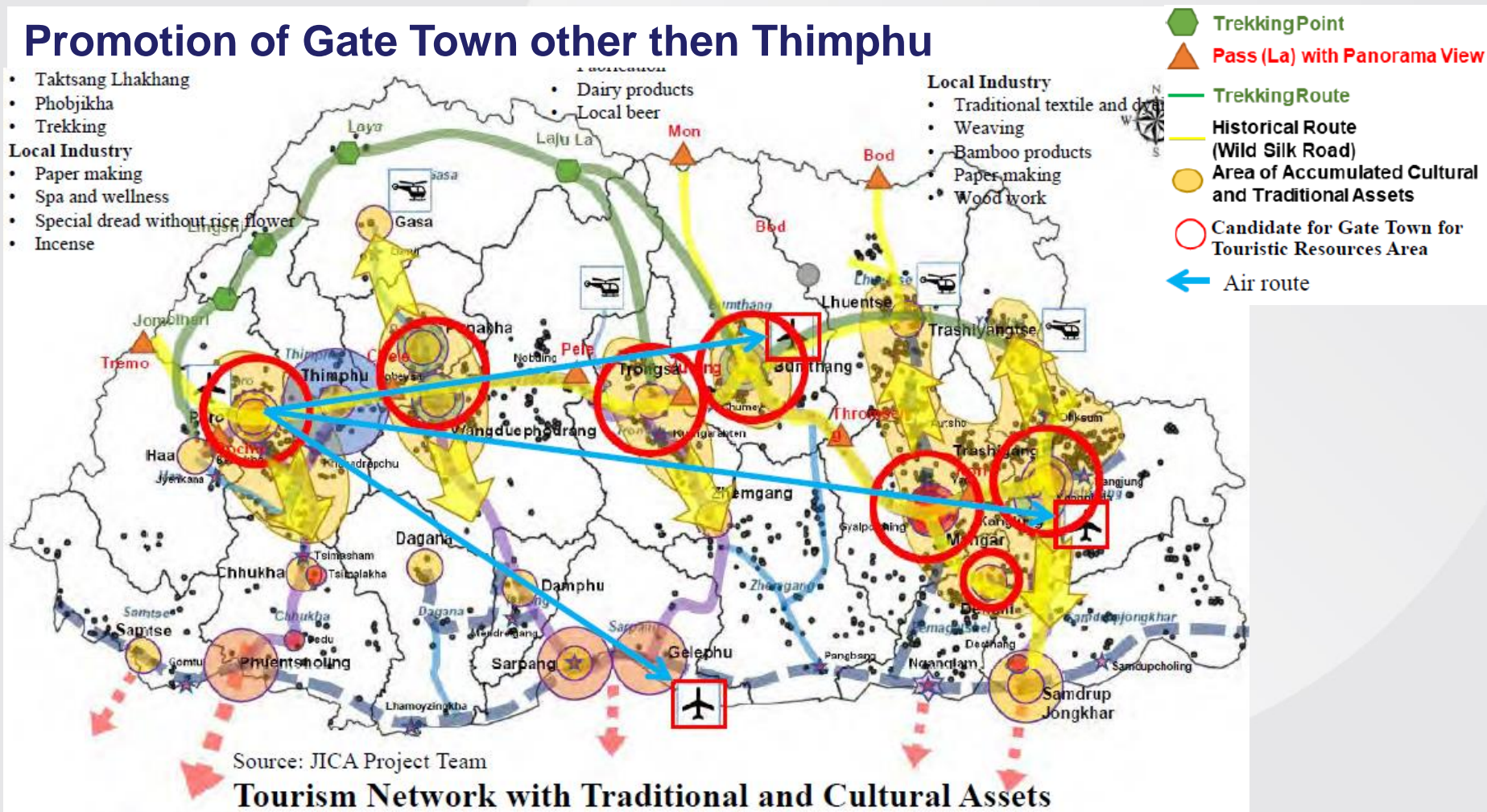
- Traditional textile and dyeing

- Weaving

- Bamboo products

- Paper making

- Wood work

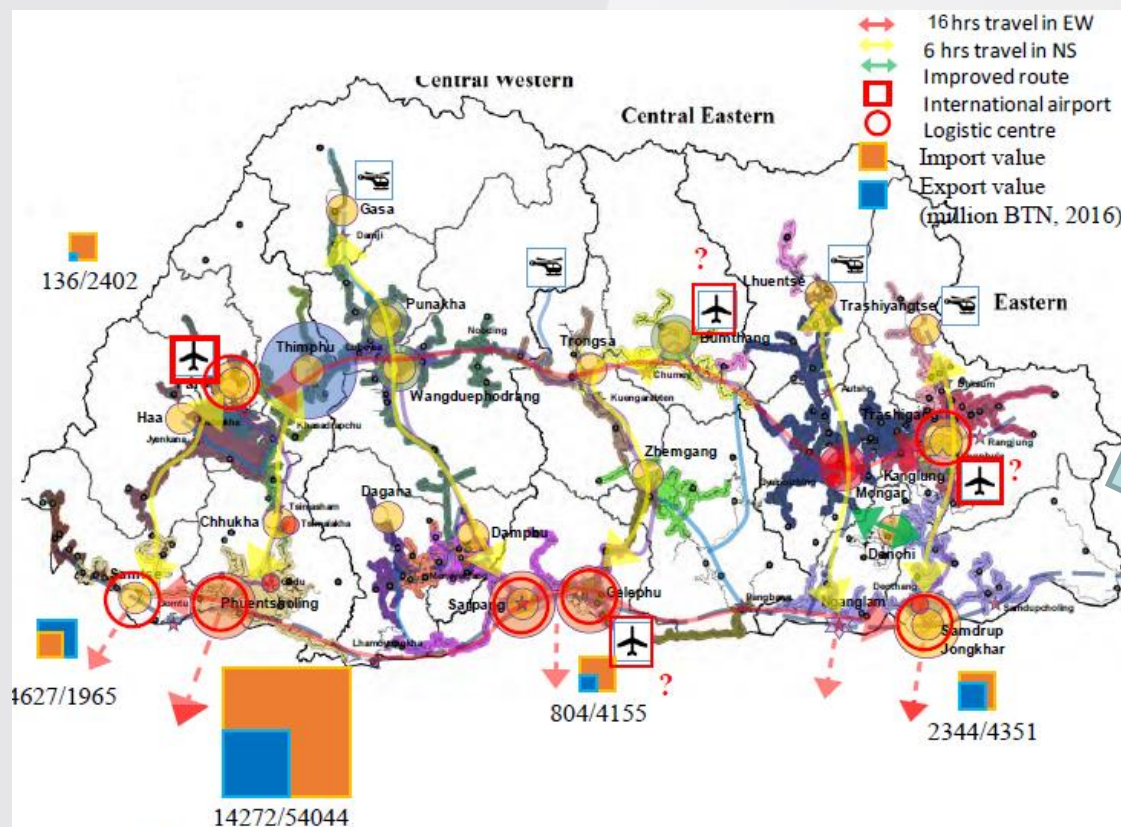


## 2. JICA's Cooperation for NCDP (Bhutan Case)

### (5) Development Program

#### ③ Effective Transport System

##### Sub-program: Creation of Trunk Road Network



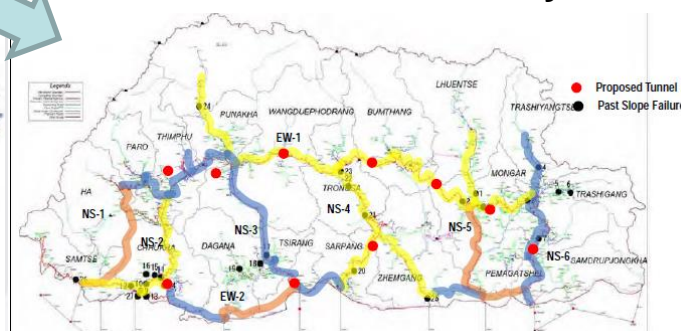
Source: JICA Project Team

Proposed Transport System (Draft)

#### Approach

- Establishment of road network in ladder form for redundancy and accessibility
- Development of tunnel to ensure the accessibility

#### Prioritization of Route Improvement based on Bottleneck Analysis



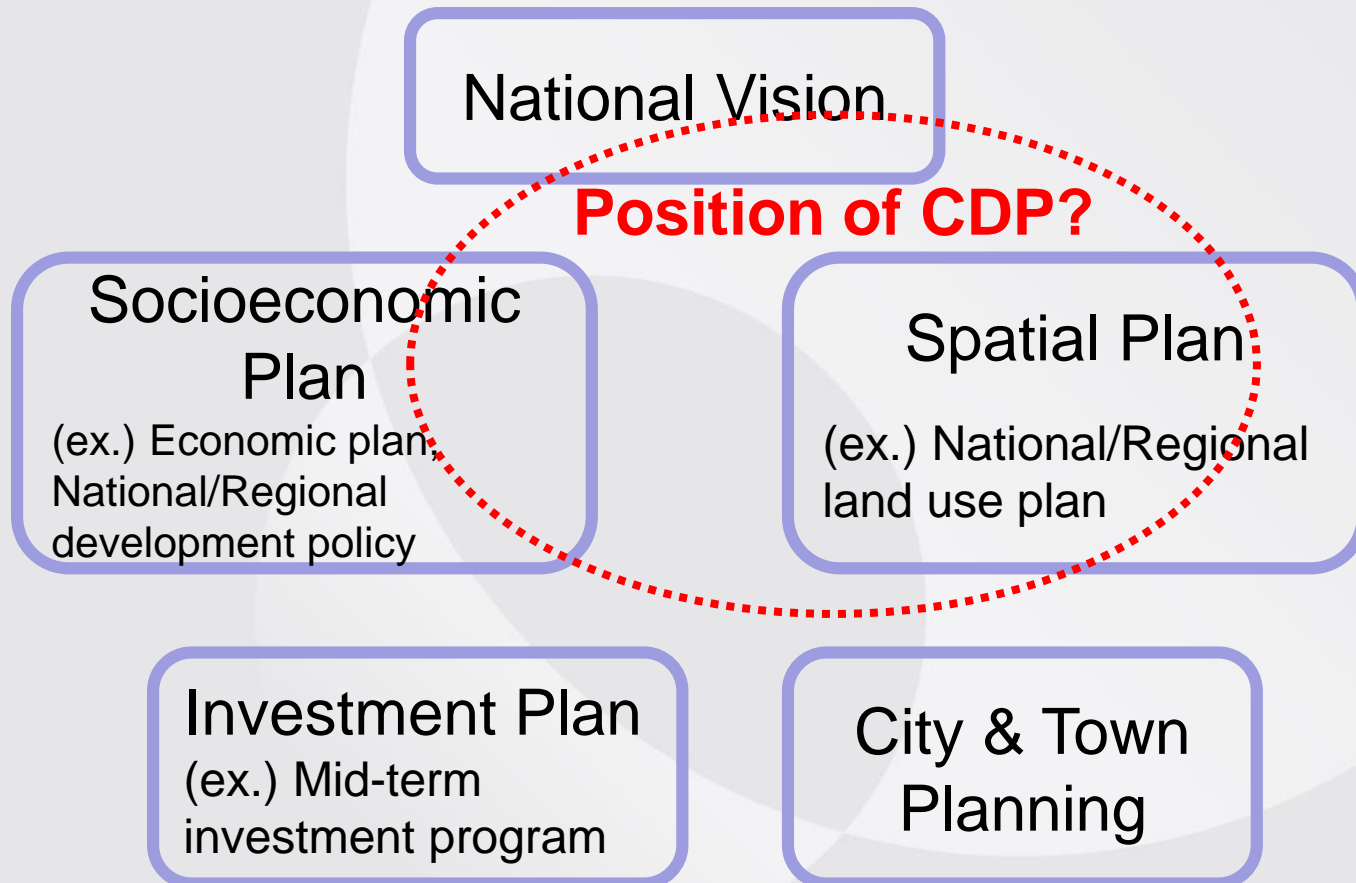
Note: High Priority, Middle Priority, Low Priority

( Sources: JICA Study Team )

## 3. What are to be addressed

### (1) Clarifying position & relations of relevant plans

(Ex.) In Mongolia, “Regional Development Policy” and “Human Settlement Plan” are supposed to be formulated according to NCDP.



## **3. What are to be addressed**

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### **(2) Planning based on facts and data**

- Clarifying available statistics and data
- Figuring out a country as it is (utilization of GIS)
- Predicting future socio-economic framework  
(ex. GDP, Possible public investment, Population by regions, employment by sectors etc )

### **(3) Clarifying Mechanism of decision making**

- Implementing structure and demarcation among relevant agencies
- Involvement of local people (Ex.) Government of Mongolia has set up regional and local committees
- Selecting a strategy among alternative scenarios with involvement of various stakeholders (SEA).

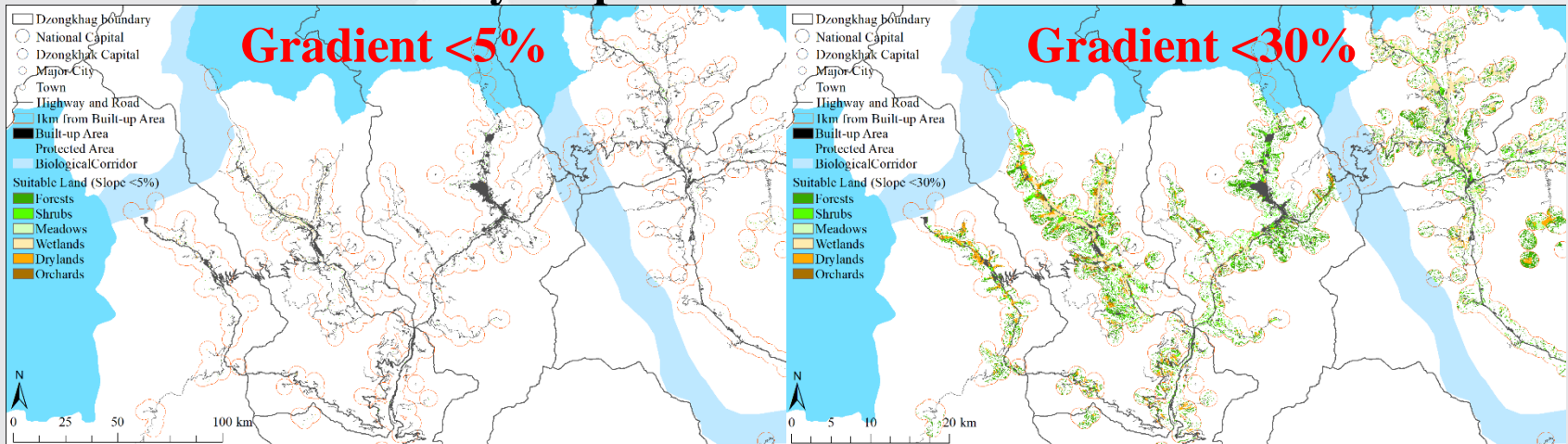
# 3. What are to be addressed

## (4) Consideration to features of the country

(Ex.) Steep mountains strictly limit lands to be developed in Bhutan. Integrated Spatial Information System developed under the NCDP Study supports to identify lands to be developed and formulate land use master plan.



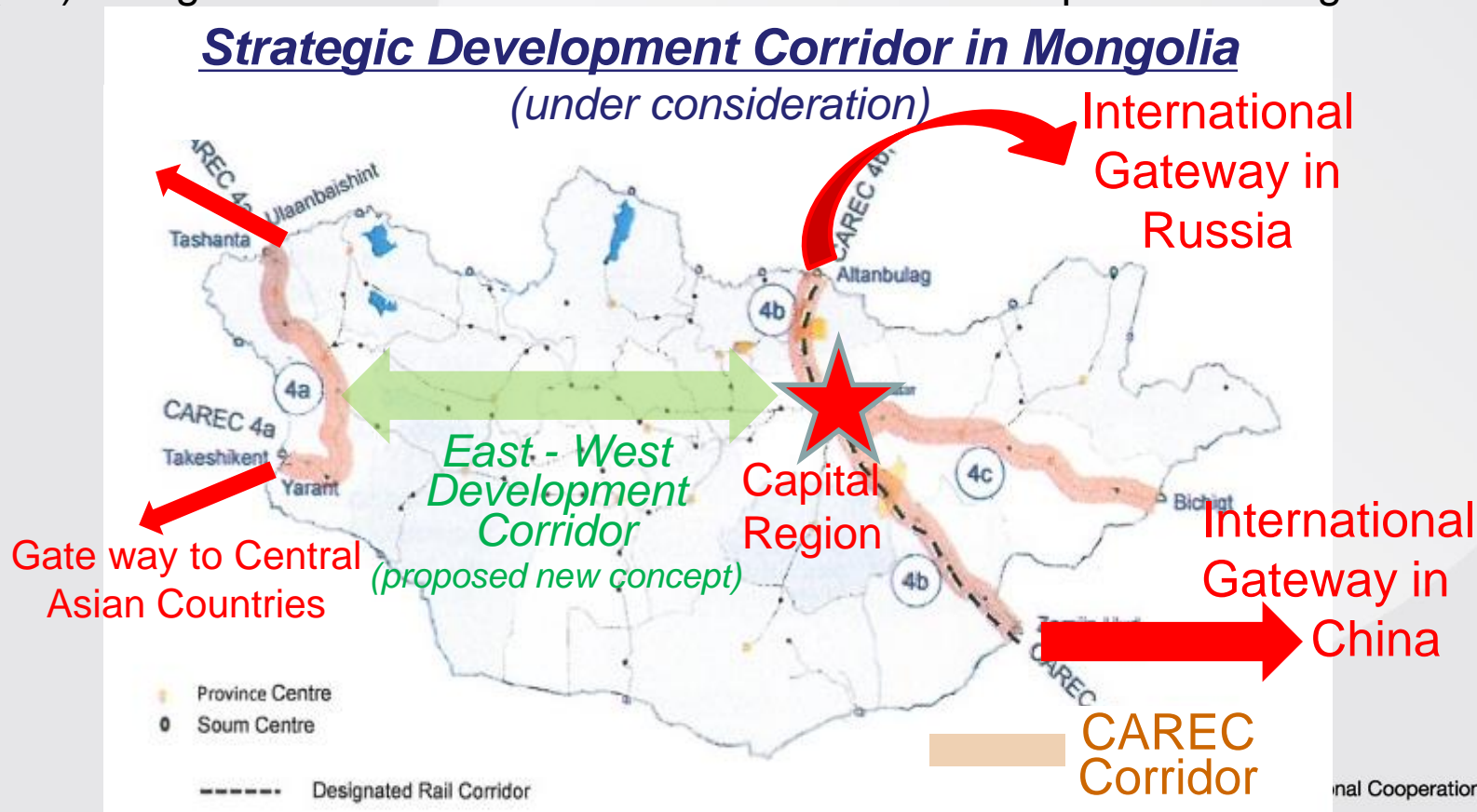
### Land Cover by Slope within 1km from Built-up Area



# 3. What are to be addressed

## (5) Consideration to geopolitical situation

- Considering relations with neighboring countries (especially for land locked countries).
- International corridor development is a hot issue for not a few countries (ex. Africa, Greater Mekong Region, Central Asia)
- (ex.) Mongolia needs two international corridors to seaports securing resilience.

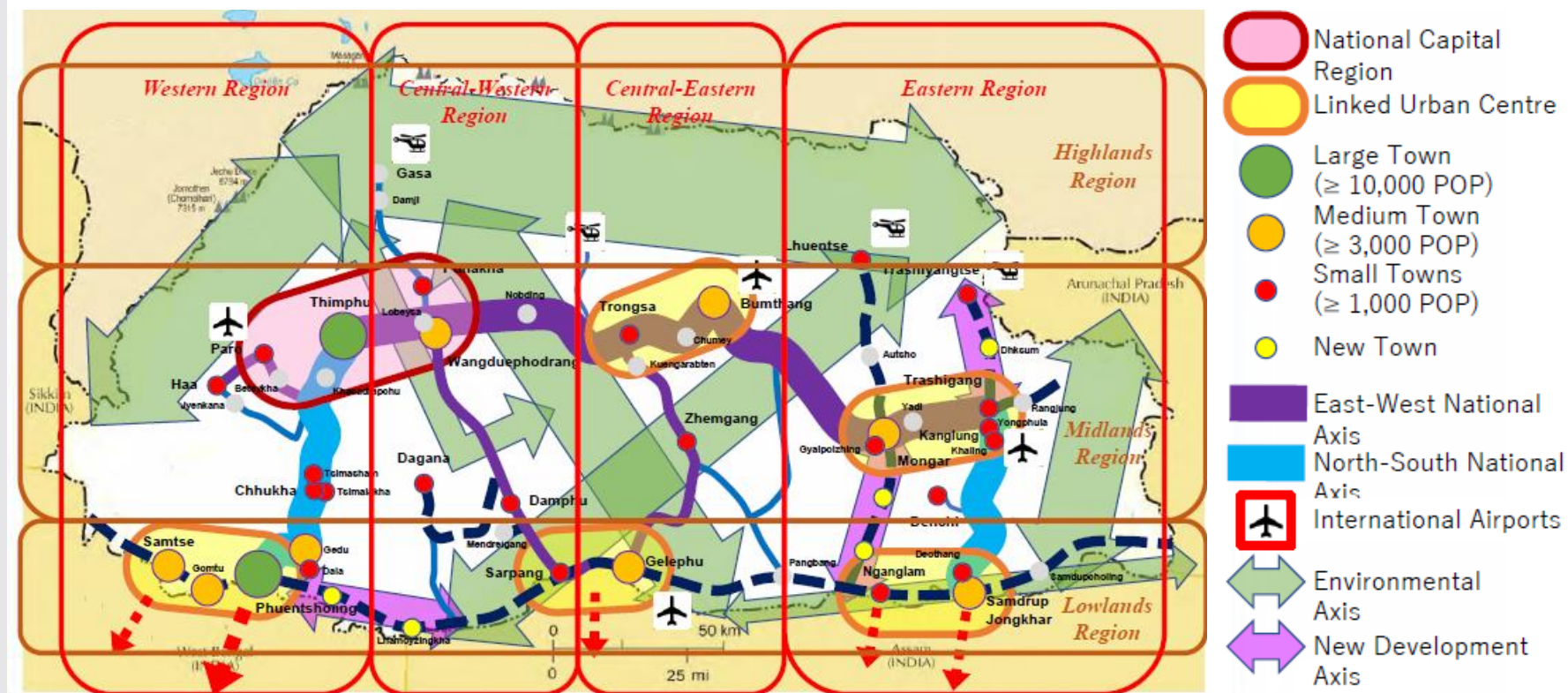


# 3. What are to be addressed

## (6) Inclusive Development

- “Alleviation of regional disparity” and “Ethnic consideration” are common issues.
- (Ex.) In Bhutan, lateral & longitudinal development corridors are identified. Longitudinal corridors are also important in terms of ethnic inclusion.

### *East-West & North-South Development Axis in Bhutan*



[ Sources: JICA Study Team ]

## **4. What are values to cooperate for NCDP**

- **Promoting inclusive development by sharing common visions among people**
- **Comprehensive and effective development based on Master Plan**
- **Sharing Japanese experiences** (Methodologies of development under Rapid Growth Period, Stable Growth Period & Population Decreasing Society)
- **Fusion of objective observation & hints of Japanese experts and political will & deep knowledge of the country bring new values.**

***Thank you for your attention!***