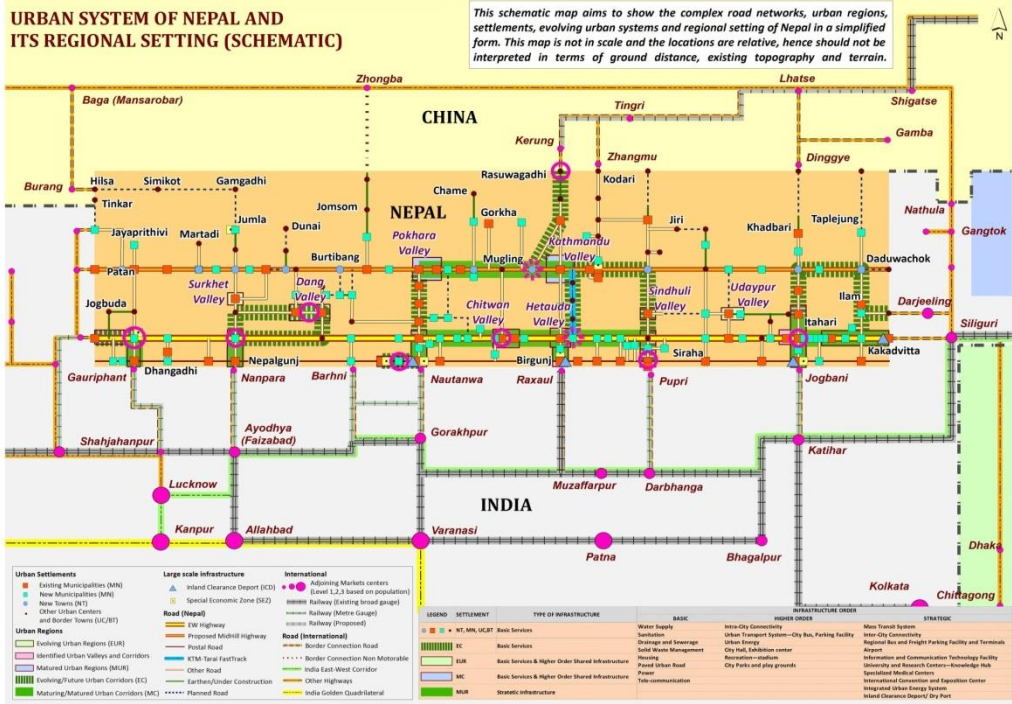




Integrating SDG into national policies and programmes: country priorities in infrastructure development in urban areas



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Deputy Director General
Department of Urban Development and Building Construction



Contents

Contents

1. Background

2. Case of National Urban Development Strategy 2017

3. Use of Urban Infrastructure Condition Index – UICI And Urban Livability Index – ULI

4. Conclusion – the way forward

**Sustainable Development means Economic Development that is socially responsive and environmentally sustainable
– Prof. Jeffrey Sachs**



Urban system: Regional Context

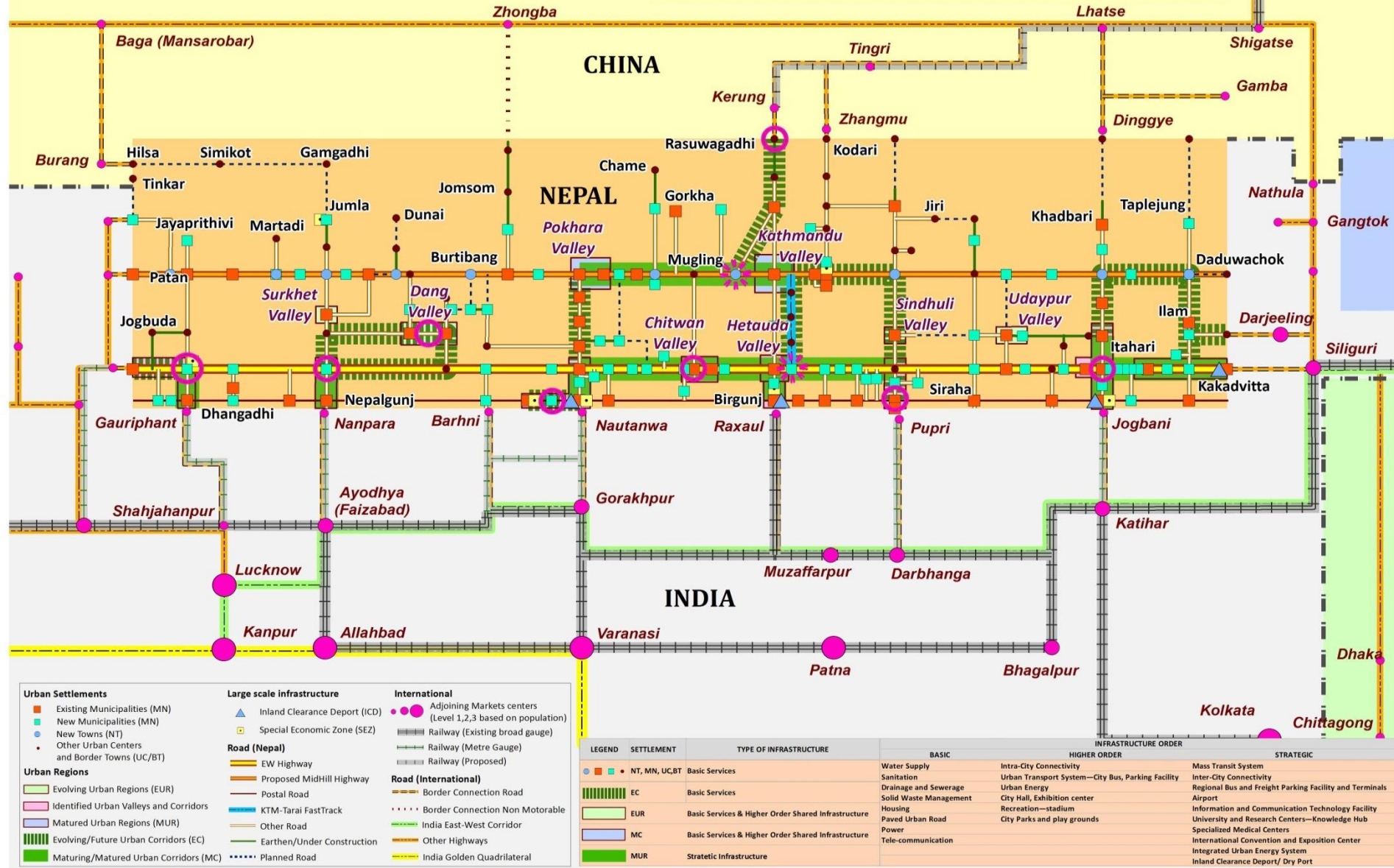




Regional Urban System - Schematic

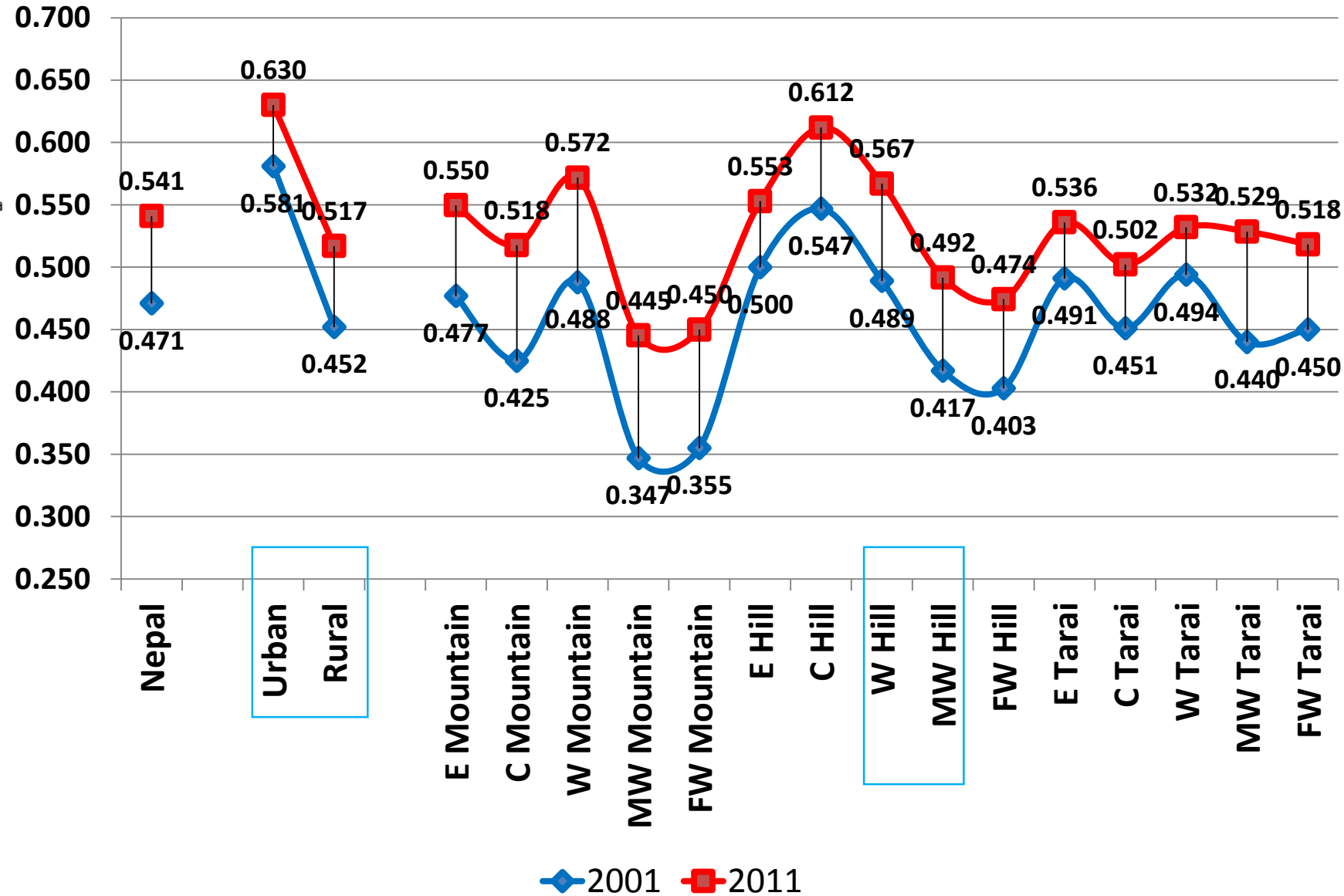
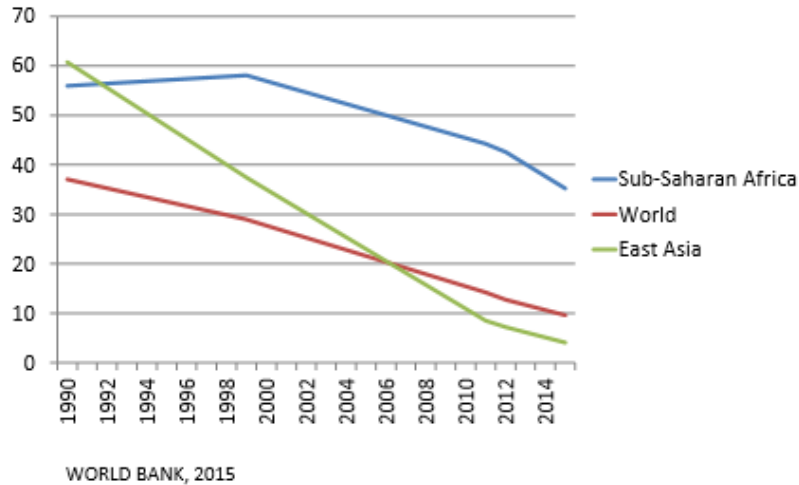
URBAN SYSTEM OF NEPAL AND ITS REGIONAL SETTING (SCHEMATIC)

This schematic map aims to show the complex road networks, urban regions, settlements, evolving urban systems and regional setting of Nepal in a simplified form. This map is not in scale and the locations are relative, hence should not be interpreted in terms of ground distance, existing topography and terrain.



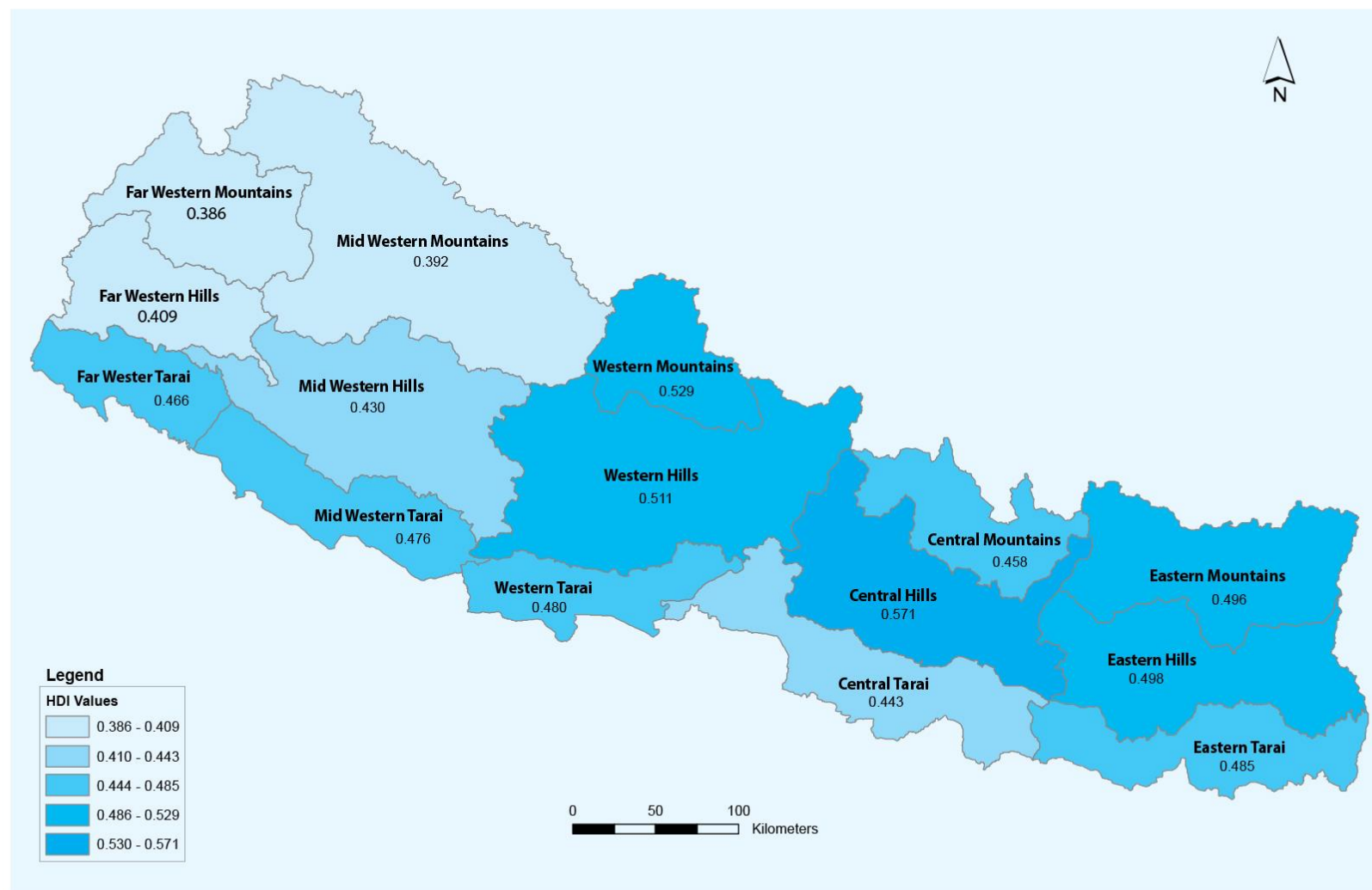
Nepal's Improvements in HDI 2001-2011

Rate of Extreme Poverty is Declining



HDI status in 5x3 regions = 15 regions (2011)

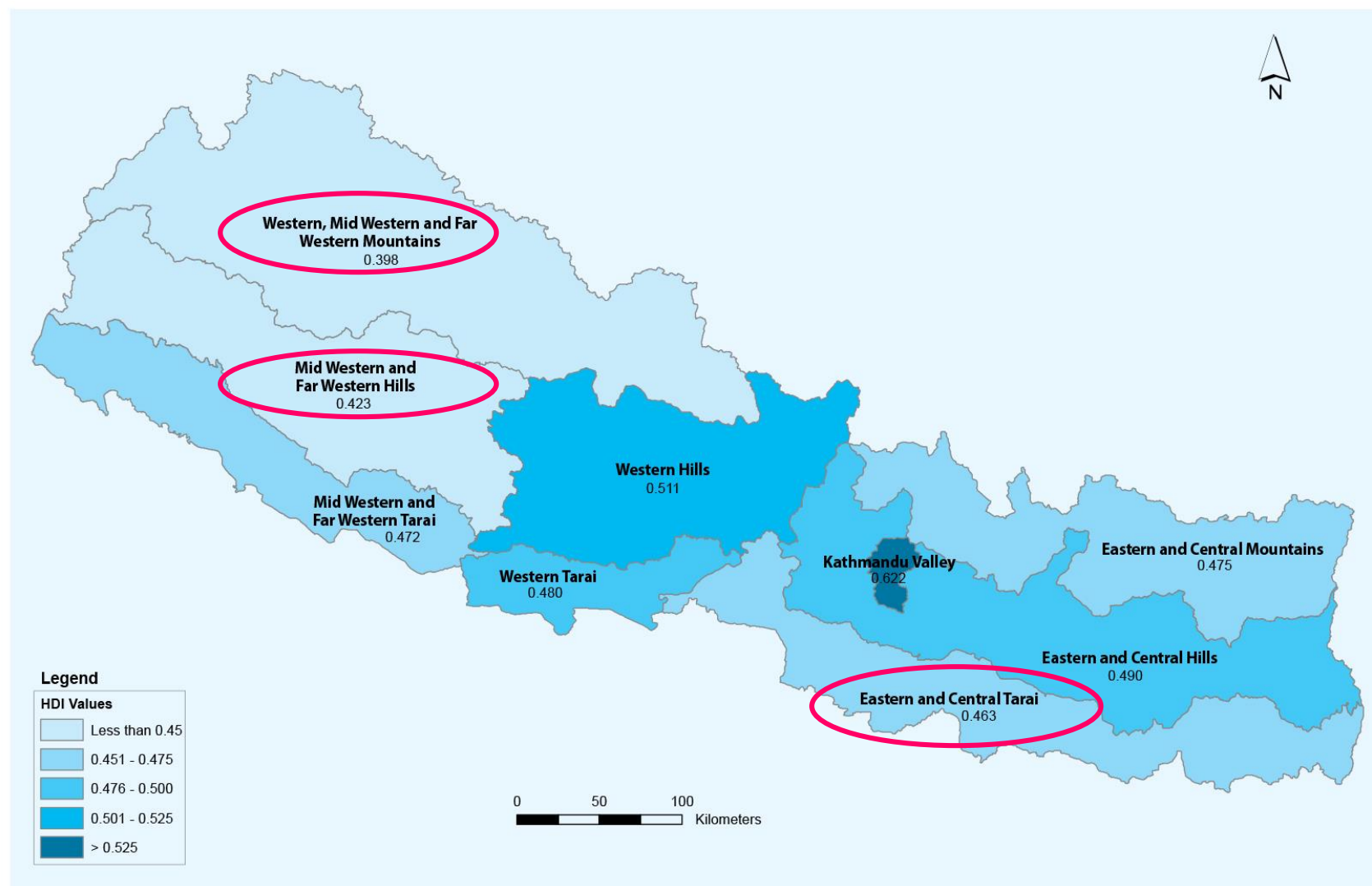
HDI values across the 15 eco-development regions, 2011



Source: Annex 4, table A4.1

MAP 2.2

HDI values for the nine eco-development regions, Nepal 2011



Source: Annex 4, table A4.1.

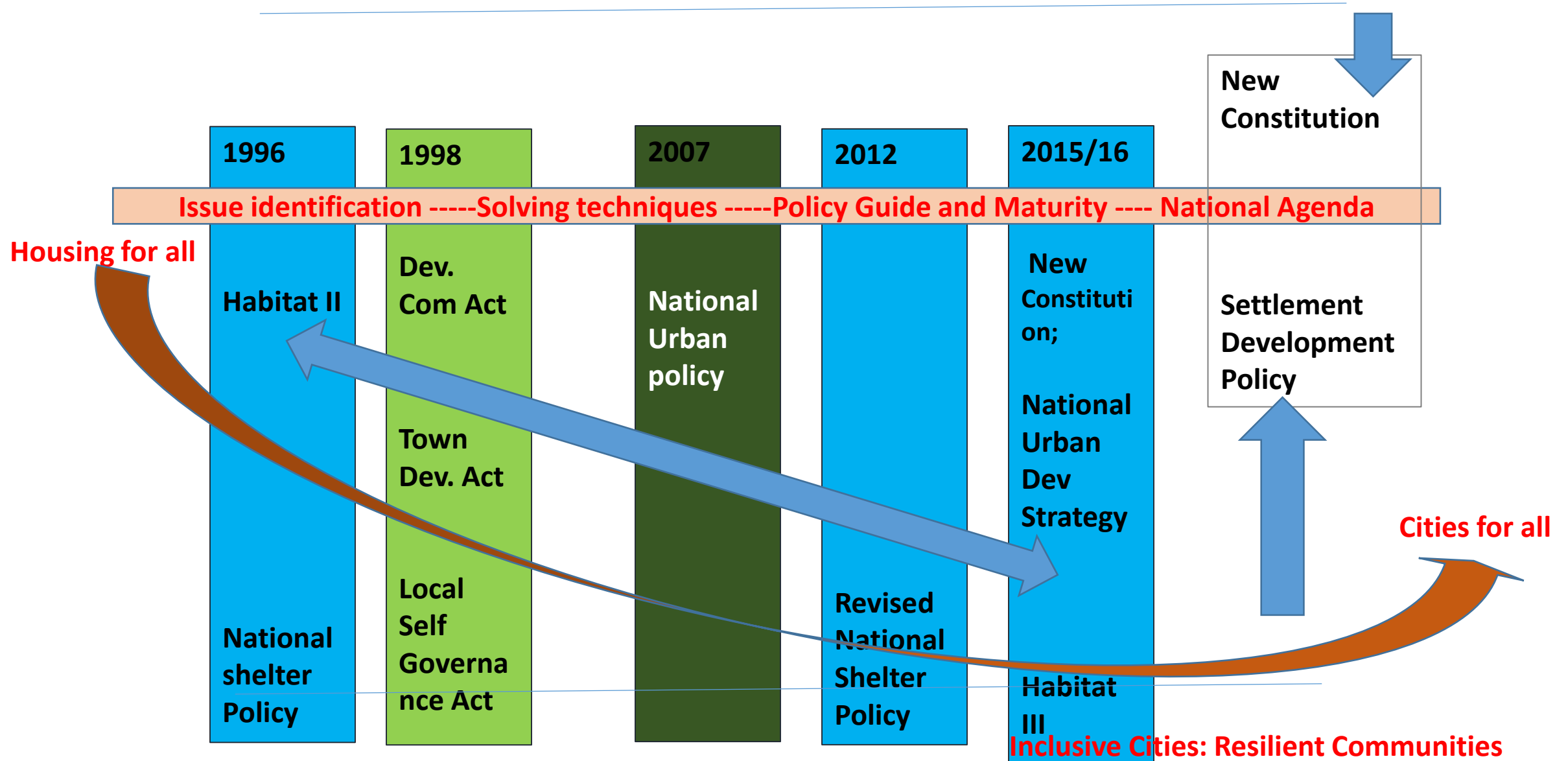
MAP 2.3

HDI values across districts, 2011



Source: Annex 4, table A4.1.

Policy Landscape on sustainability, resiliency and governance



National Urban Policy 2007

Priority in Regional investment,
UR inter linkages, PPP

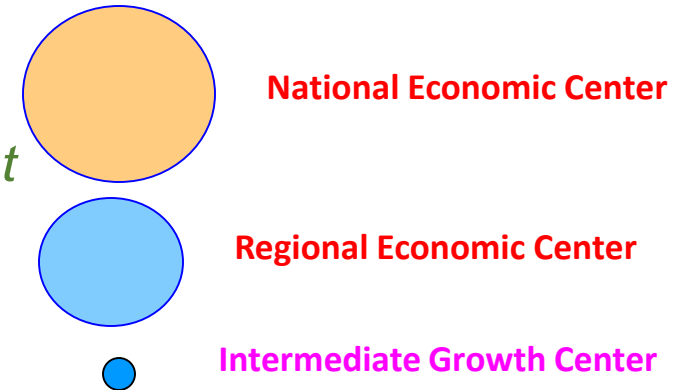
a balanced national urban system

Utilization of local resource
through economic activities,
compacting settlements, jobs

safe and prosperous urban environment

Institutional capacity building
for planning and
implementation, common
infrastructure, integrated urban
planning and monitoring
system

effective urban management

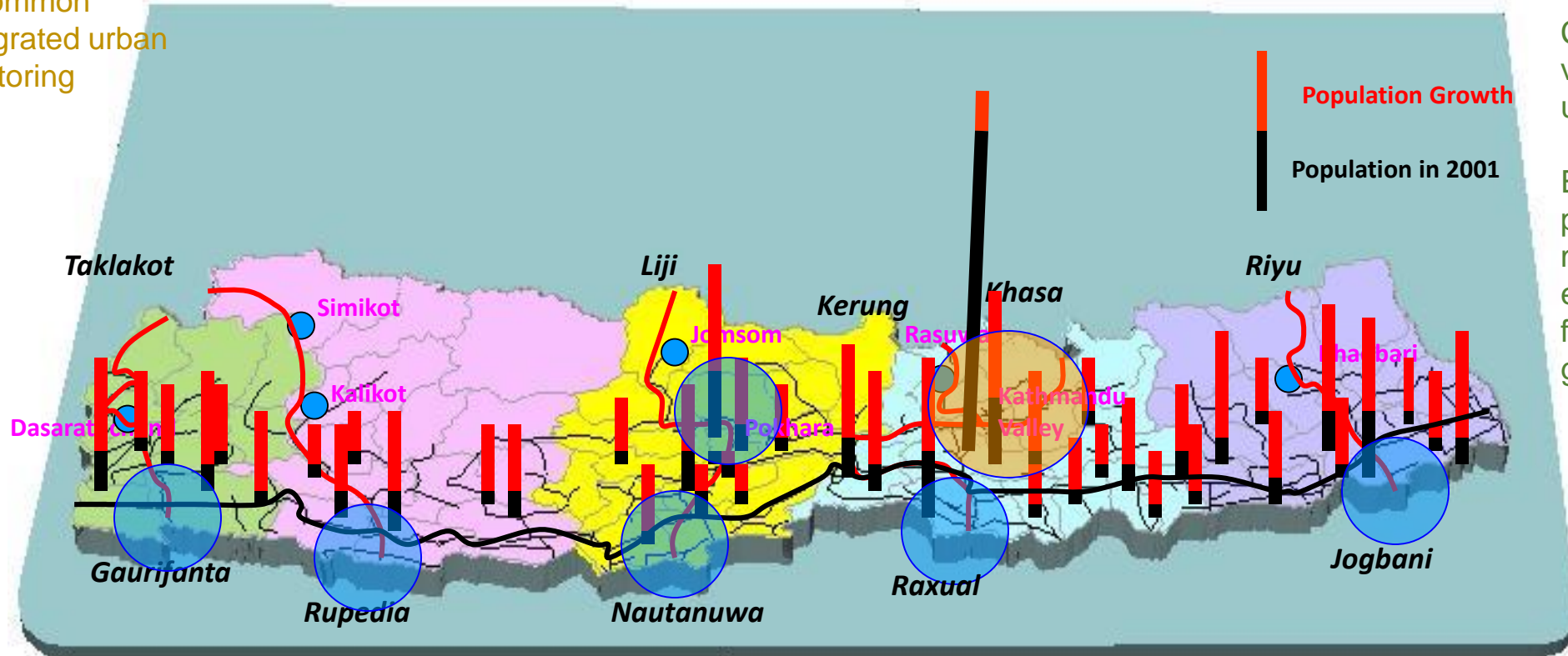


**Through this
policy we
recognize**

Investment in
Governance and in
infrastructure

Corridors and
valleys as planning
unit

Empowerment
packages to
municipality to
enhance OSR and
for urban
governance

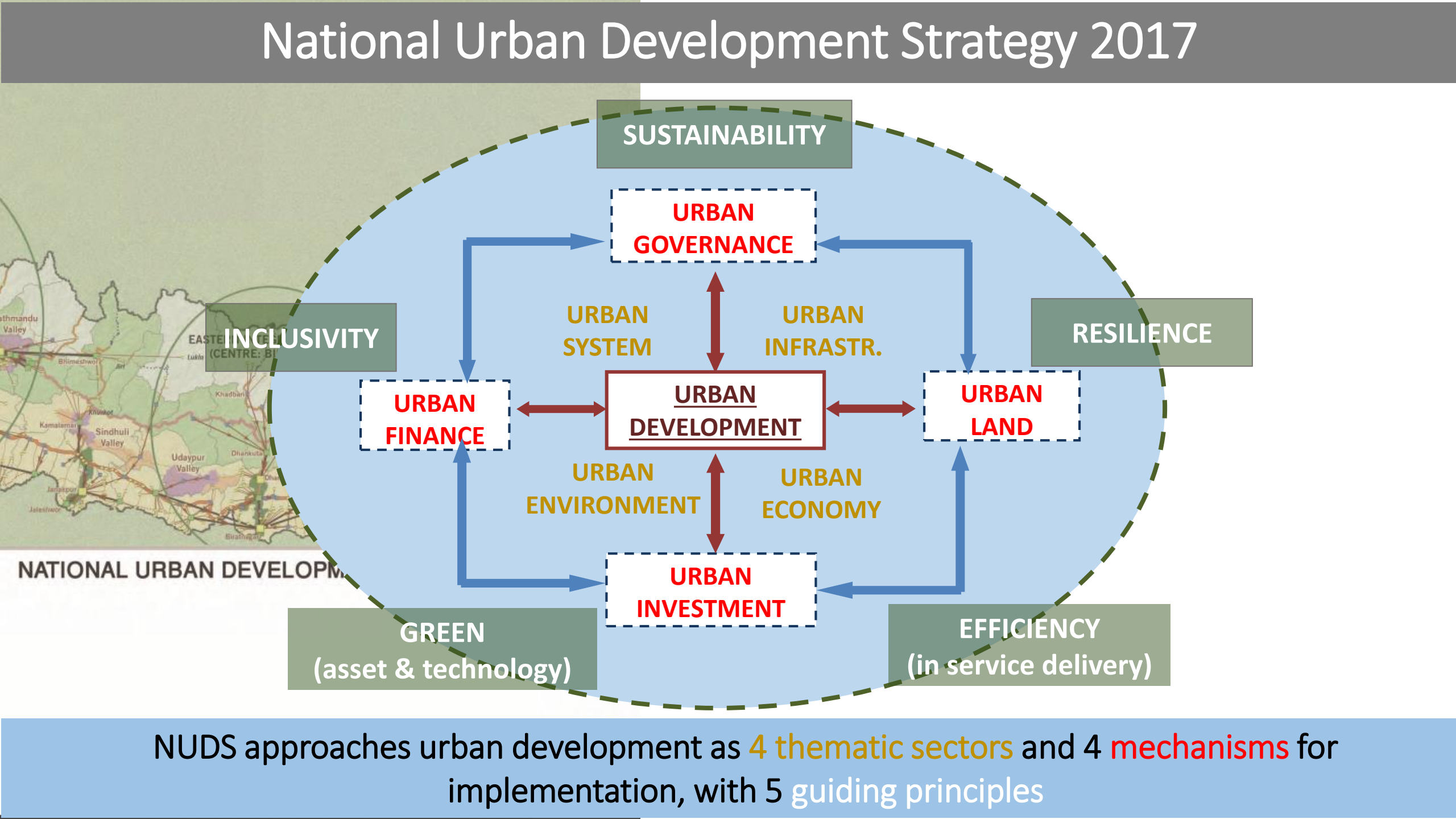


Adapted but not updated

National Urban Development Strategy 2017

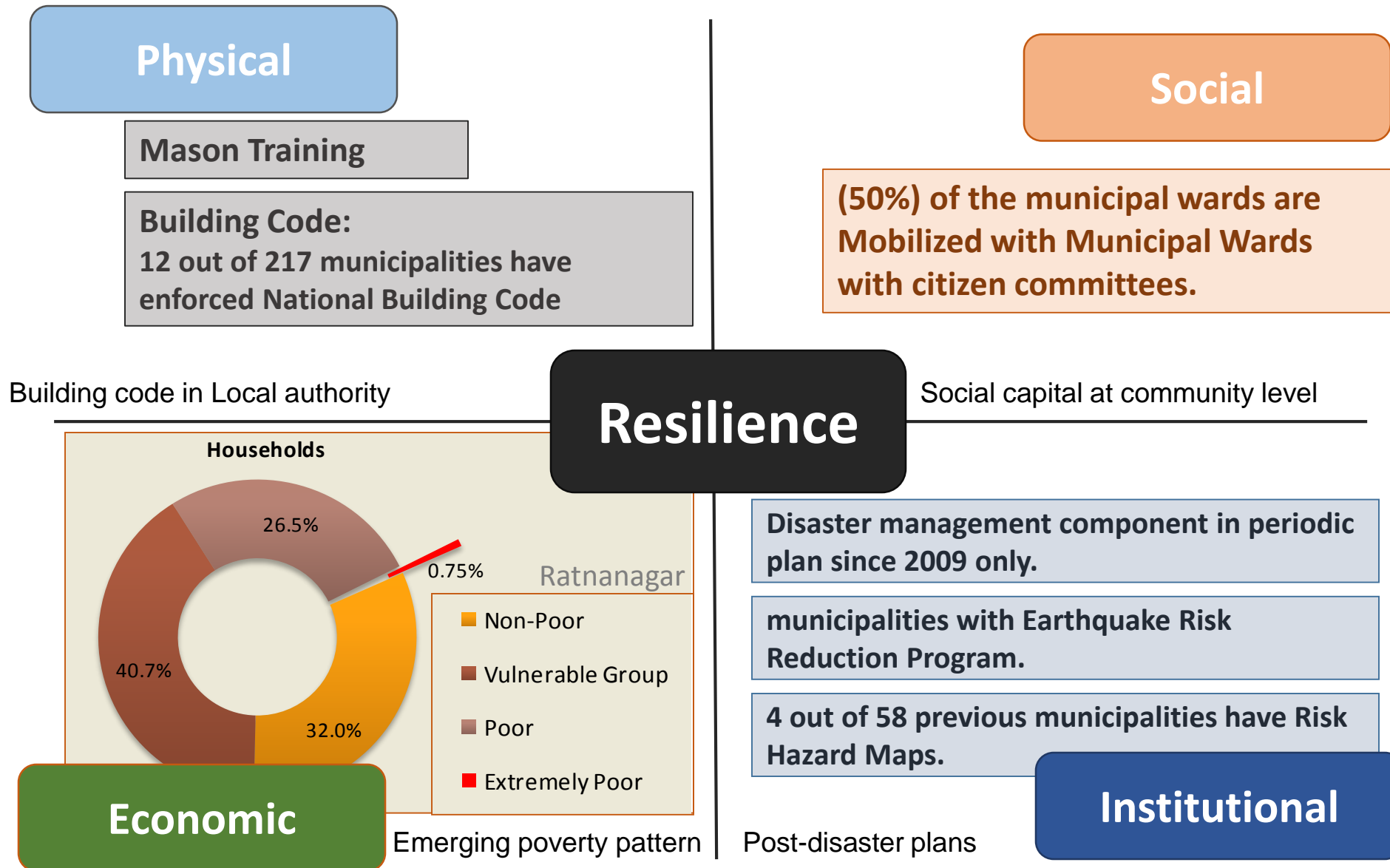
The diagram illustrates the National Urban Development Strategy 2017 framework. At the center is a box labeled **URBAN DEVELOPMENT**. Surrounding it are four thematic sectors: **URBAN SYSTEM** (top), **URBAN INFRASTR.** (right), **URBAN ENVIRONMENT** (bottom), and **URBAN ECONOMY** (left). These sectors are interconnected with **URBAN DEVELOPMENT** by double-headed arrows. Four mechanisms for implementation are shown in dashed boxes: **URBAN GOVERNANCE** (top), **URBAN FINANCE** (left), **URBAN LAND** (right), and **URBAN INVESTMENT** (bottom). Blue arrows indicate a clockwise flow from **URBAN GOVERNANCE** to **URBAN FINANCE**, then to **URBAN INVESTMENT**, then to **URBAN LAND**, and finally back to **URBAN GOVERNANCE**. Five guiding principles are represented by green boxes: **SUSTAINABILITY** (top), **INCLUSIVITY** (left), **RESILIENCE** (right), **GREEN (asset & technology)** (bottom-left), and **EFFICIENCY (in service delivery)** (bottom-right). A map of Nepal is visible on the left side of the diagram.

NUDS approaches urban development as 4 thematic sectors and 4 mechanisms for implementation, with 5 guiding principles



NUDS approaches urban development as 4 thematic sectors and 4 mechanisms for implementation, with 5 guiding principles

Urban Resilience: Approach of NUDS 2017



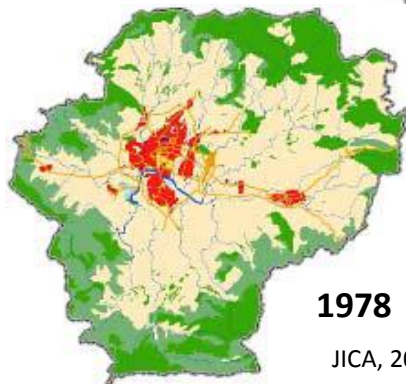
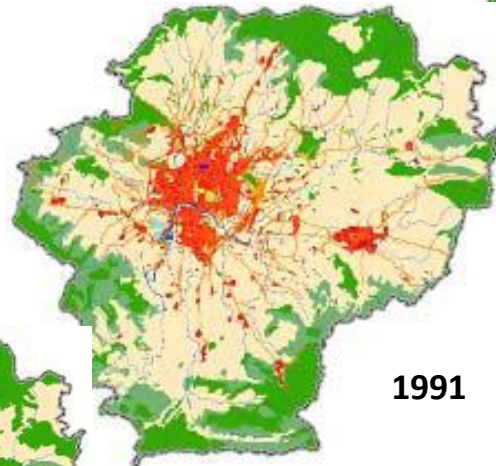
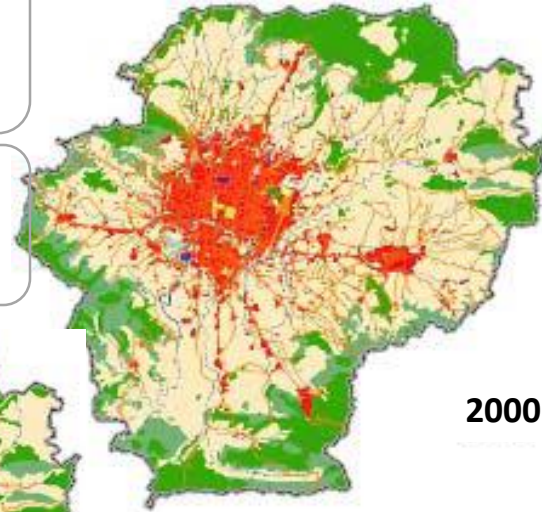
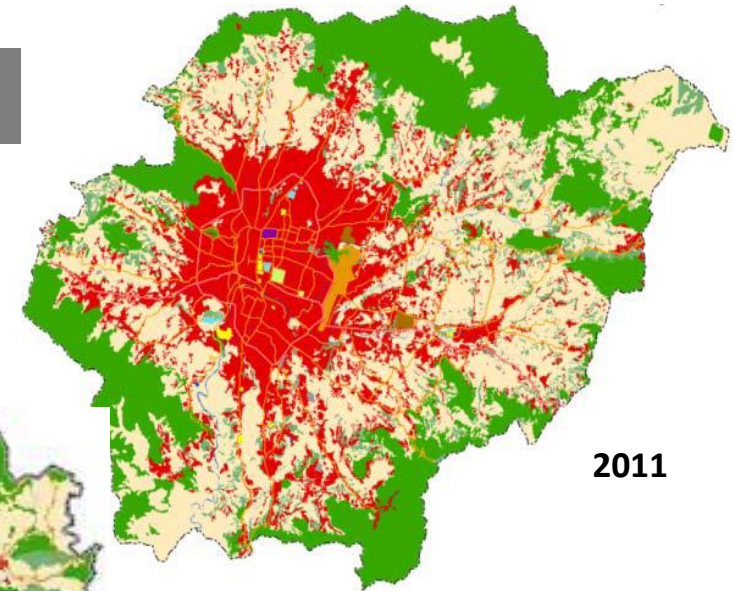
Urban investments – as it houses density, heterogeneity, and economies!!

Kathmandu Valley: Strategies

Promote environment and tourism friendly economic functions

Institutionalize urban regeneration program in historic core areas tied with the local economy

Mainstream informal urban economy



JICA, 2012



De-concentrate environmentally incompatible industries.



Investment : Infrastructure Deficit

Investment Required

Total

NRs 1,253 billion

Total W/O New Road Const.

NRs 756 billion

Description	58 Municipalities	133 Municipalities
New Roads	151,973	345,560
Upgradation of Roads	96,146	173,460
Piped WS Connection	9,019	10,169
Toilets Construction	1,731	4,371
Electricity	652	1,917
Landfill Site	743	683
Storm Drainage	75,129	188,886
Sewerage	37,502	155,910
Total	372,895	880,956

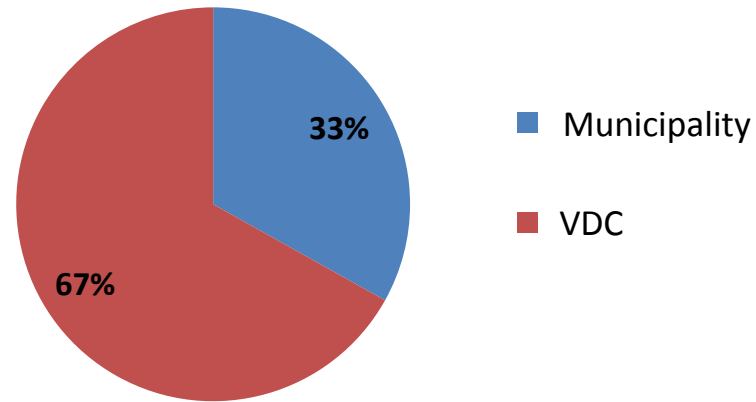
Amount in NRs Millions



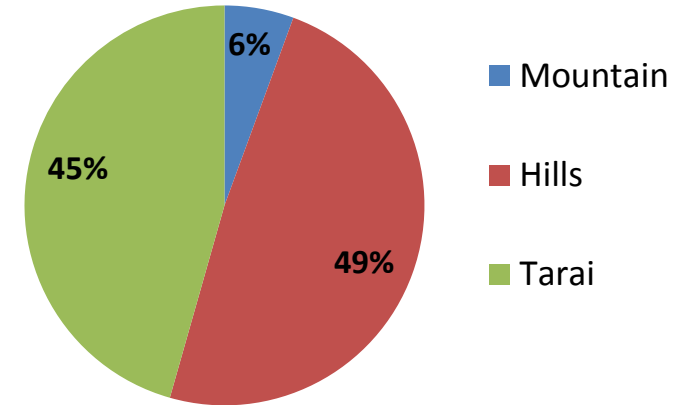
Why Investment in Urban Areas...?

GDP contribution

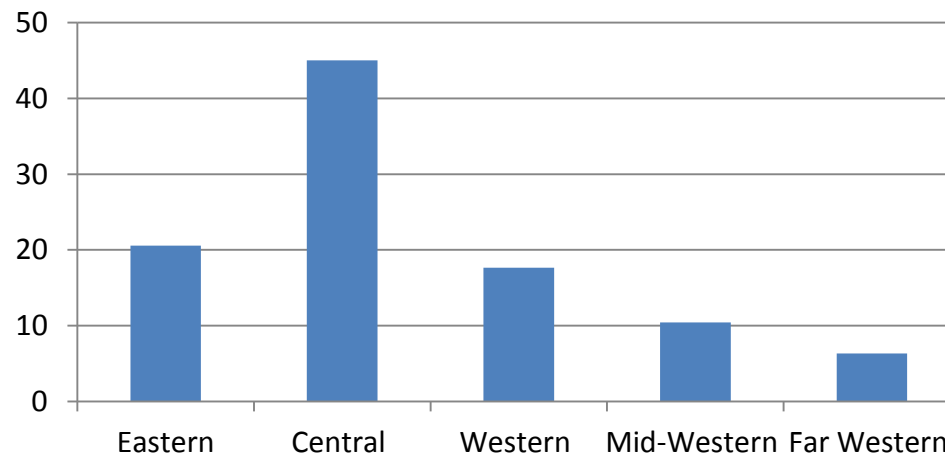
GDP contribution of municipality and VDC



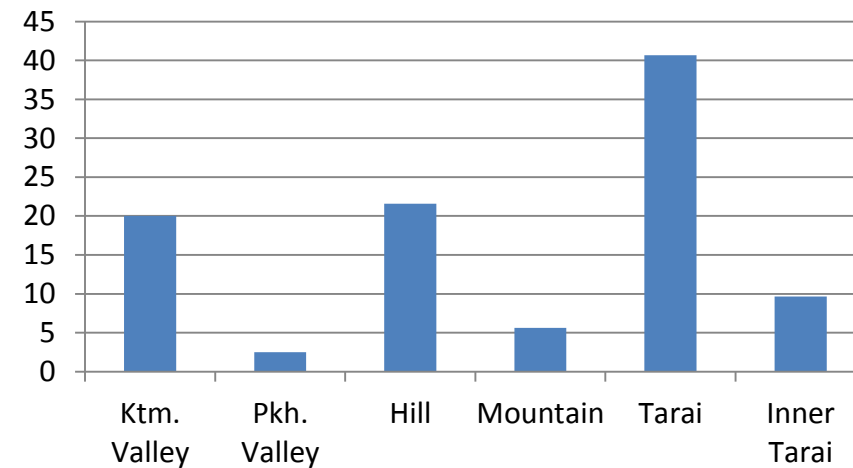
GDP contribution of the ecological regions



GDP contribution of the development regions



GDP contribution of the defined regions





Government of Nepal
Ministry of Urban Development

Inclusive Cities: Resilient Communities

**Third United Nations Conference on Housing and
Sustainable Urban Development (Habitat III)**

NEPAL
National Report



October 2016

UR relations, jobs creation, demographic dividend, welfare based strategies,

Balanced urban structure, Infrastructure provisions with sustainability and conservations, governance,

Disaster and Climate change risk in human settlements,

LED, affordable housing and adequate access to infrastructure, institutional development

3. Urban Infrastructure Condition Index – UICI

Indicator	Computed Value	Weightage	Index value of Indicator	UICI (out of 100)
Urban Character	100	0.10	10	91
Road Density	100	0.15	15	
% of hard topped road	80.1	0.05	4	
Water Supply Coverage	80	0.20	16	
Electricity Connection	93.2	0.15	14	
Sanitation	95.7	0.15	14.4	
% of Pakki House (RCC roof)	73.5	0.05	3.7	
Waste Collection	90.8	0.15	13.6	



Ranking of Municipalities

Top 10 Ranked Municipalities

Municipality	UICI, Points	Rank
Kathmandu Metropolitan	91	1
Butwal	86	2
Bhaktapur	78	3
Baglung	75	4
Kirtipur	73	5
Lalitpur Sub Metropolitan	73	6
Banepa	73	7
Pokhara Sub Metropolitan	73	8
Dharan	68	9
Madhyapur Thimi	67	10

Bottom 10 Ranked Municipalities

Municipality	UICI, Points	Rank
Gulariya	8	54
Kapilbastu	14	53
Bhimdatta	15	52
Tikapur	16	51
Ramgram	17	50
Siraha	18	49
Narayan	19	48
Jaleswor	22	47
Gaur	22	46
Amargadhi	24	45

Four municipalities, namely Triyuga, Rajbiraj, Khadbari, Dipayal, are not included in the ranking list due to lack of data

Urban Livability Index – ULI

How we measure urban infrastructure and facilities

Urban Livability Index NUDS

			Weightage
Indicators	Population density	% of urban area within municipality (with 10 pp/ha density)	10
	Road and Transportation	Road Density km/sq km	20
		% of hard topped road to total road length	
	Water Supply Coverage	% of HH with access to piped water supply	20
	Electricity Coverage	% of HH connected to gridline	10
	Sanitation	% of HH with access to toilet	10
	Housing Type	% of pakki house (roof)	5
	Solid Waste Management	Solid Waste Collection	5
			Total : 80

Ranking of Municipalities

Top 10 Ranked Municipalities

Municipality	ULI, Points	Rank
Kathmandu Metropolitan	72.1	1
Butwal	69.1	2
Pokhara Sub Metropolitan	60.3	3
Bhaktapur	60.0	4
Baglung	58.4	5
Kirtipur	57.6	6
Banepa	56.8	7
Lalitpur Sub Metropolitan	55.6	8
Dharan	55.4	9
Hetauda	52.3	10

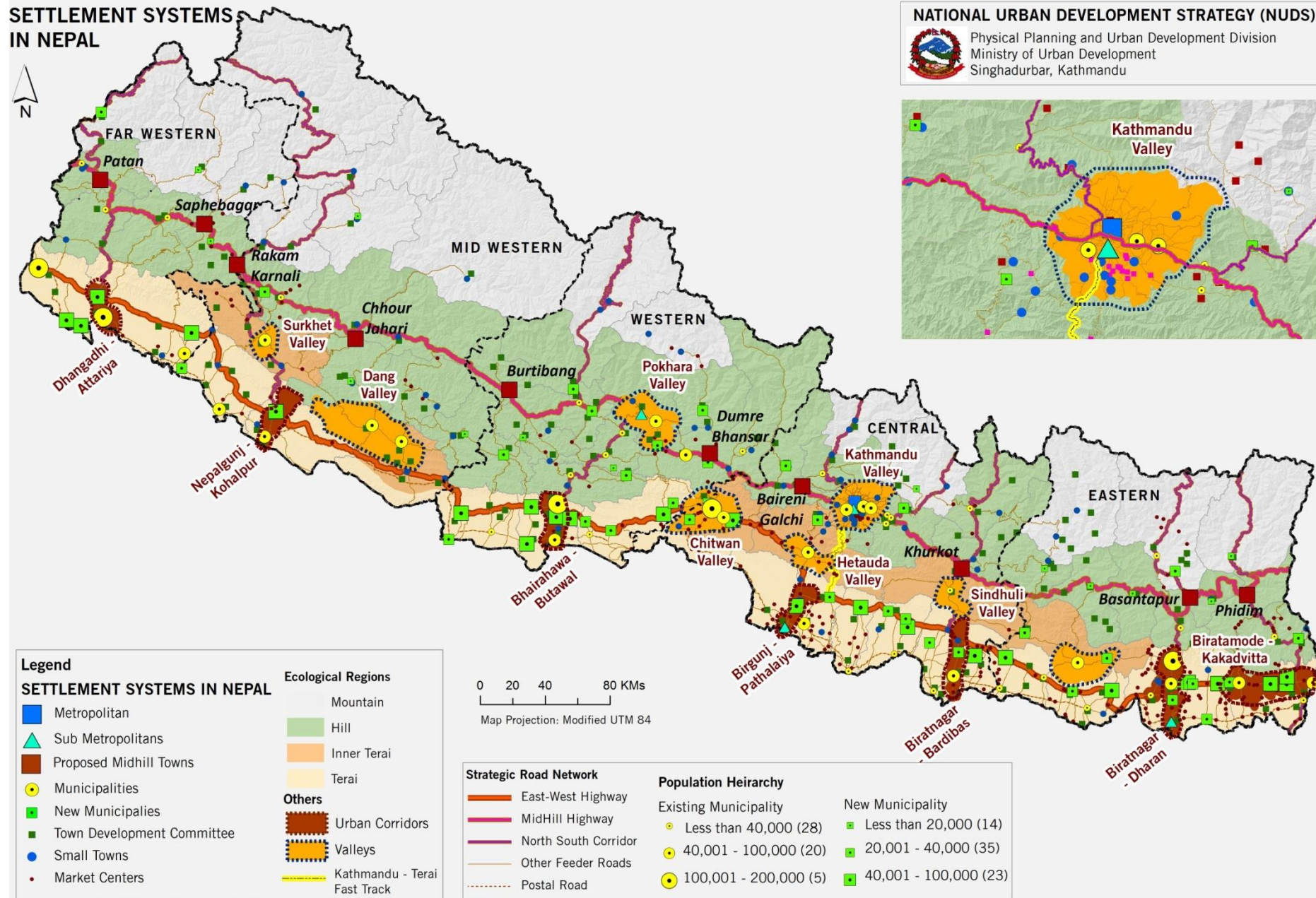
Bottom 10 Ranked Municipalities

Municipality	ULI, Points	Rank
Gulariya	7.2	58
Triyuga	12.0	57
Kapilbastu	12.3	56
Bhimdatta	12.3	55
Ramgram	13.1	54
Tikapur	14.2	53
Siraha	14.5	52
Narayan	15.9	51
Jaleswor	16.7	50
Gaur	17.6	49



Urban System: Settlement Distribution Valleys, and Corridors

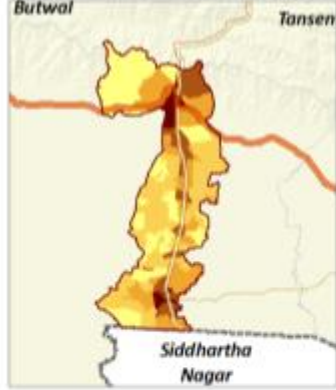
SETTLEMENT SYSTEMS IN NEPAL





Urban Form

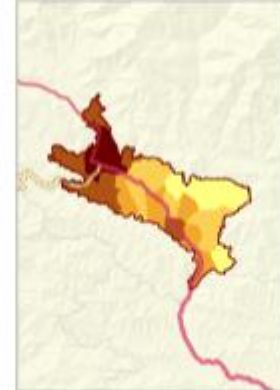
Butwal - Bhairahawa



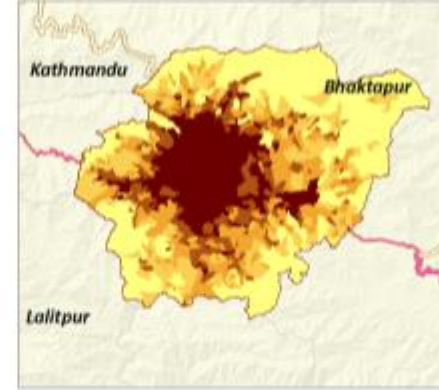
Surkhet Valley



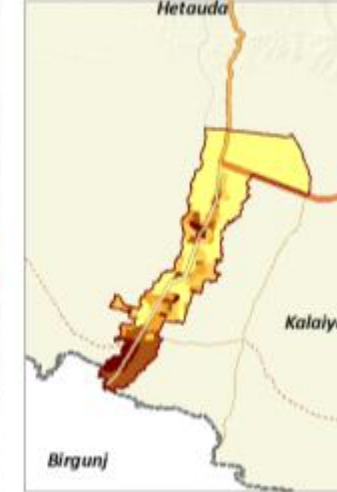
Pokhara Valley



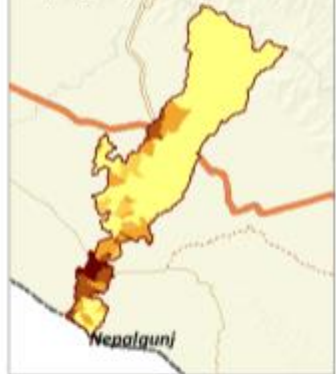
Kathmandu Valley



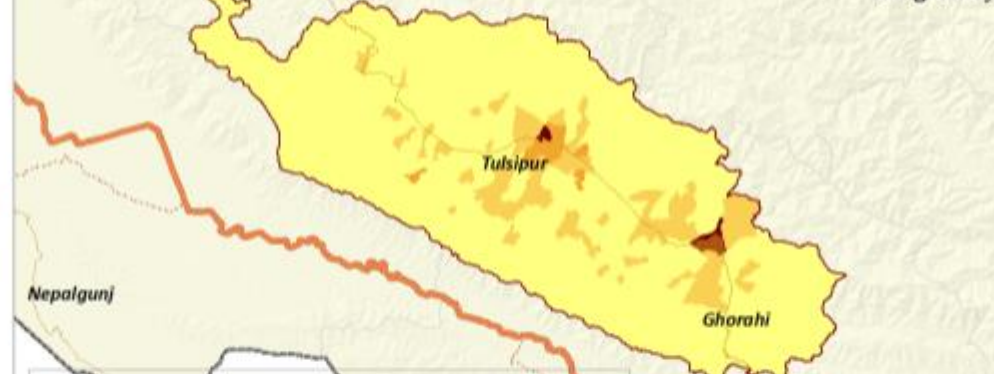
Birgunj - Pathalैया



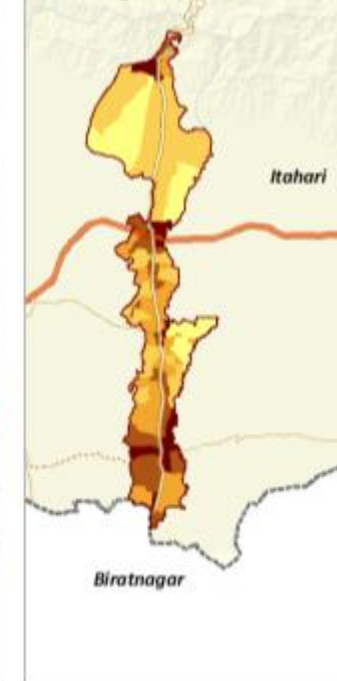
Nepalgunj - Kohalpur



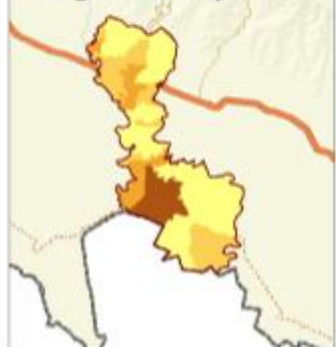
Dang Valley



Biratnagar - Dharan



Dhangadhi - Attariya



DENSITY DISTRIBUTION IN URBAN CLUSTERS (CORRIDORS & VALLEYS)

Legend

Ward Density Per Ha Road

less than 5	East-West Highway
5 to 10	MidHill Highway
10.1 - 20	North South Corridor
20.1 - 30	Other FRN
above 50	Postal Road

14th national Plan toward Green Economy

Urban Investment: Strategies and Budget flow

6 Himali Towns

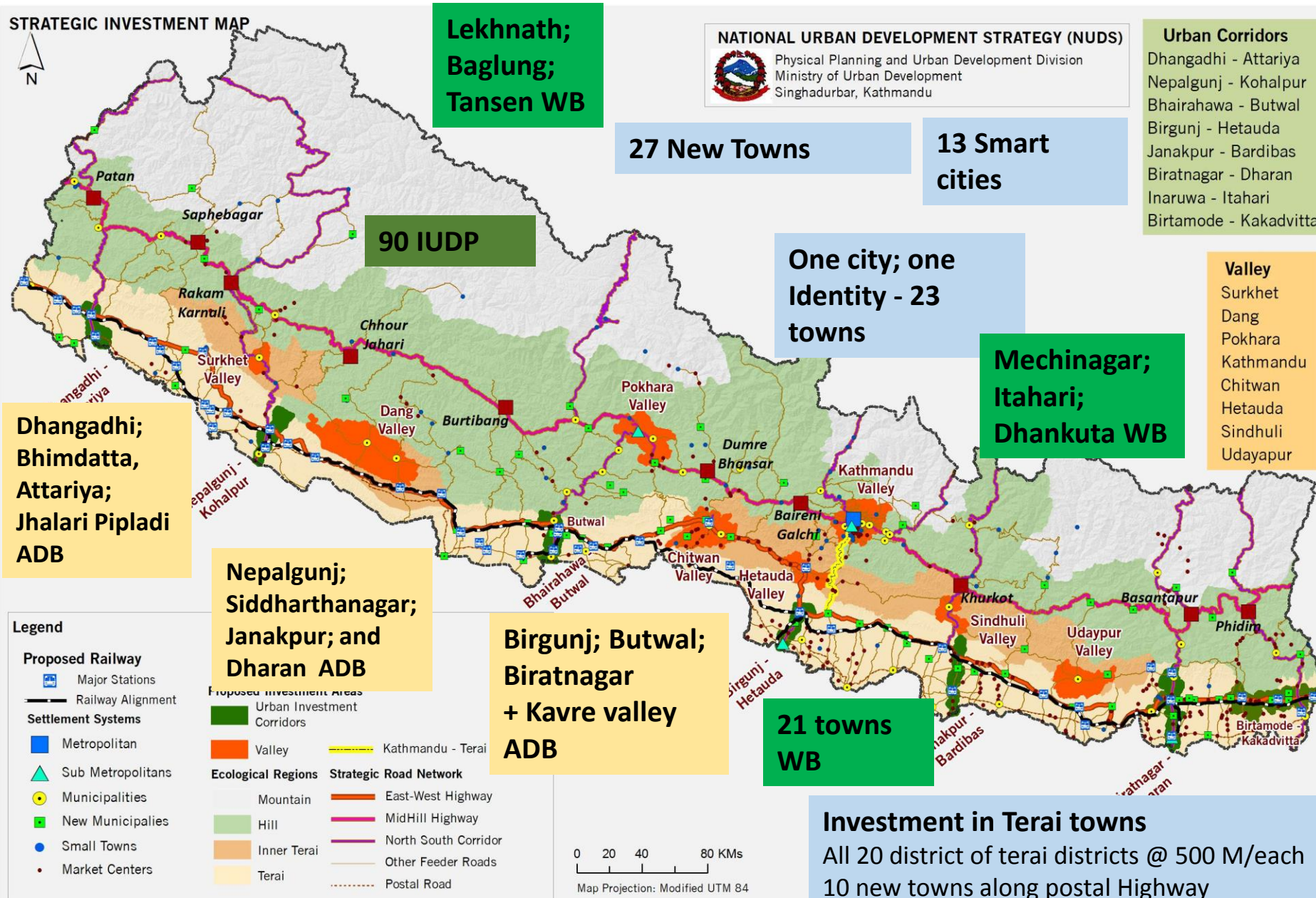
4 Food Green Cities

2 Urban Economic Corridors

27 New towns

13 smart cities

For urban sustainability and resiliency



way forward

- Operationalization of NUDS (UICI and ULI) for investment in urban space
- Gradual shift to Infrastructure Governance – ritual vs project based funding??
- Local institutions to link with performance based investment
- regional learning for innovation

Conclusion

- ...As Investment is increasing, innovation and co-work is required**
- ...Social development strategy has to be connected with physical development strategy**
- ...As federal system is active, we are in need to develop provincial spatial development plans**
-Urban Investment discipline has to be integrated in academics**

**Governance with Physical Planning is a key
Innovation in Investment model is required**

**Lets start with PPP; PPAP;
PPA and civil society partnership
K building; for urban and even for climate change**

Conclusion.....2

Municipal Development plan to be compatible with regional and national strategy..

Make Periodic Plan together with investment plan (not only a wish list)

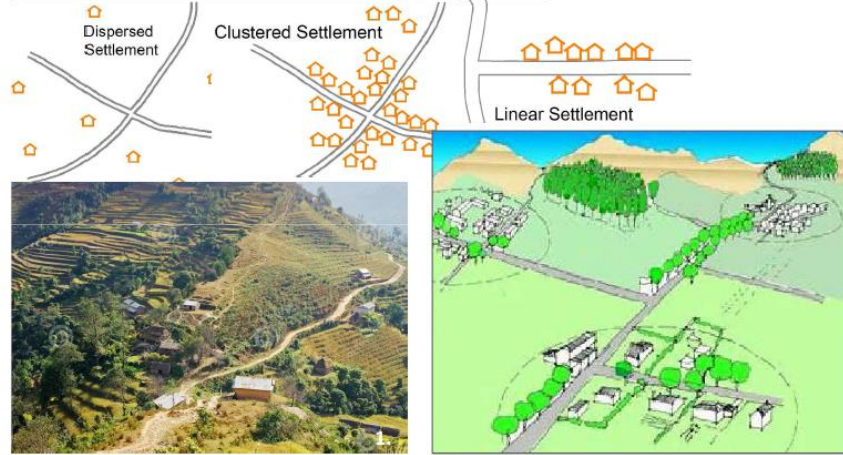
Let's coordinate all development through spatial planning.... Or space planning as coordinating attribute

Post Disaster learning to institutionalize



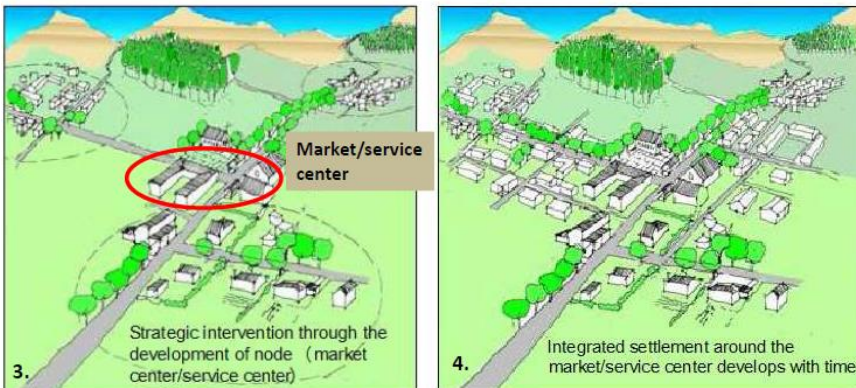
Strategies for Reconstruction and Rehabilitation

1. Integrated Safer Cities and Settlements



Dispersed and vulnerable settlement

Relocation and clustering



Coordinated market activities, community services, living spaces and building resilience

Consolidation and expansion of settlement

2. Build Back Better: Building Level



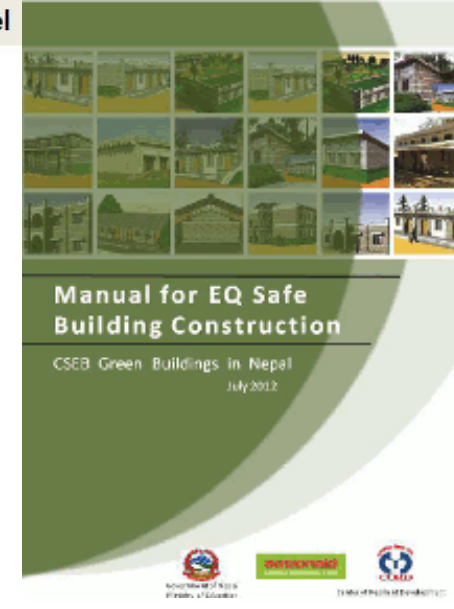
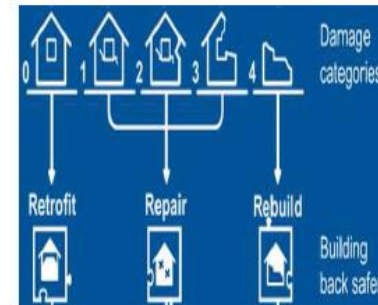
Review of National Building Code— Professional Engineered Design (PED) and Mandatory Rule of Thumb (MRT)

Mandatory enforcement of National Building Code/Regulations

Stepping up of monitoring of functional and structural changes in buildings

Awareness and adoption of retrofitting practices

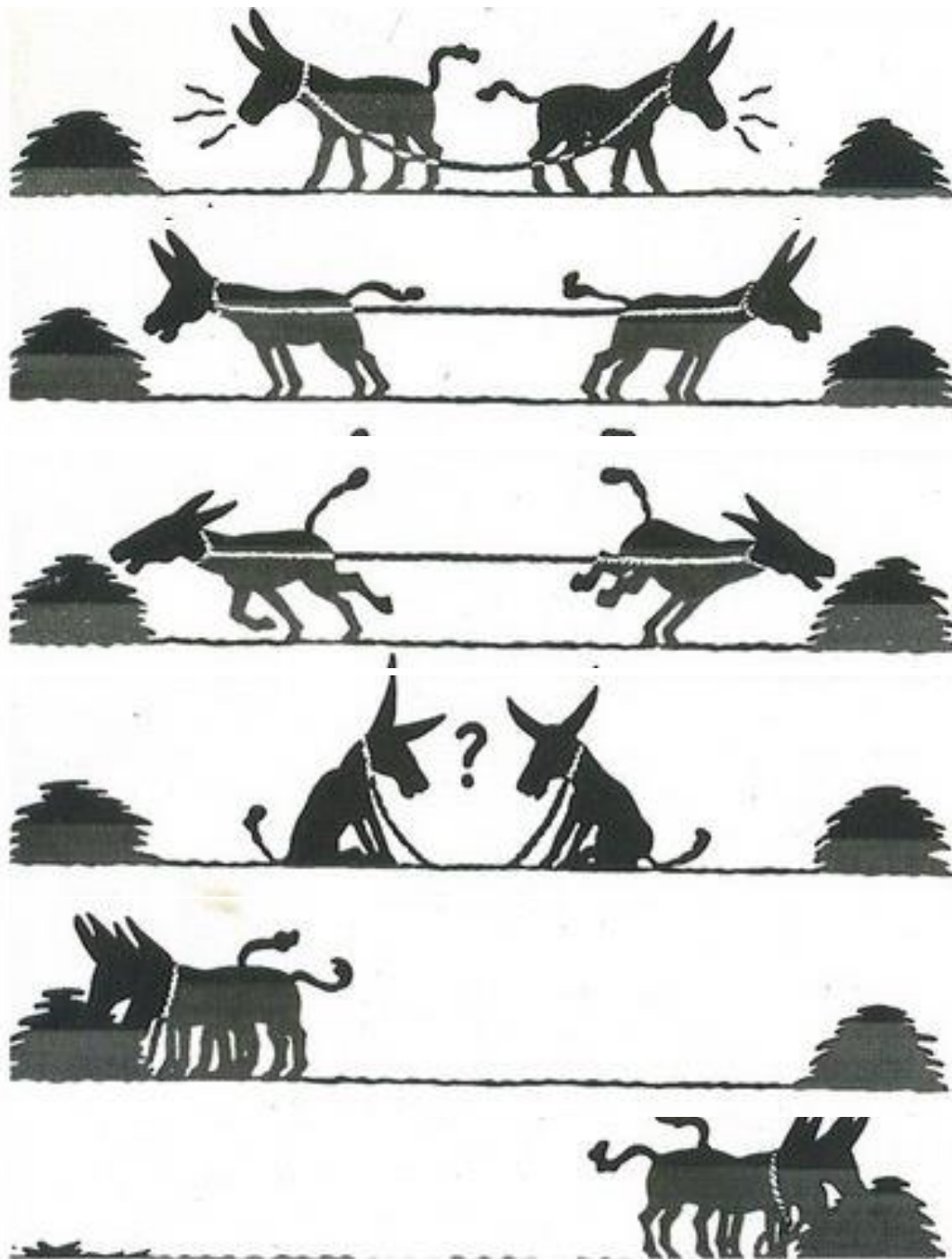
Technical support at the household level



Manual for EQ Safe Building Construction

CSEB Green Buildings in Nepal
July 2012





Thank you

References:

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www.dudbc.gov.np

www.npc.gov.np

Contact:

pkmainalee@hotmail.com

For the same agenda

Together!

we can do.