

National Mission for a Green India (GIM)

Bharati
Ministry of Environment, Forest & Climate Change
Govt. of India, New Delhi
27 May, 2015

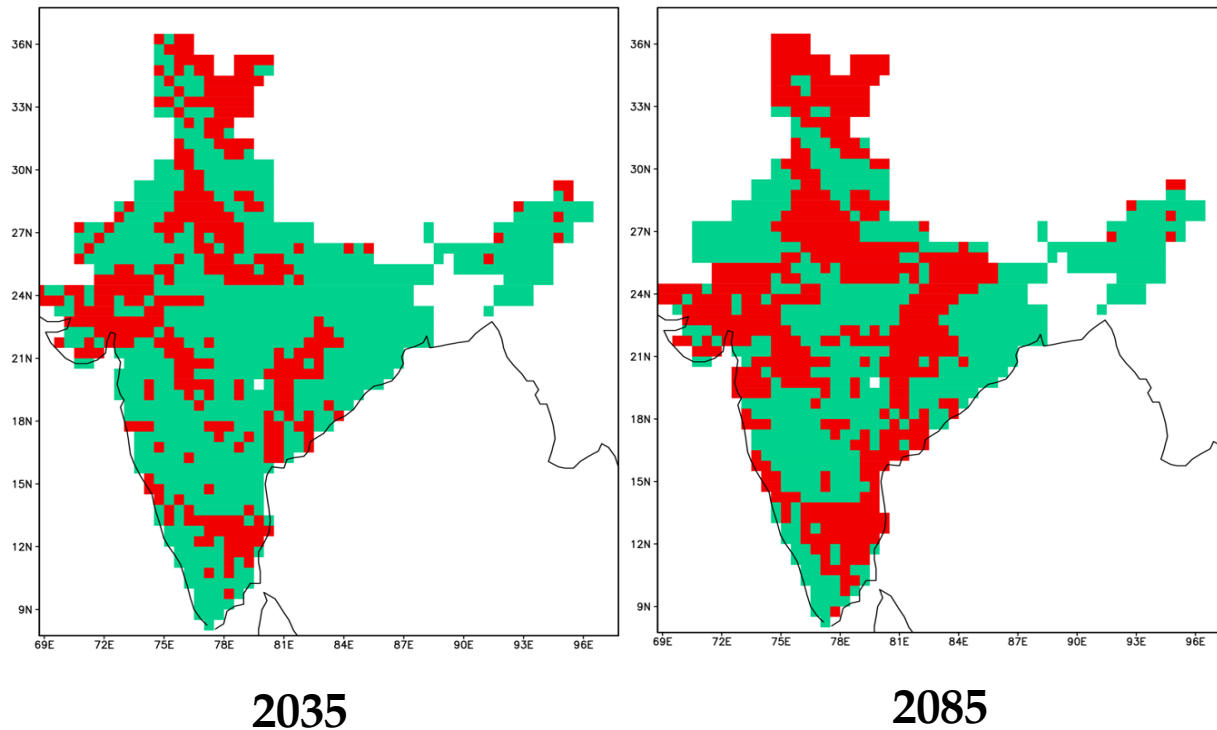


Outline

- ▣ National Action Plan on Climate Change (NAPCC):
genesis, focus and components
- ▣ National Mission for a Green India
 - Significance and overall goal
 - Objectives
 - Deliverables
 - Key elements
 - Means to achieve
 - Landscape approach
 - Developments so far

Vulnerability projections

India's economy closely tied to its natural resource base and may face a major threat because of the projected changes in climate



Red grids are vulnerable

Genesis of NAPCC

- ▣ Strategy to **adapt** to climate change and to further **enhance** the ecological sustainability of India's development path
- ▣ Released on June 30, 2008 with the aim to:
 - Alter the development paradigm through long-term integrated strategy
 - Ensure growth with sustainable development
 - Reduce vulnerability to impact of Climate Change
- ▣ Includes following:
 - Measures to promote development objectives while also yielding **co-benefits**
 - Steps to simultaneously advance India's development and climate change-related objectives of adaptation and mitigation

Focus of NAPCC

- Past and on-going Climate Change trends, vulnerability assessment, future climate scenario using regional models
- To **protect the poor** and **vulnerable sections** of society through an inclusive and sustainable development strategy, sensitive to climate change
- Sectoral analysis of key vulnerable sectors for **adaptation/mitigation** options to cope with current and future climate change (*agriculture, water, habitat, energy (Energy efficiency and Renewable energy technologies), forestry, health and disaster management etc.*)
- Monitoring and evaluation framework to improve the impact of the adaptation/ mitigation activities

Components of NAPCC

Eight National Missions on addressing the climate change through adaption and mitigation measures

- National Solar Mission
- National Mission on Enhanced Energy Efficiency
- National Sustainable Habitat
- National Water Mission
- National Mission for Sustaining Himalayan Eco-system
- **National Mission for a Green India**
- National Mission for Sustainable Agriculture
- National Mission for Strategic knowledge on Climate Change

National Mission for a Green India (GIM)

- Endorsed by the PM Council on Climate Change in 2011
- Expenditure Finance Committee and Cabinet Committee of Economic Affairs approval of the mission for ₹ 13,000 crore in 2013 and 2014 respectively
- A Centrally Sponsored Scheme with central share of 90% for NE and special category States while 75% for rest of India



Significance of the Mission

- ▣ Significance of forests in relation to Climate change: in ameliorating climate, food security, water security and livelihood security of local communities
- ▣ Forests and Climate Change: studies project that ~ 39% of forested grids are vulnerable to CC leading to shift in forest types.
- ▣ Changed forest ecosystems → more vulnerability to adverse climatic conditions → more occurrence of fire, pests/diseases, invasive species, loss of biodiversity etc. → severally affect the **forest-dependent livelihoods**

Mission: overall goal

Protection, restoration and enhancement of India's forest cover in response to climate change

Enhance carbon sinks in sustainably managed forests /other ecosystems

Adaptation of vulnerable species/ecosystems to the changing climate

Enhance Livelihood Opportunities

GIM: Objectives

- Improved quality of forest cover on 5 m ha
- Increased forest/tree cover on forest & non-forest land on another 5 m ha
- Improved eco-system services including biodiversity, hydrological services and Carbon sequestration as a result of treatment of 10 m ha

GIM: Objectives

Contd...

- Increased forest based livelihoods income of forest dependent communities
- Enhanced annual CO₂ sequestration by 50 to 60 m ton in 2020 (*this mitigation potential was estimated by Prof. Ravindranath, IISc Bangalore*)

This becomes more important in view of Govt.'s focus to increase power production.

GIM: Mission Costs (over XII and XIII Plan Period)

Area :	10 million hectare
Sub Mission costs :	34,000 crores
Support Interventions:	12,000 crores
Total :	46,000 crores

As approved by CCEA in phase – 1 (2012-18)

Area:	3.28 million hectare
Sub-Mission cost :	Rs. 9,400 Cr.
Support intervention :	Rs. 3.600 Cr.
Total :	Rs. 13,000 Cr.

Total Outlay for XII Plan for GIM

Convergence with other programmes and schemes

	Rs (crore)
GIM	2,000
13th FC grants	400
Through convergence with MGNREGA	4,000
Through convergence with CAMPA	6,000
Through convergence with NAP	600
Total outlay	13,000

GIM: submissions and intervention

- **SM-1:** enhancing quality of forest cover and improving ecosystem services (4.9 m ha)
- **SM-2:** Ecosystem restoration and increase in forest cover (1.8 mha)
- **SM-3:** Enhancing tree cover in Urban & Peri-urban areas (including institutional lands) (0.2 mha)
- **SM-4:** Agro-Forestry and Social Forestry (3 mha)
- **SM-5:** Restoration of Wetlands (0.1 mha)
- **Intervention:** Promoting alternative fuel energy to 3 million households to reduce carbon emission

GIM: deliverables through 5 submissions and an intervention

1. Qualitative improvement of forest cover/ ecosystems in:

- 1.5 m ha moderately dense forests but showing degradation
- 3.0 m ha of degraded forests
- 0.4 m ha of grasslands
- 0.1 m ha of wet lands

2. Creating new forest cover through eco-restoration/ afforestation

- 1.8 m ha of scrub, mangroves, ravines, sea-buckthorn, shifting cultivation areas, abandoned mining area
- 0.2 m ha of urban/ peri urban
- 3.0 m ha of agro/ social forestry; non-cultivable land

GIM: deliverables through 5 submissions and an intervention

Contd...

3. Promoting alternative fuel energy for about 3 million households

- biogas, solar devices, LPG, biomass based systems, improved stoves etc.

4. Livelihood improvement activities

- create estimated 2400 million person days of wage employment and skilled employment under GIM

GIM: key elements

Holistic view to
“greening”

- Encompassing both protection and restoration
- Emphasis on restoration of degraded ecosystems and habitat diversity (**native biodiverse species mix**)
- Treatment of forest, non-forest/private lands in a composite way

Vulnerability
criteria for
intervention

- Well-defined criteria including projected vulnerability to CC, potential of areas for enhancing C sinks....
- Landscape-based approach emphasizing on saturation on identified landscapes

Integrated cross-
sectoral approach

- Inter-sectoral convergence (e.g. animal husbandry, agriculture, rural development, energy and forests) to synergize efforts

GIM: key elements

Contd...

Key role for local communities

- Gram Sabha as an overarching institution in convergence of resources and integrated planning at village level
- Build a team of local young Green Crusaders

Decentralized governance

- Revamped SFDA/FDA/JFMCs to support the field institutions
- Community ownership leading to need-based intervention

Robust and effective monitoring framework

- Multi-tier comprehensive monitoring
- Self-monitoring by multiple agencies
- Monitoring by external agencies
- Social Audit
- Use of modern technology
- Intense monitoring of few pilot areas

GIM: other elements

Ease out regulatory framework on felling and transit of forest produce

- To promote of agro-forestry/social forestry
- To incentivize low income producers and collectors
- To reduce the regulatory & implementation burden

Research & Development

- Identification of research priorities such as study of vegetation response to CC, Silviculture & management response to achieve Mission objectives, benchmarking Carbon capture potential of ecosystems, economic evaluation of ecosystem goods & services

Mission Organization

National

- National Governing Council chaired by MEF to provide overall guidance
- National Executive Council for direction/management
- Mission Directorate

State

- State Steering Committee chaired by CS having cross-sectoral representation
- Revamped SFDA

Mission Organization

Contd...

District

- District Steering Committee
- Revamped Forest Development Agency

Village

- Planning and implementation to be vested with local level bodies : revamped JFMCs

Landscape approach: Identification of landscapes

- ▣ Landscapes identified on the basis of bio-physical & socio-economic parameters and vulnerability to CC
- ▣ Three levels of landscapes: L1, L2 and L3
 - L1: broad landscape of importance having large contiguous areas of forest and non-forest lands in a given landform/catchment e.g. Karnataka has taken three agro-climatic zones as L1 landscapes
 - L2: operational unit having area around 5000-10,000 ha
 - L3: working unit at village/cluster of villages level

Identification of landscapes

Contd...

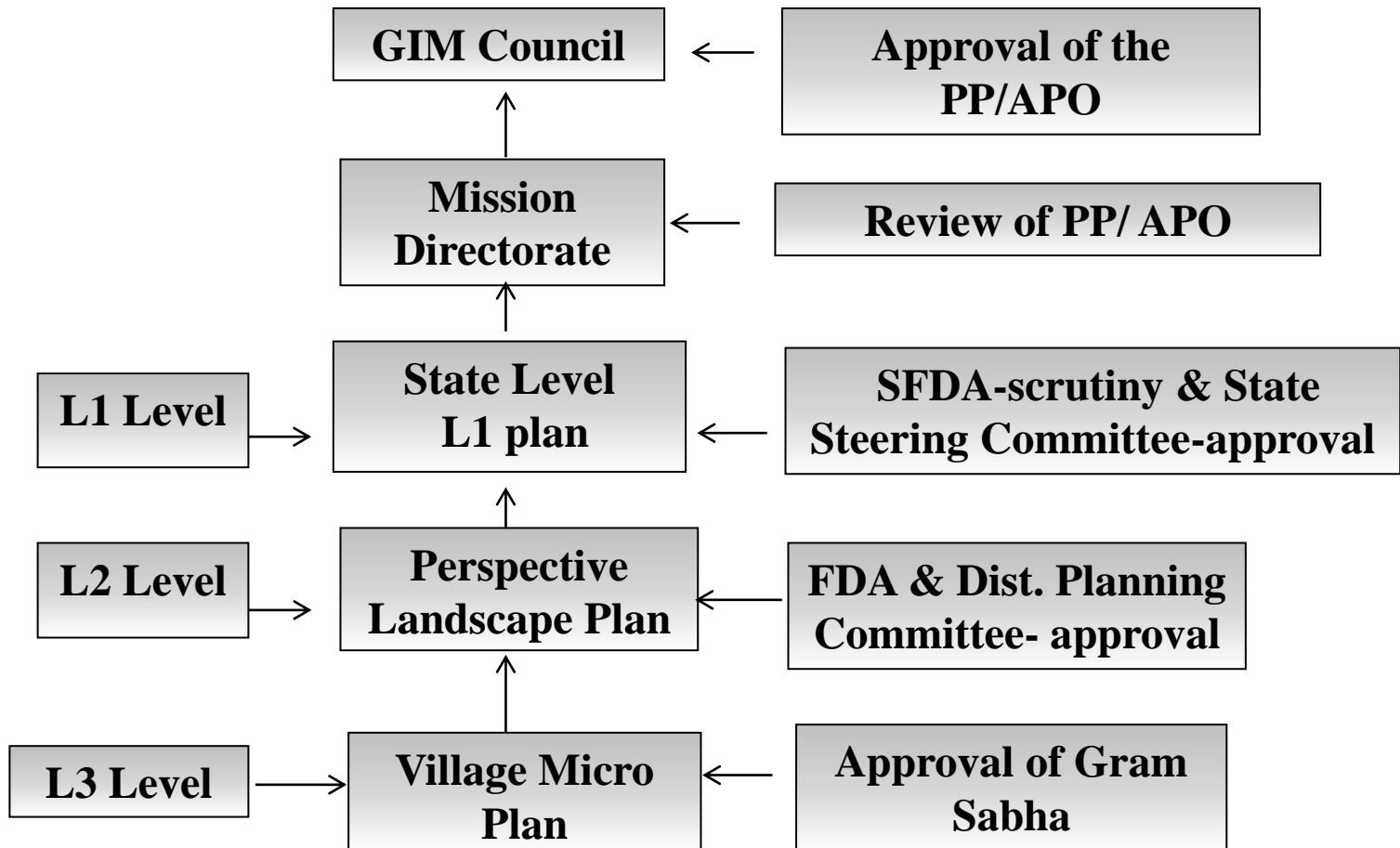
- ▣ Parameters may be:
 - Land forms / catchments / bio-geographic zones etc.
 - Forest and tree cover
 - Biodiversity richness
 - Corridors
 - Wastelands
 - Vulnerability to Climate Change impacts of forests and communities
 - % population of STs / SCs and other forest-dependent communities
 - Poverty levels (BPL %)
 - Wetlands/tanks
 - Drinking water supply/intake points

Identification of landscapes

Contd...

- ▣ Certain criterion relevant for all landscapes e.g. forest and tree cover
- ▣ Special criteria for specific sub-missions e.g. sea-buckthorn areas in the western Himalayan states, shifting cultivation area in north east, areas for agro-forestry, urban landscape and catchments supplying drinking water etc.

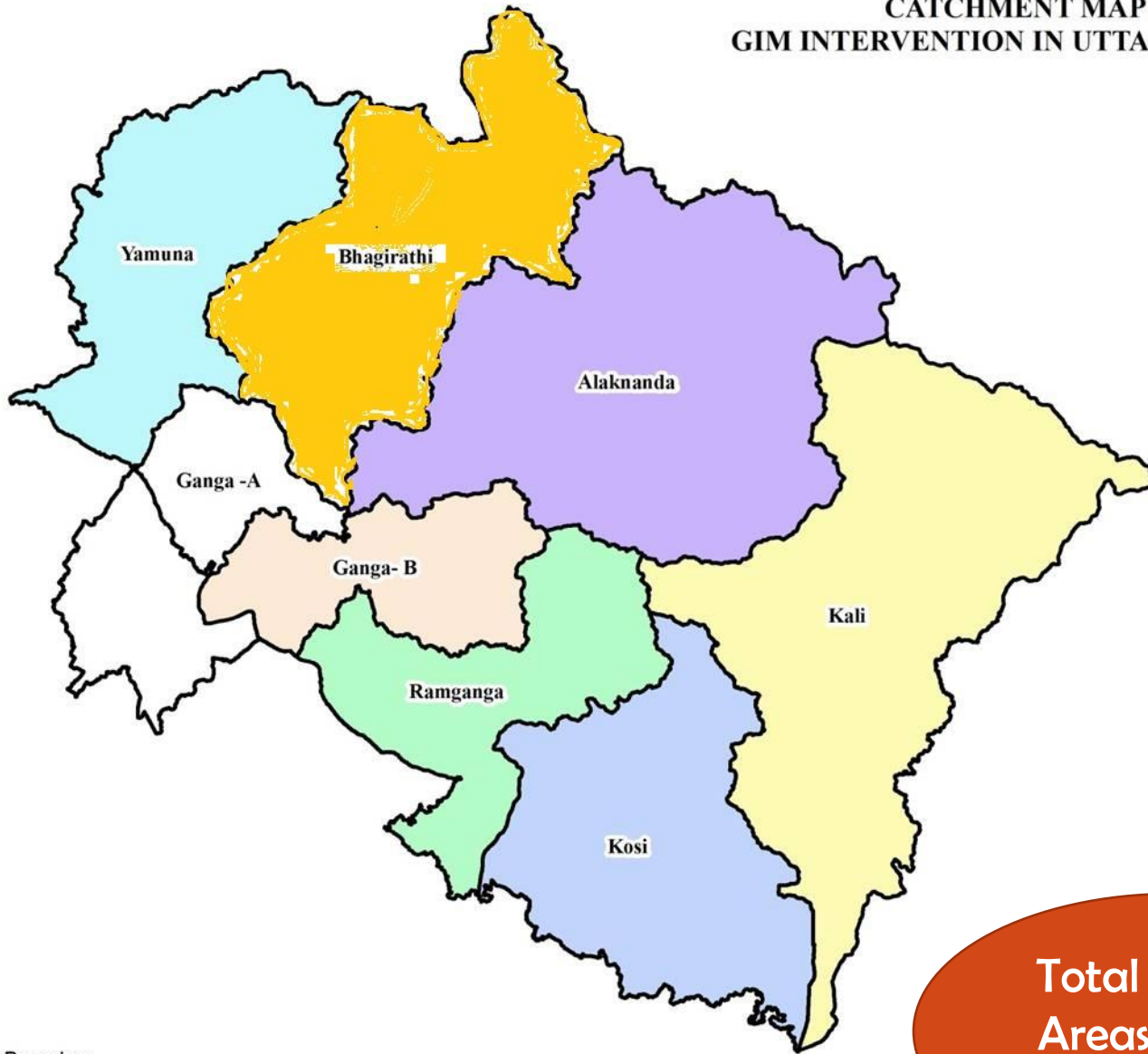
Institutional Structure



Uttarakhand

- L1 Landscapes identified based on forest cover and availability of blanks at the Catchments/Watersheds level (Total 08, selected 07)
- L2 Landscapes identified based on extent of moderately dense & open forest, availability of blanks and status of treatment of Sub-watersheds (Total 110, selected 31)
- L3 Landscapes selected based on erosion intensity, forest cover, slope, altitude and status of treatment at micro watershed level (total 1110, selected 279)

CATCHMENT MAP GIM INTERVENTION IN UTTARAKHAND



Legend











 Catchment Boundary

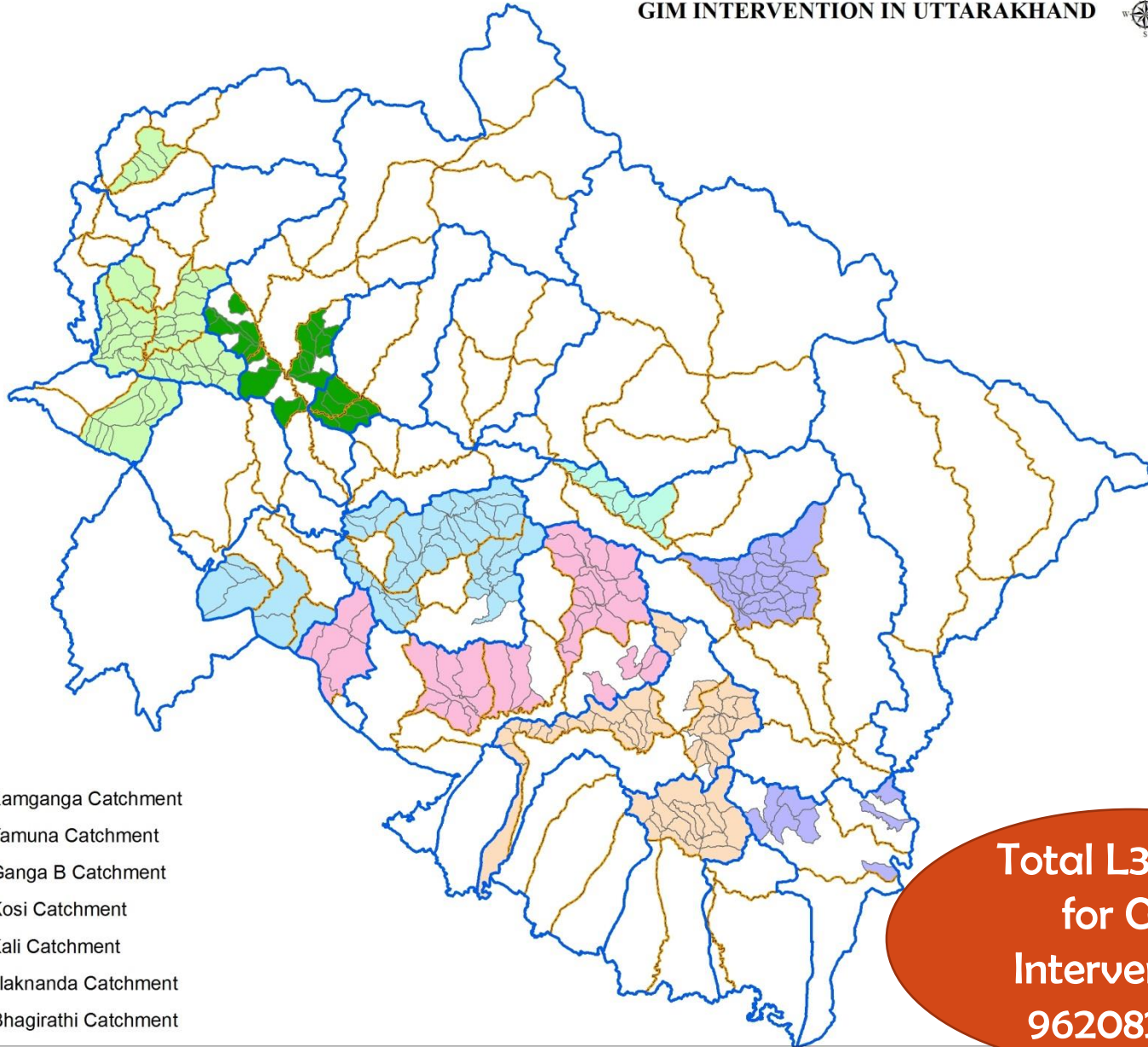
Total seven L1
Areas for GIM
Intervention

GIM INTERVENTION IN UTTARAKHAND



Legend

-  WS
-  SWS
-  MWS
-  L2 A: Ramganga Catchment
-  L2 B: Yamuna Catchment
-  L2 C: Ganga B Catchment
-  L2 D: Kosi Catchment
-  L2 E: Kali Catchment
-  L2 F: Alaknanda Catchment
-  L2 G: Bhagirathi Catchment



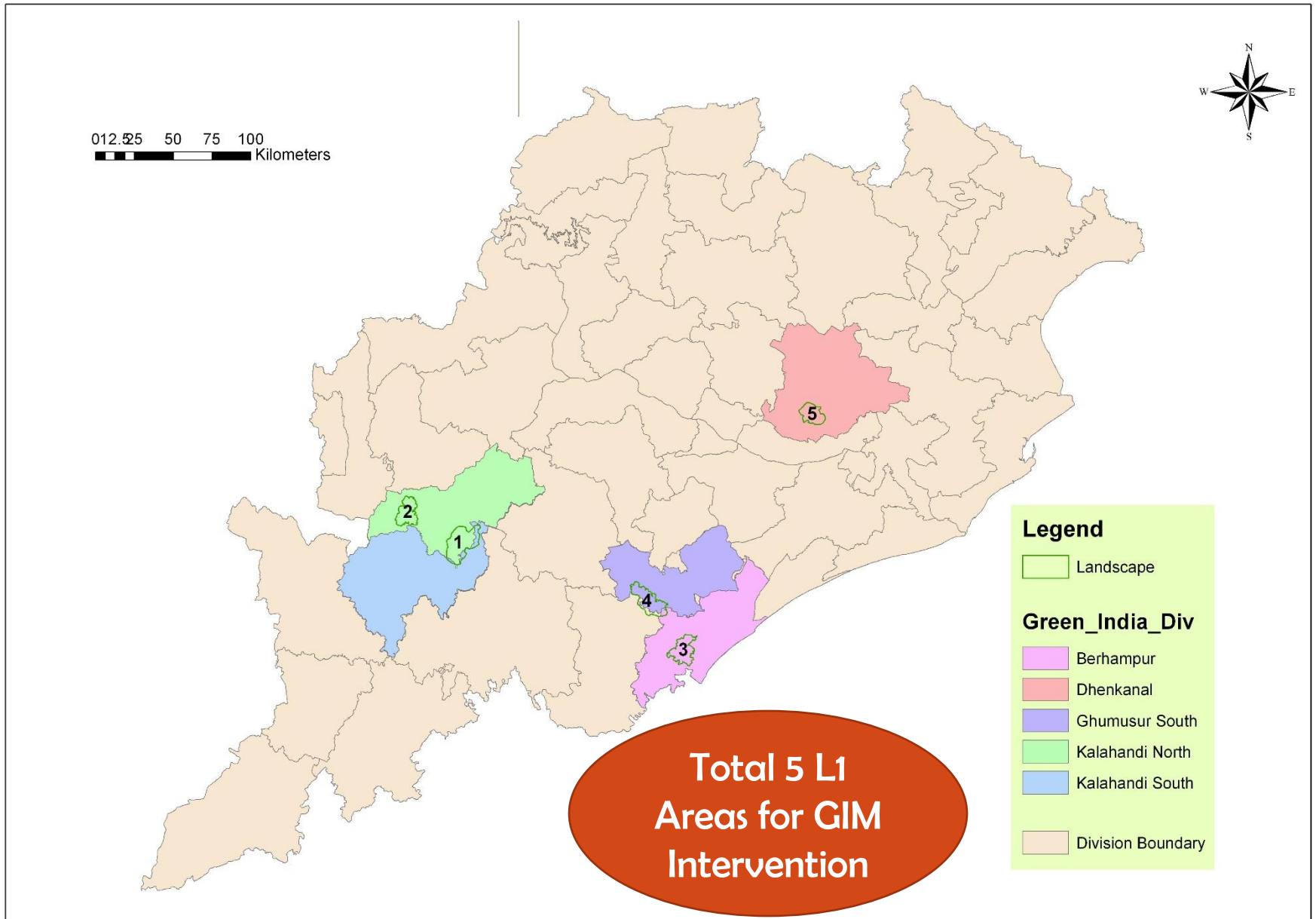
**Total L3 Areas
for GIM
Intervention:
962082 ha.**

Odisha

Criteria for identification of landscapes :

- Vulnerability to climate change
- Representative Forest cover and Forest types of the state like
 - Indian moist peninsular Sal
 - Tropical Dry Mixed Deciduous Forest (Northern and Southern)
 - Moist mixed Deciduous Forest without Sal
 - Dry Deciduous Scrub
- Dependency on forest and poverty level of local people including STs/SCs
- Wide variation in floristic diversity

Map showing L1 landscapes in the State of Odisha

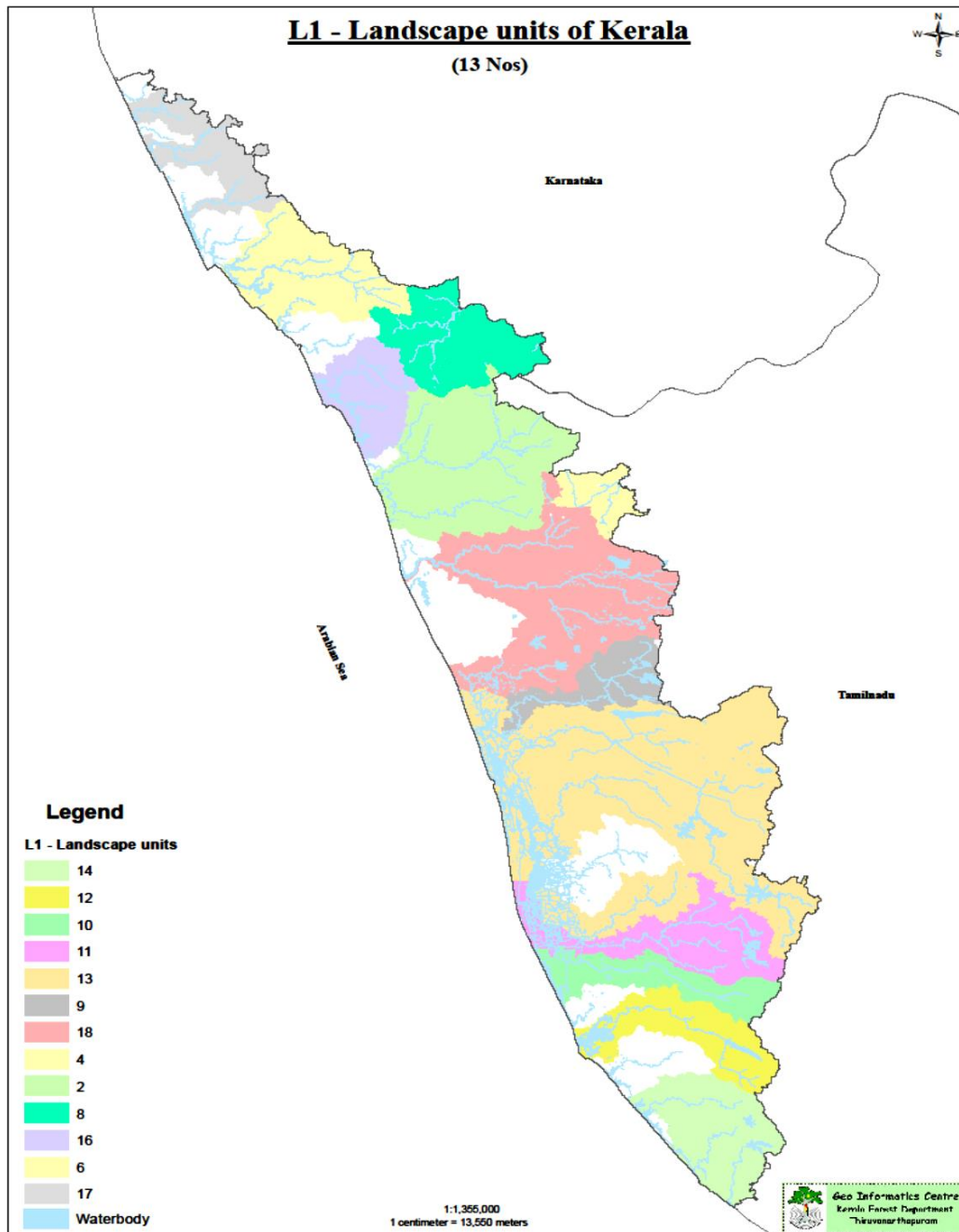


Kerala

- ▣ 44 watersheds clubbed into 13 L1 landscapes based on climate, geology, topography and vegetation type so that each L1 becomes a large distinguishable **landmass**
- ▣ 13 L1 landscapes divided into 36 L2 landscapes based on forest cover, JFMC, biodiversity richness map, special ecosystems, mangrove areas, tribal settlement areas, wildlife habitat fragmentation
- ▣ L3 landscapes identified based on micro-watershed, forest-dependency, deforestation & degradation, distribution of forest cover, presence of local groups (JFMCs) and Self Help Groups (SHGs)

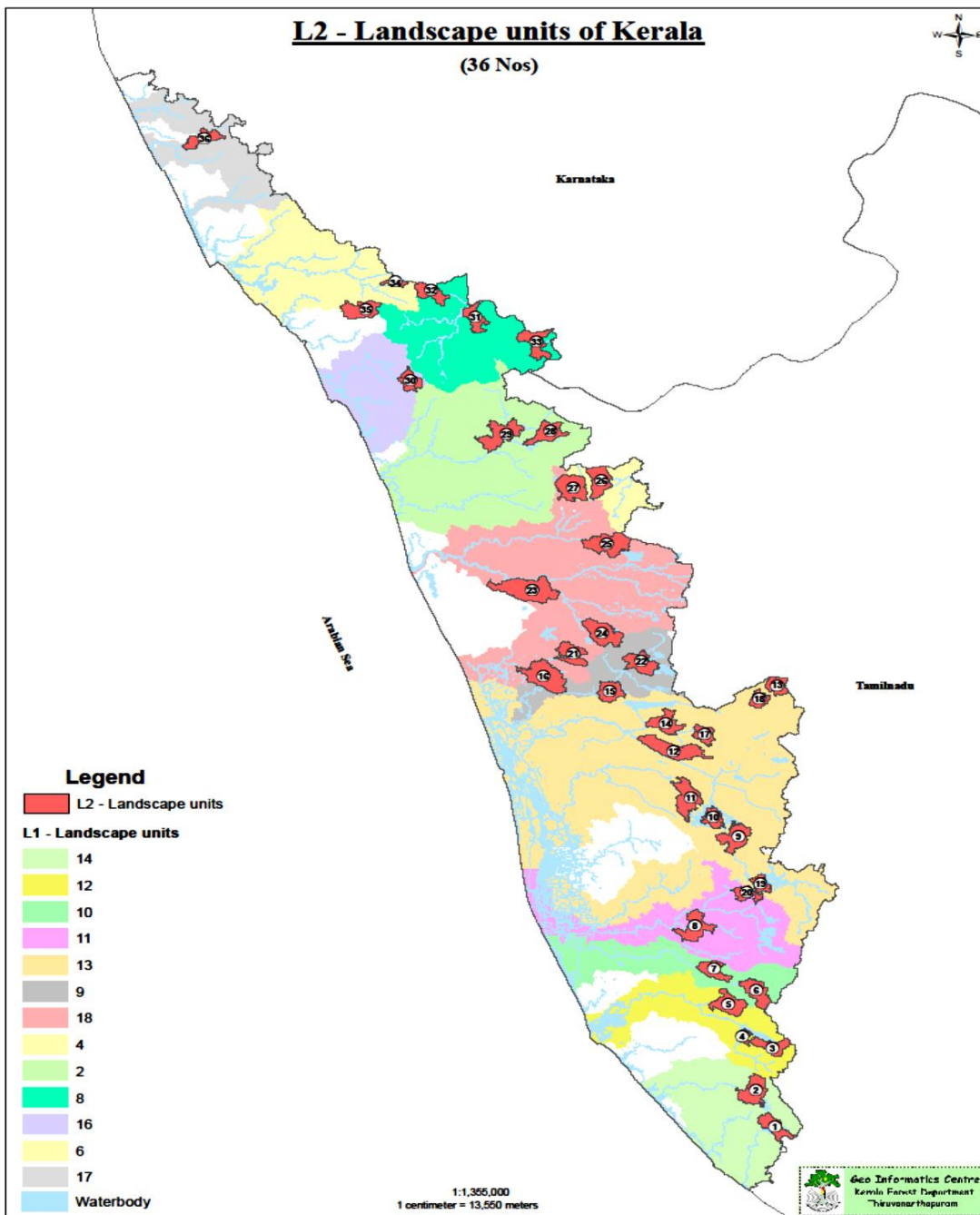
L1 - Landscape units of Kerala

(13 Nos)

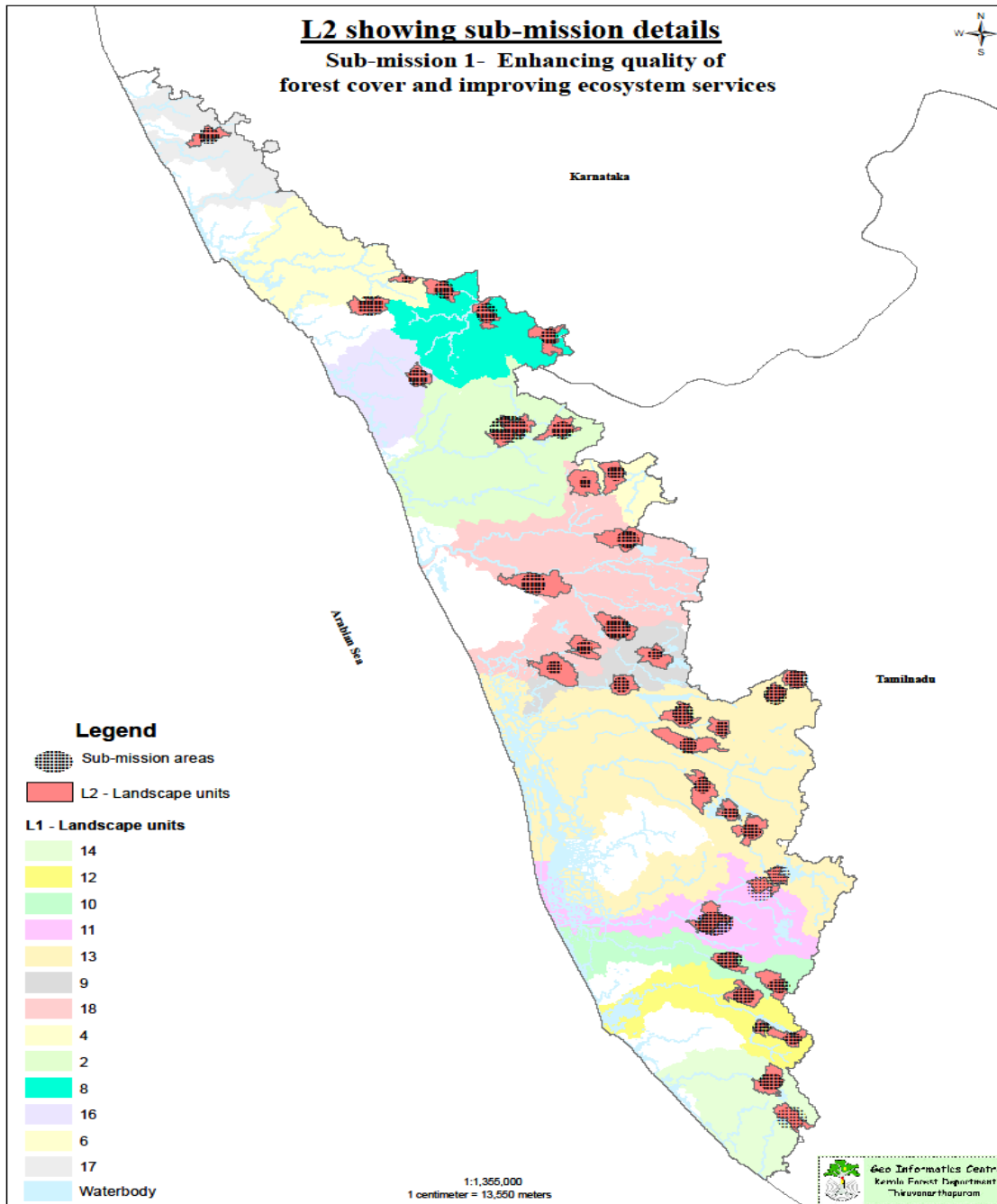


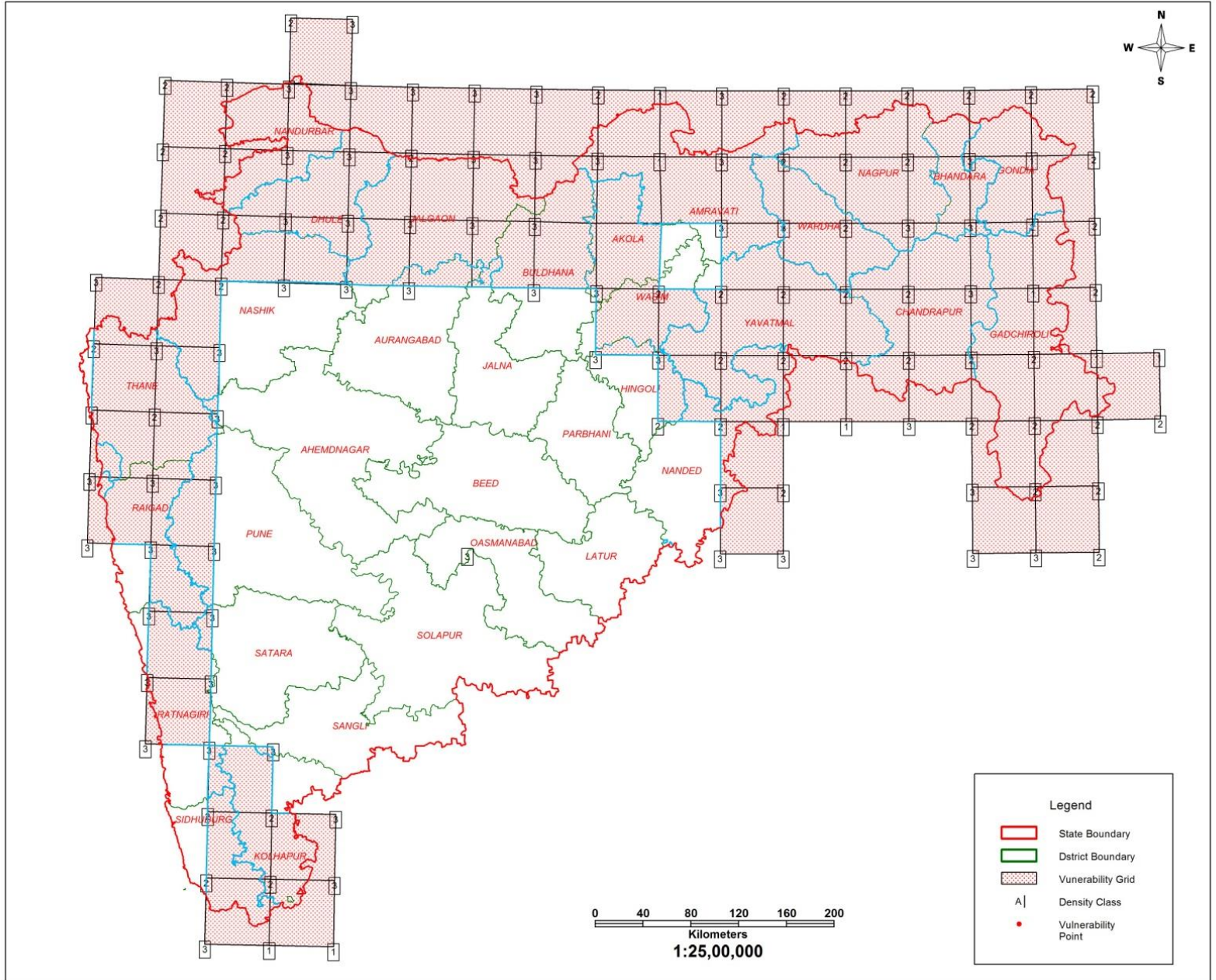
L2 - Landscape units of Kerala

(36 Nos)

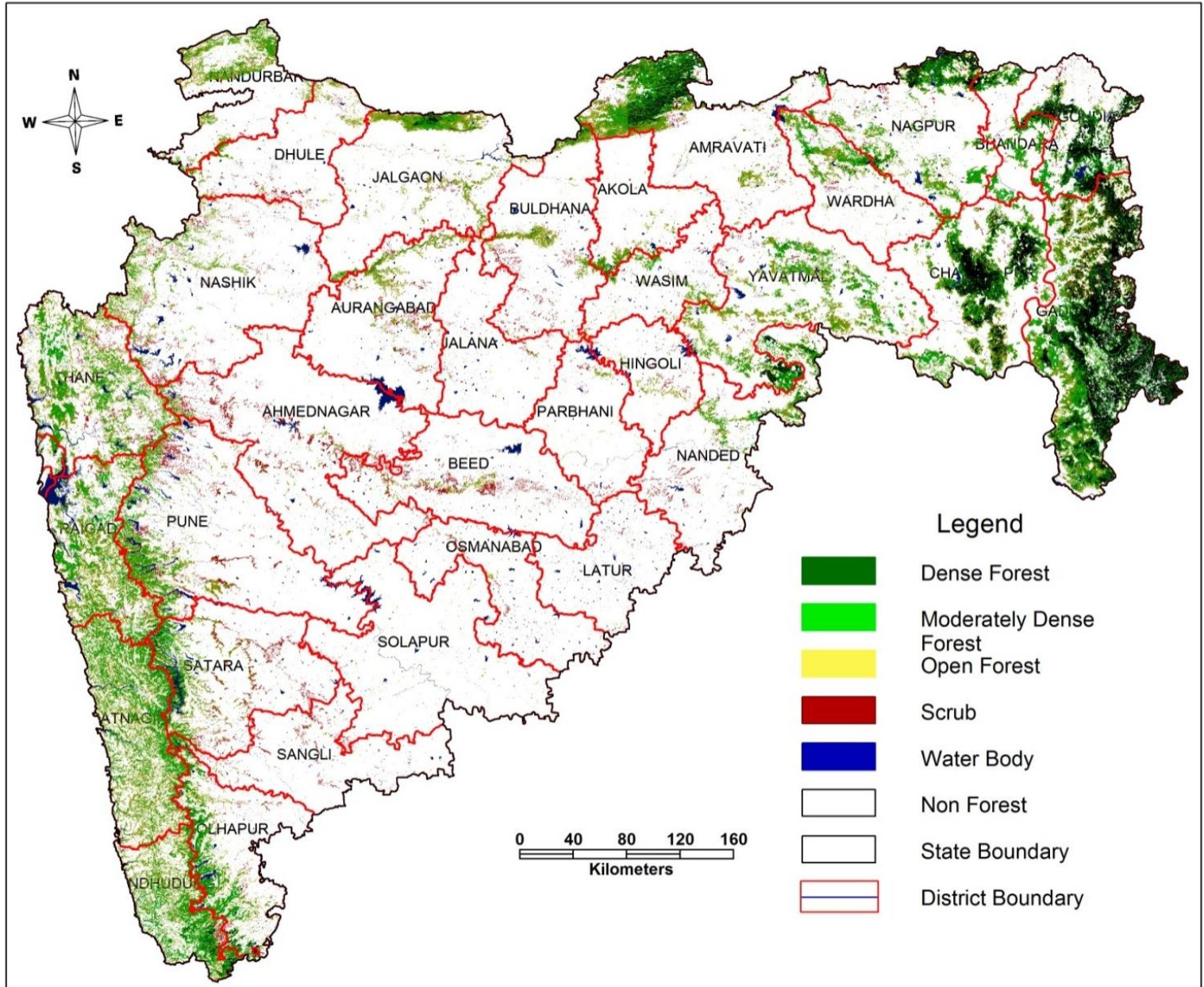


L2 showing sub-mission details
Sub-mission 1- Enhancing quality of forest cover and improving ecosystem services

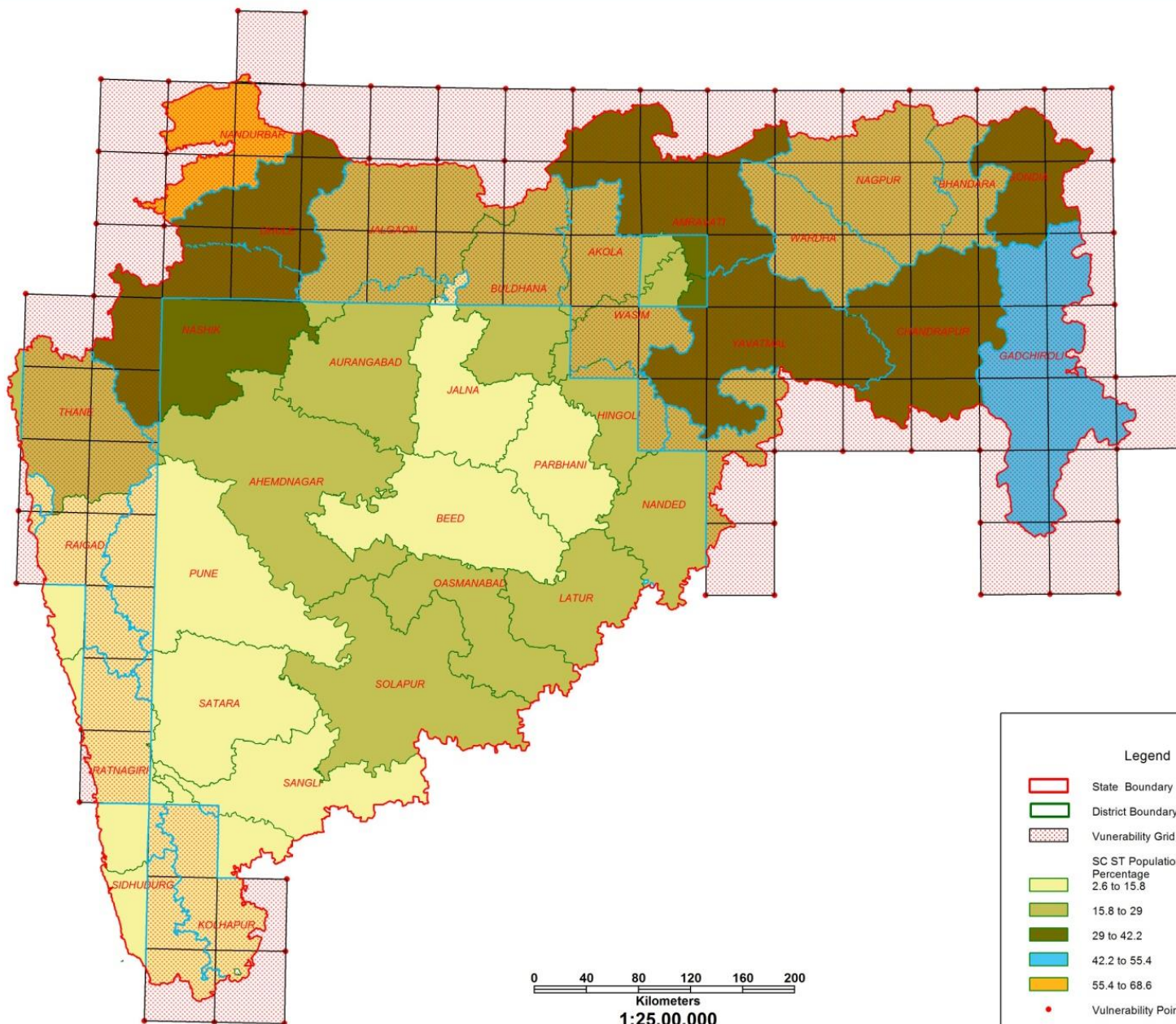




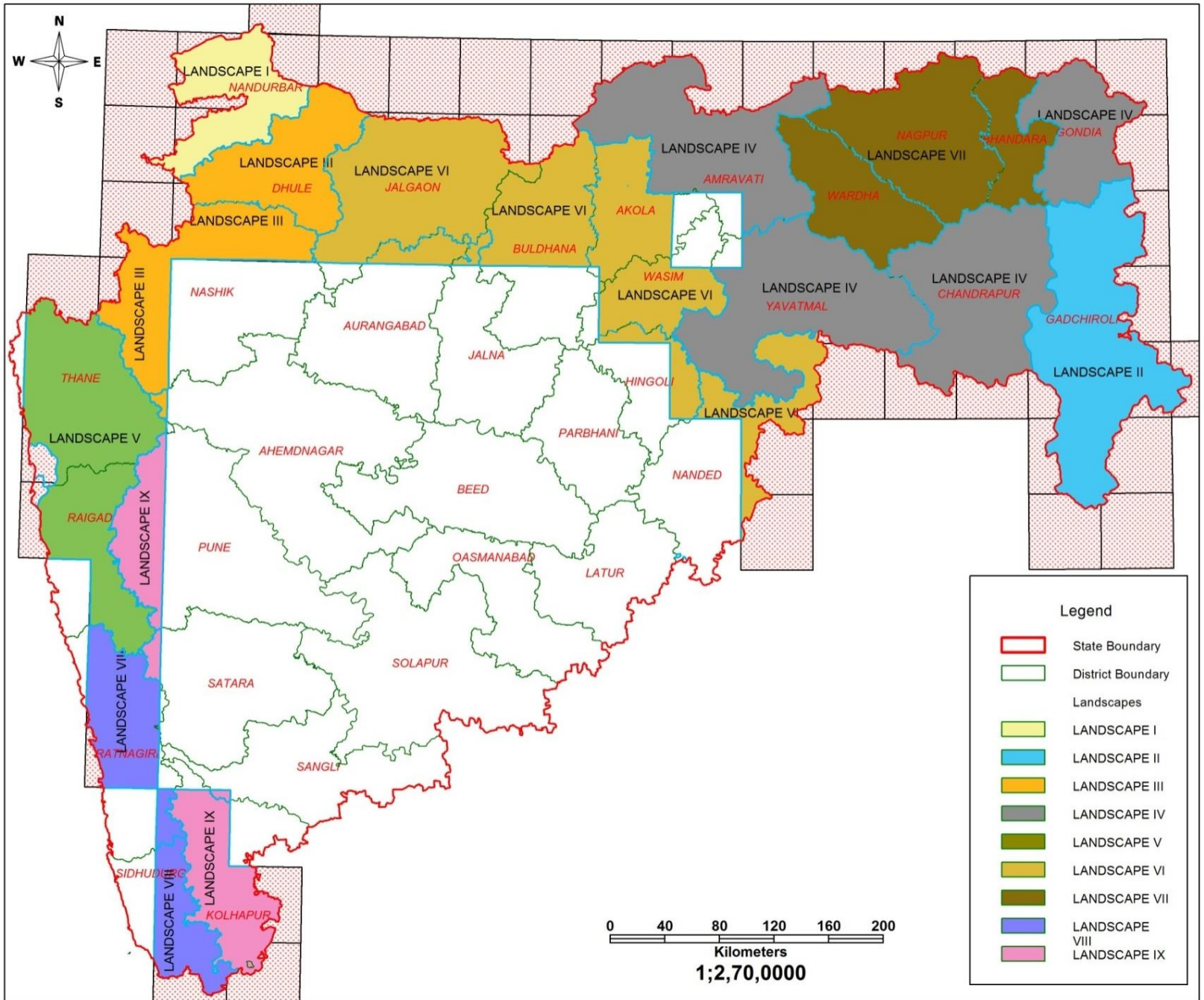
MAHARASHTRA DENSITY TYPE MAP



CLIMATE VULNERABILITY MAP AND SC ST POPULATION DATA MAP OF MAHARASHTRA



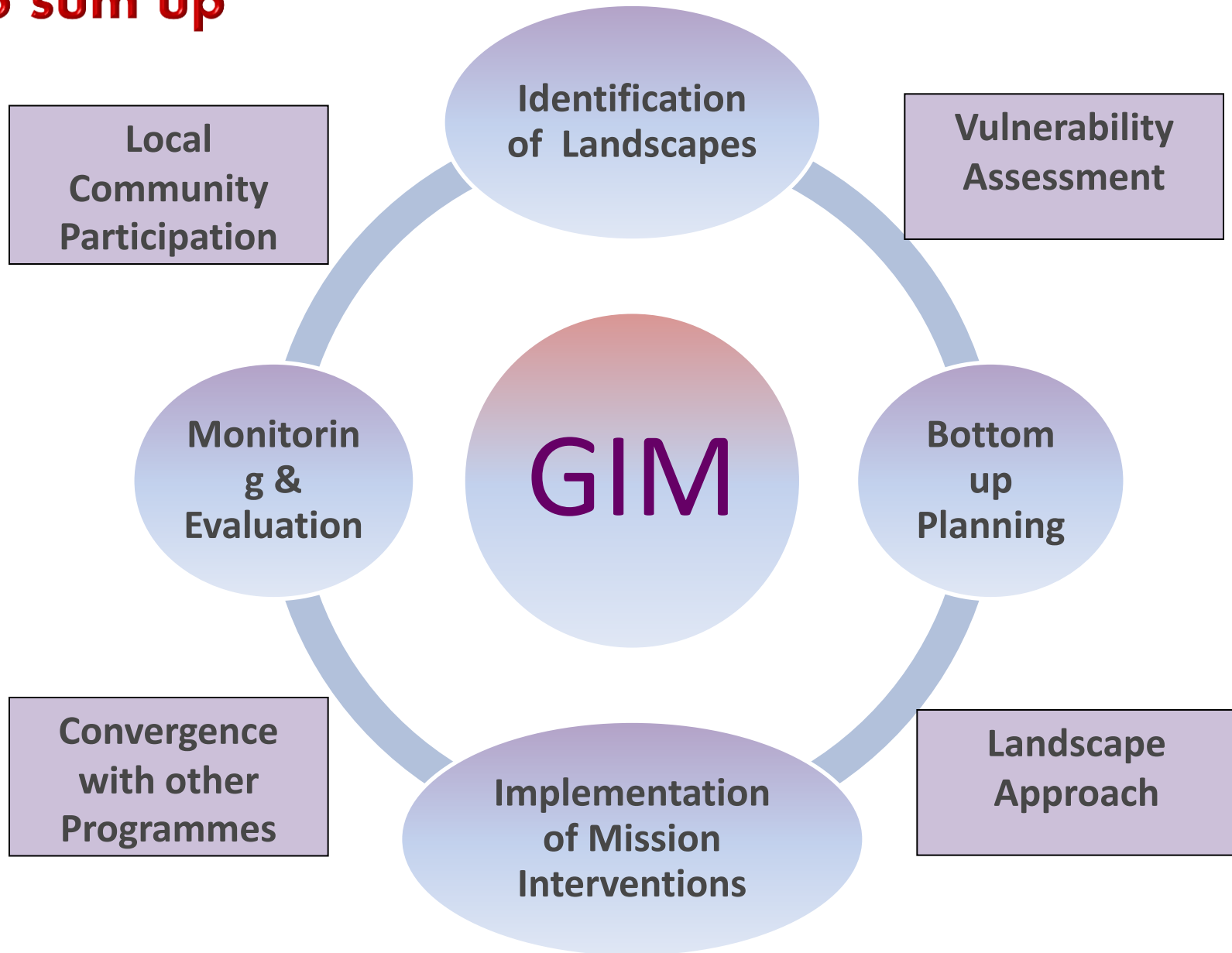
IDENTIFICATION OF LANDSCAPES (L I) IN MAHARASHTRA



Progress of Activities under GIM

- ▣ Received Perspective Plans from 13 States which have been examined in consultation with respective States
- ▣ Approval of 6 Perspective Plans by the National Executive Council
- ▣ Convergence guidelines with MNREGS and CAMPA issued
- ▣ Efforts are on for convergence with other schemes such as NAP, NMCG, Catalytic Development Programme of Ministry of Textiles, Bamboo and Horticulture Mission, Programs of Ministry of New and Renewable Energy, Rainfed Authority of India
- ▣ Externally Aided Projects on Eco-System Services Improvement Project (ESIP) for MP & Chhattisgarh and for greening the transition zone between Thar Desert and the gaps in Aravali range in Rajasthan

To sum up



Thanks

