

Urban Rural Partnership to Enhance Collective Resilience

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What are urban-rural linkages?

- A basic definition of rural-urban linkages is that they consist of flows (of goods, people, information, finance, waste, information, social relations) across space, linking rural and urban areas
- Urban and rural areas have different and often complementary assets which are integrated through a broad set of linkages

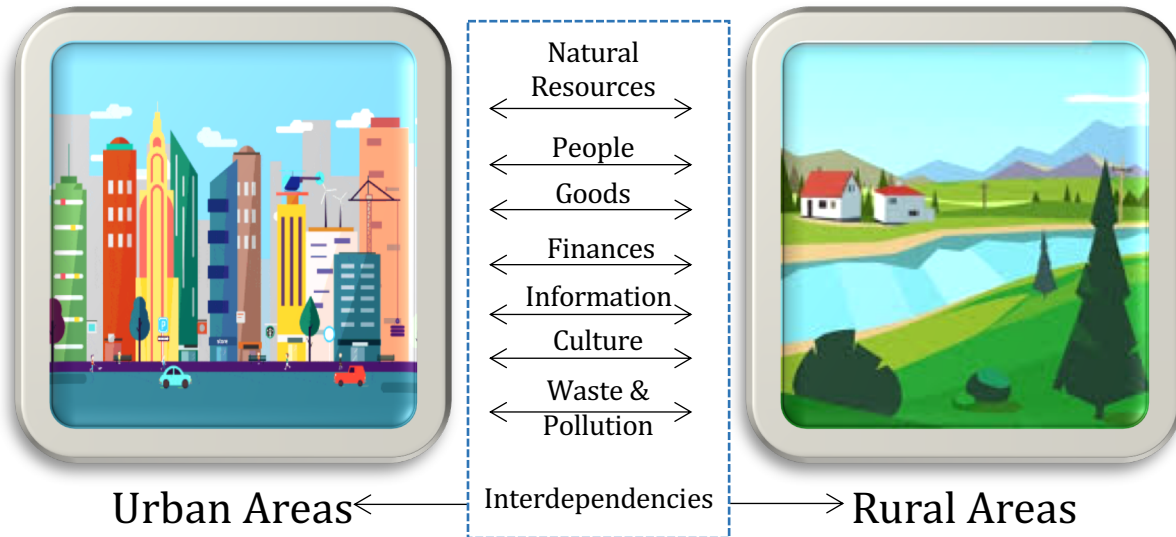
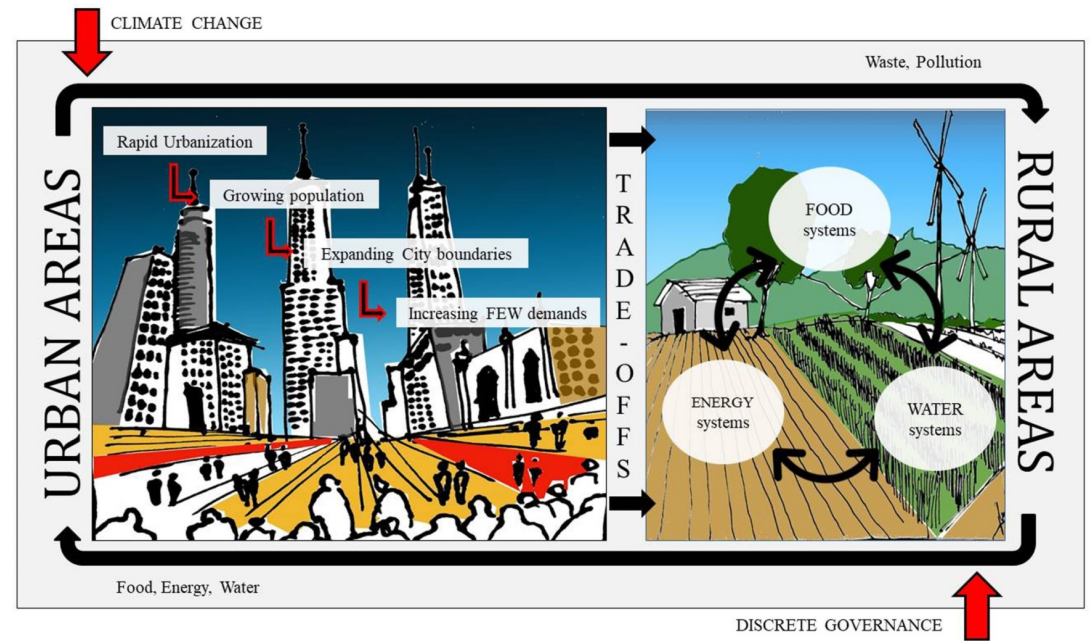


Figure: Underlining Urban-Rural linkages



Urban-rural linkages in global frameworks



The New Urban Agenda

Urban-rural linkages hold the key to achieve multiple Sustainable Development Goal's mainly **Goal 11** (Sustainable cities and communities).

Priority 2 of SFDRR-
Strengthening Disaster risk
Governance to Manage
Disaster Risk

-Foster collaboration and
partnerships at various
governance levels

In 2015, UN-Habitat and
development partners
defined **10 entry points** to
Urban-Rural Linkages, mainly
emphasizing on partnerships
between urban and rural
areas

RCES (Regional Circular Ecological Sphere)

Fifth Basic Environment Plan of the Government of Japan

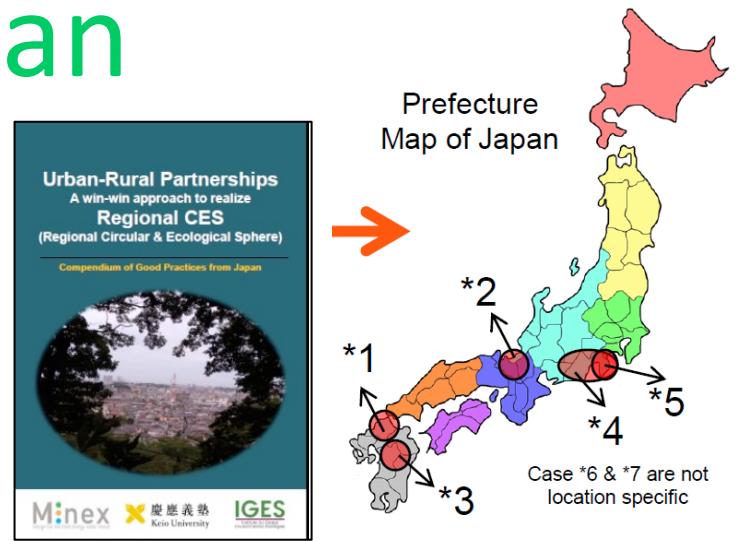
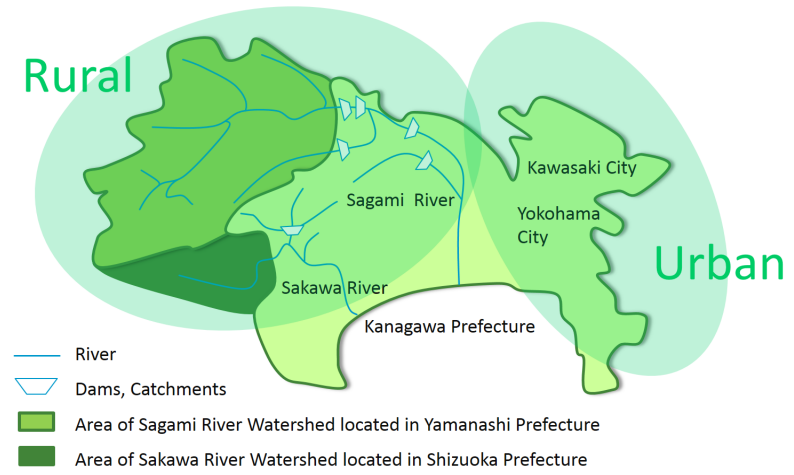
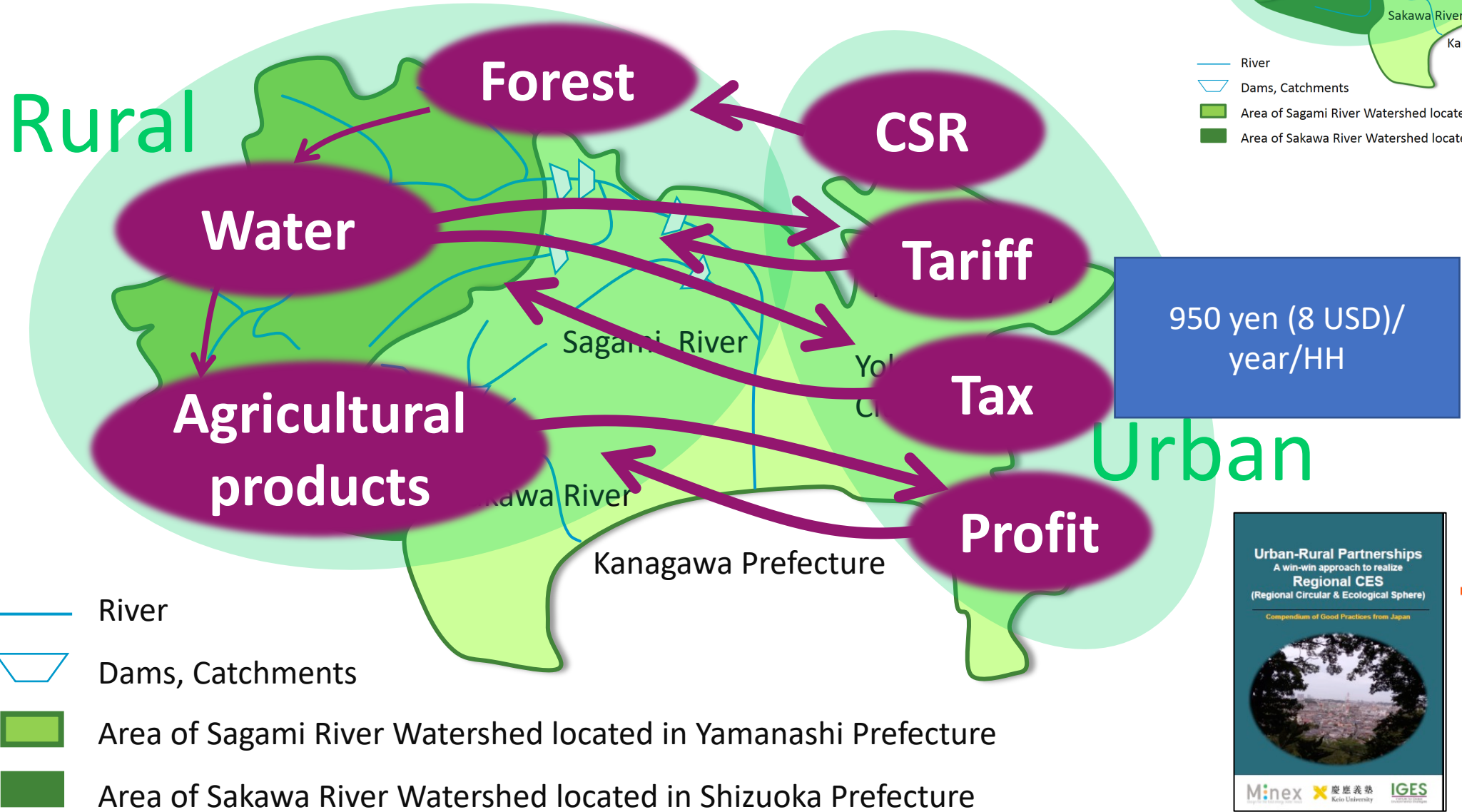


- ◆ Explore simultaneous solutions for economic, regional and international challenges
- ◆ Maximize sustainable use of regional resources
- ◆ Enriching and strengthening partnerships

Source: MOEJ 2018

https://www.env.go.jp/policy/kihon_keikaku/plan/plan_5/attach/ref_en-02.pdf

Case 1: Kanagawa watershed



Issues of water and forest conservation

- ✓ 70% of catchment covered by privately owned plantation forests.
- ✓ Forests are not management because forestry became unprofitable
- ✓ Water quality deterioration
- ✓ Less groundwater recharge
- ✓ Increase risks of landslide disaster



Key governance issues

- ✓ Citizens consultation and involvement
- ✓ 25% of the committee members from Civil society
- ✓ Arrange **demonstration field visits** for the citizens
- ✓ Regular **monitoring and reporting** to the public
- ✓ Every five years review the projects and make necessary revisions
- ✓ Contributions of private sectors in the forest managements
- ✓ Support conservation activities in upstream prefectures



Case 2: Nagpur, India

4 Transformation Agendas & 12 Focus Areas

SMART ENVIRONMENT

1. Carbon Neutral & Sustainable Habitat
2. Swachh Nagpur
3. Urban Greens

SMART LIVING

4. Inclusive Living
5. Poly-centric City
6. Safe & Walkable Streets
7. Economic Vitality

SMART MOBILITY

8. Transit Oriented Development
9. Connect Places & Move People
10. Urban Regeneration with Walk-to-Work principles

SMART GOVERNANCE

11. Digital, Efficient & Transparent Governance
12. Revive Nagpur's image as regional economic centre and boost job creation

SCP (2016)

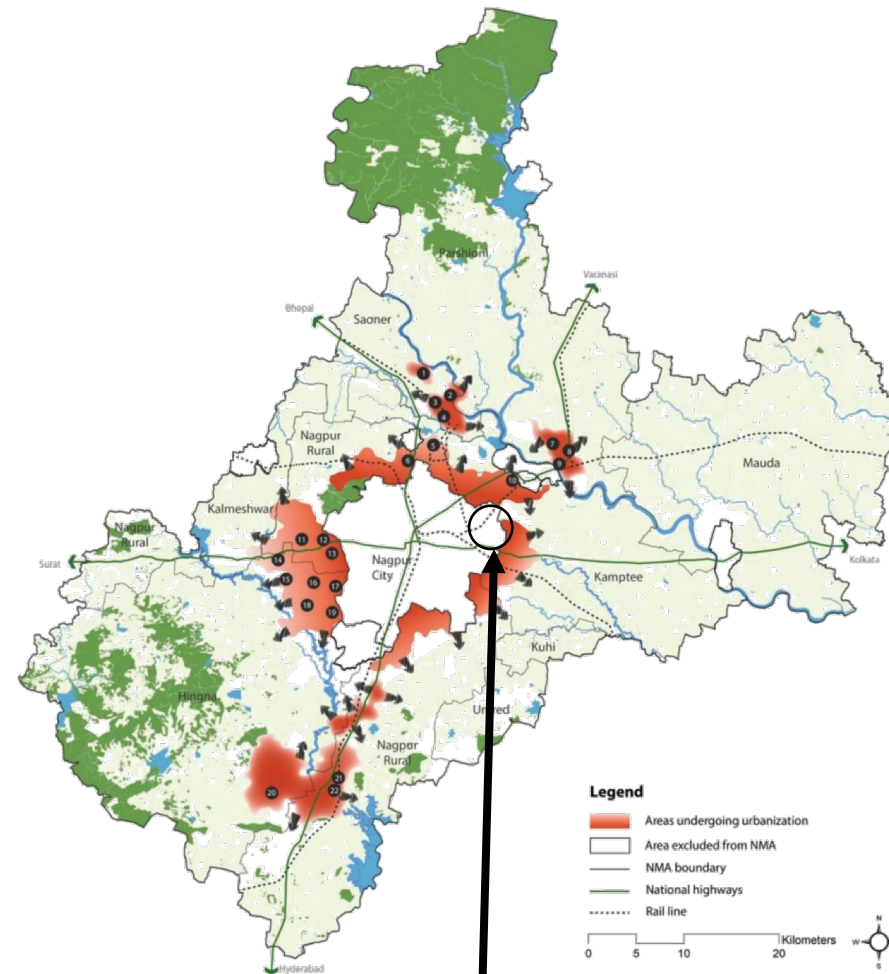
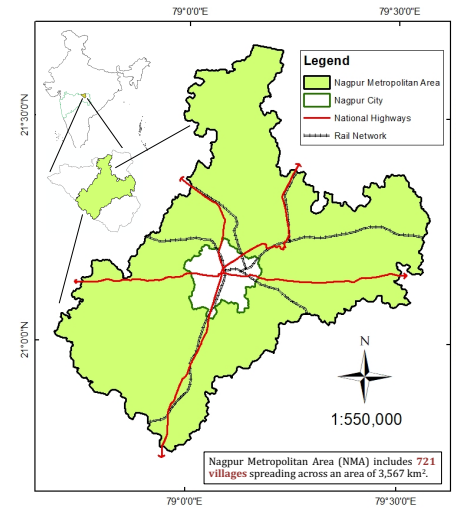


Figure: Census towns and growing urban areas in the NMA

Area based interventions are proposed in 951 acres of land in Mouzas of Pardi, Bharatwada and Punapur, located on the eastern periphery of Nagpur city



Case 2: Nagpur, India

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SMART LIVING

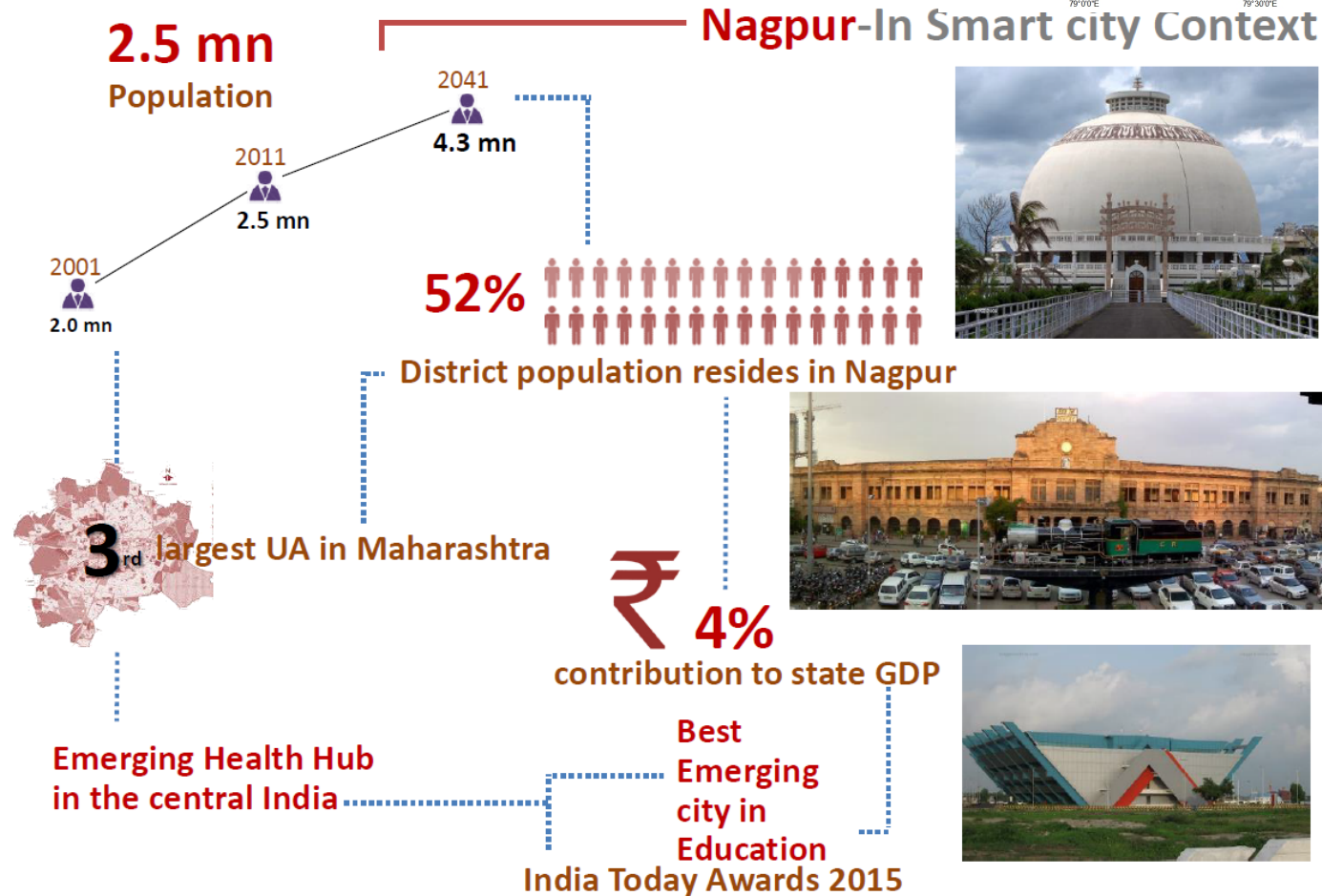
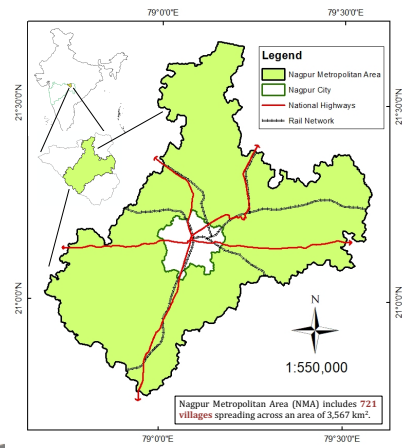
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SMART MOBILITY

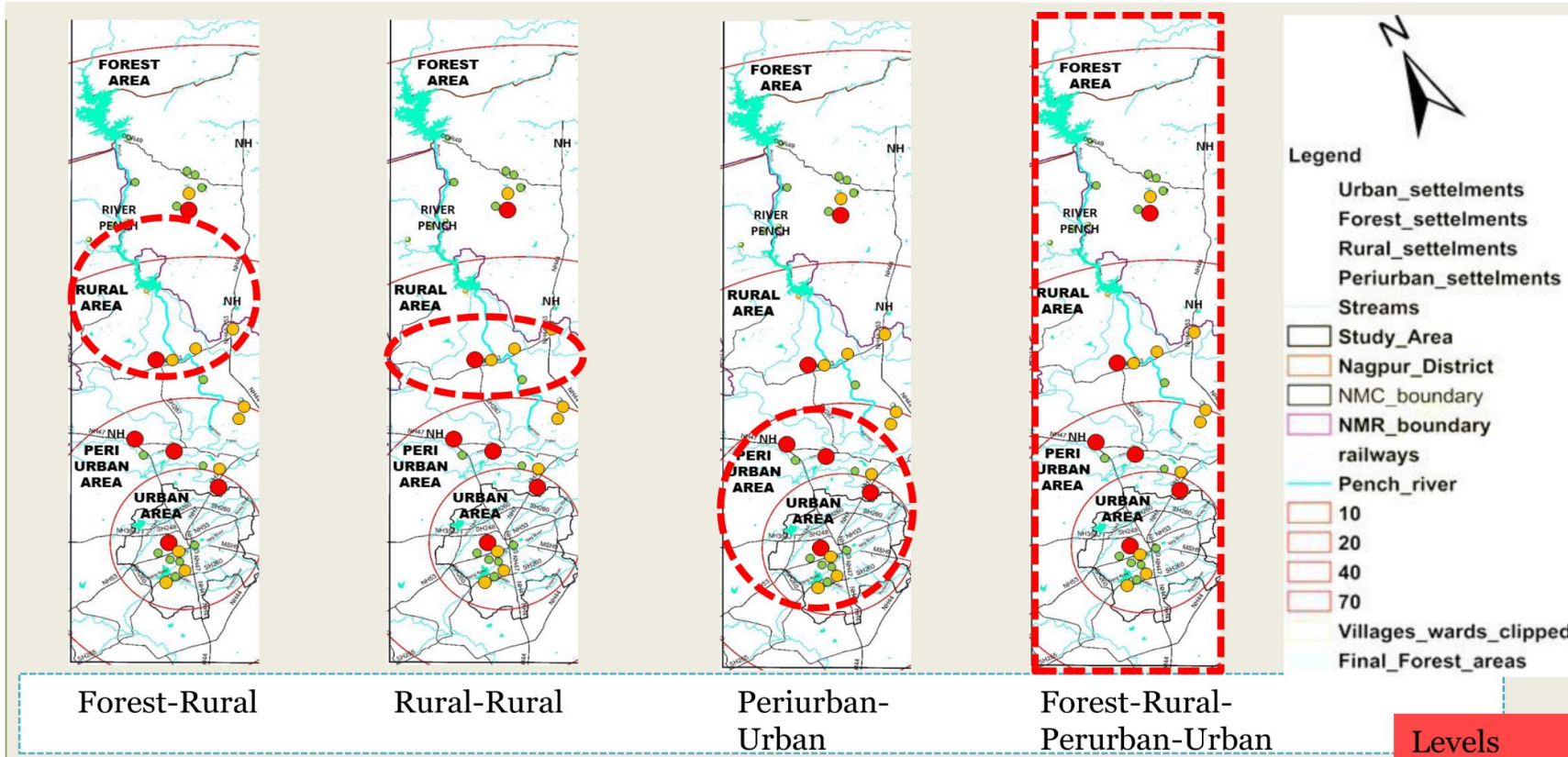
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SMART GOVERNANCE

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Scale of urban rural linkages



Forest
Dept./Community

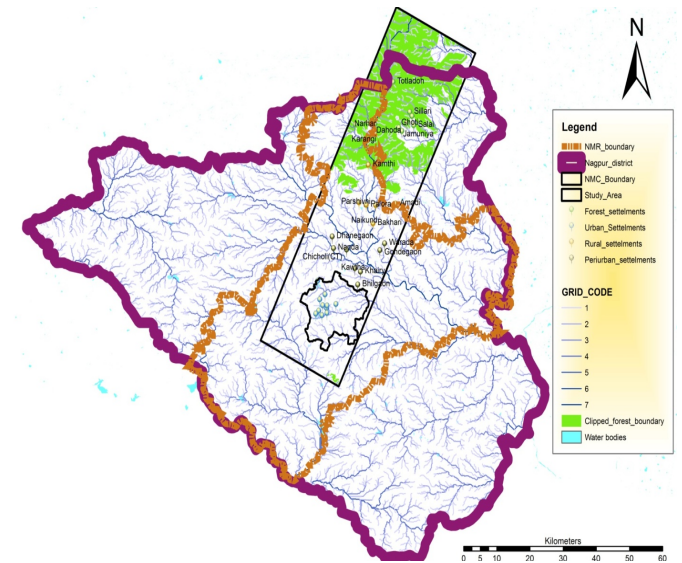
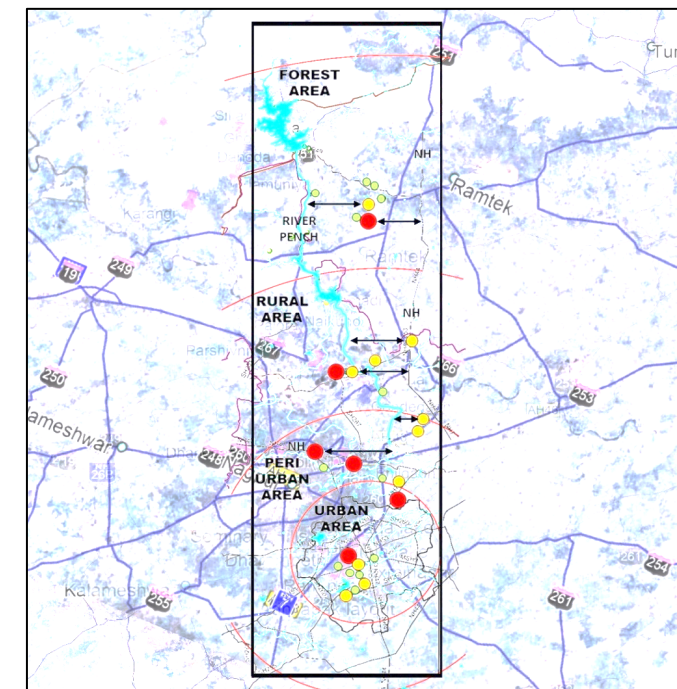
Corporate
sector/Community

Corporate
sector/MJP/NGOs/CB
O/NMC/ULB/VP

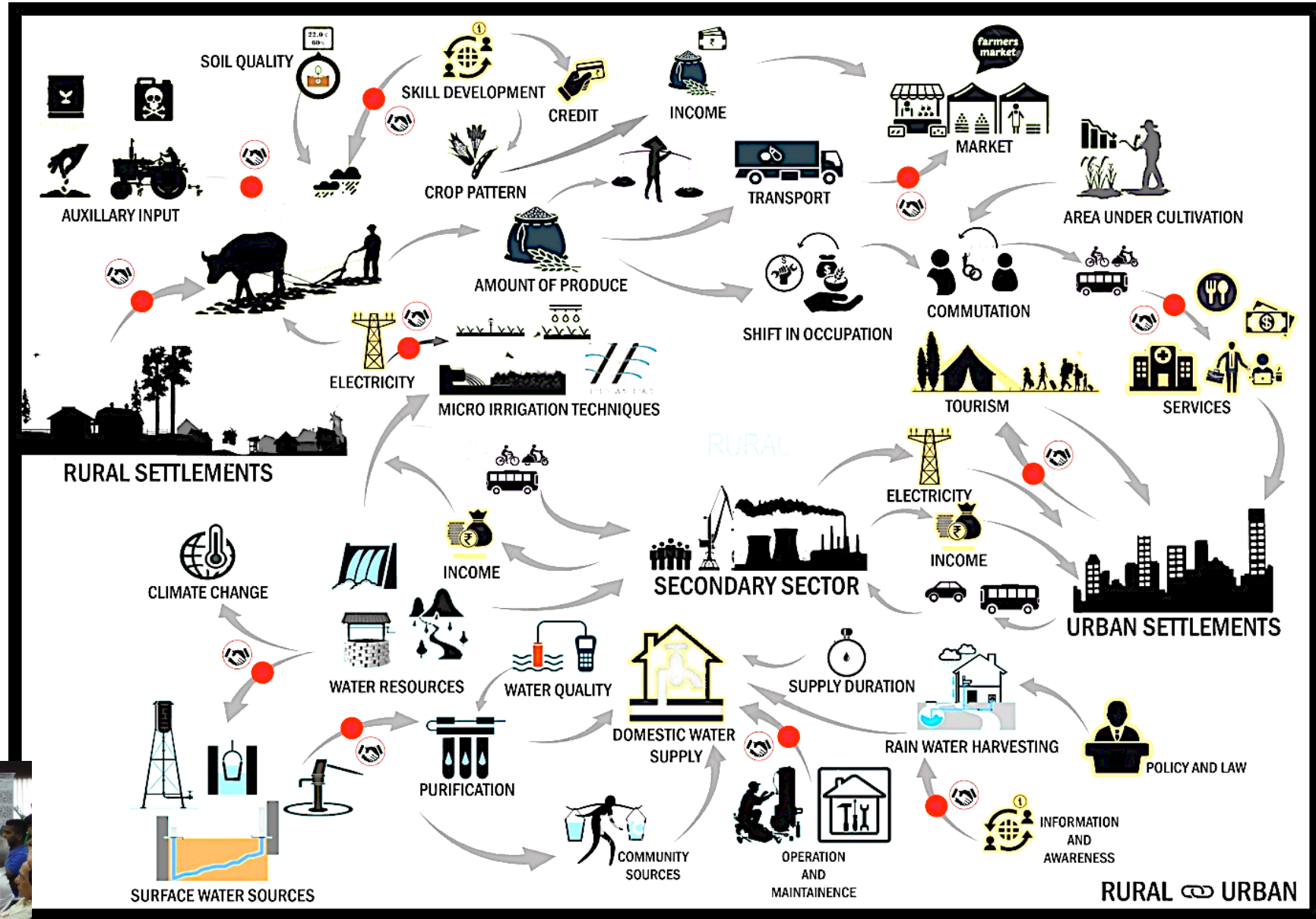
MJP/NGOs/CBO/NMCULB/VP
/Urban residents/Institutions

Levels

Stakeholders



Dependency analysis



Summary

- A resilient city needs a resilient rural development: collective resilience is important
- Identification of resource flow (food, energy, water, human resources etc.) needs to be strengthened
- Public / citizen participation becomes important: transparency in governance

Publications

Urban-Rural Partnerships A win-win approach to realize Regional CES (Regional Circular & Ecological Sphere)

Compendium of Good Practices from Japan



BUILDING URBAN-RURAL PARTNERSHIP FOR RESILIENT FUTURE

Promoting Regional Circular Ecological Sphere
Concept for Sustainable Resource Management
and Collective Resilience of Urban and Rural
Regions in Nagpur Metropolitan Area



Invited ViewPoint

Optimizing Food-Energy-Water (FEW) nexus to foster collective resilience in urban-rural systems

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ARTICLE INFO

ABSTRACT

With developing concerns of climate change, population growth and rapid urbanisation, there is growing need to optimise Food-Energy-Water (FEW) nexus. Subsequently, FEW nexus thinking has become a prerogative for development planning today, as the three sectors are intricately linked to each other. This study identifies the key barriers to operationalising FEW nexus at ground level and underlines the need for urban-rural shared perspectives in resource management. Since, urban and rural systems depend on shared stock of natural resources, the study theorises that building integrated decision making platforms at regional level will significantly enhance their collective resilience to emerging socio-environmental challenges.

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1. Introduction

Food-Energy-Water (FEW) sectors are highly interconnected; water is required for almost all forms of energy production and supply, energy is required to treat and transport water, and both water and energy are essential to produce food [20]. 'FEW nexus' refers to the intricate relationships and trade-offs between these tightly linked systems [13]. The notion of FEW nexus gained global momentum during the Bonn 2011 Nexus Conference [3,14], wherein it was established that failing to recognize the consequences of one sector on another can lead to notable inefficiencies in the entire system, for example the choices made on food and diet influence both water and energy requirements. While the current world population of 7.3 billion is expected to reach 8.5 billion by 2030 [27], the global demands

for food, energy and water are estimated to correspondingly increase by 35%, 50% and 40% [9,31]. The inter-linkages between FEW sectors further complicate the matter of addressing their growing demands. World Economic Forum [33] has continually highlighted through the Global Risk reports that food crises, energy shocks and water scarcity are among the major risks to the contemporary world in terms of likelihood and impact. Stephan et al. [25] stressed that currently, 844 million people lack access to safe drinking water [34], 1.1 billion lack access to energy [15] and about 815 million do not have secure access to food [11]. Predictably, the growing FEW demands amidst the severe resource shortages could lead to social and political instability, geopolitical conflicts and irreparable environmental damage [4,22].

Driven by the unprecedented climate uncertainties, rapid urbanisation and social changes including population growth, the global communities today are critically struggling for survival and growth amidst dwindling natural resources [16]. As urbanisation continues apace, the city boundaries are expanding and more forests, wetlands, water bodies etc.

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