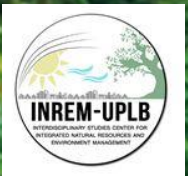# Integrating the Commons in Landscape Governance in a Changing Climate: Key Challenges and Opportunities

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INTERDISCIPLINARY STUDIES CENTER FOR
INTEGRATED NATURAL RESOURCES AND
ENVIRONMENT MANAGEMENT

Outline of Presentation

- Context and Key Concepts
- Why Integrate the Commons in Landscape Governance: Key Opportunities
- Major Challenges for the Integration
- Take Home Message

- **Natural resources - important assets fundamental to achieving the SDGs**
- **NR undergoing massive degradation in many parts of Asia compromising the environmental services they provide**
- **Climate change a threat multiplier that contributes to NR degradation and threatens SDGs**

Key Climate-related Risks in Asia

- Increased flood damage to infrastructure, livelihoods and settlements
- Heat-related human mortality
- Increased drought-related water and food shortage
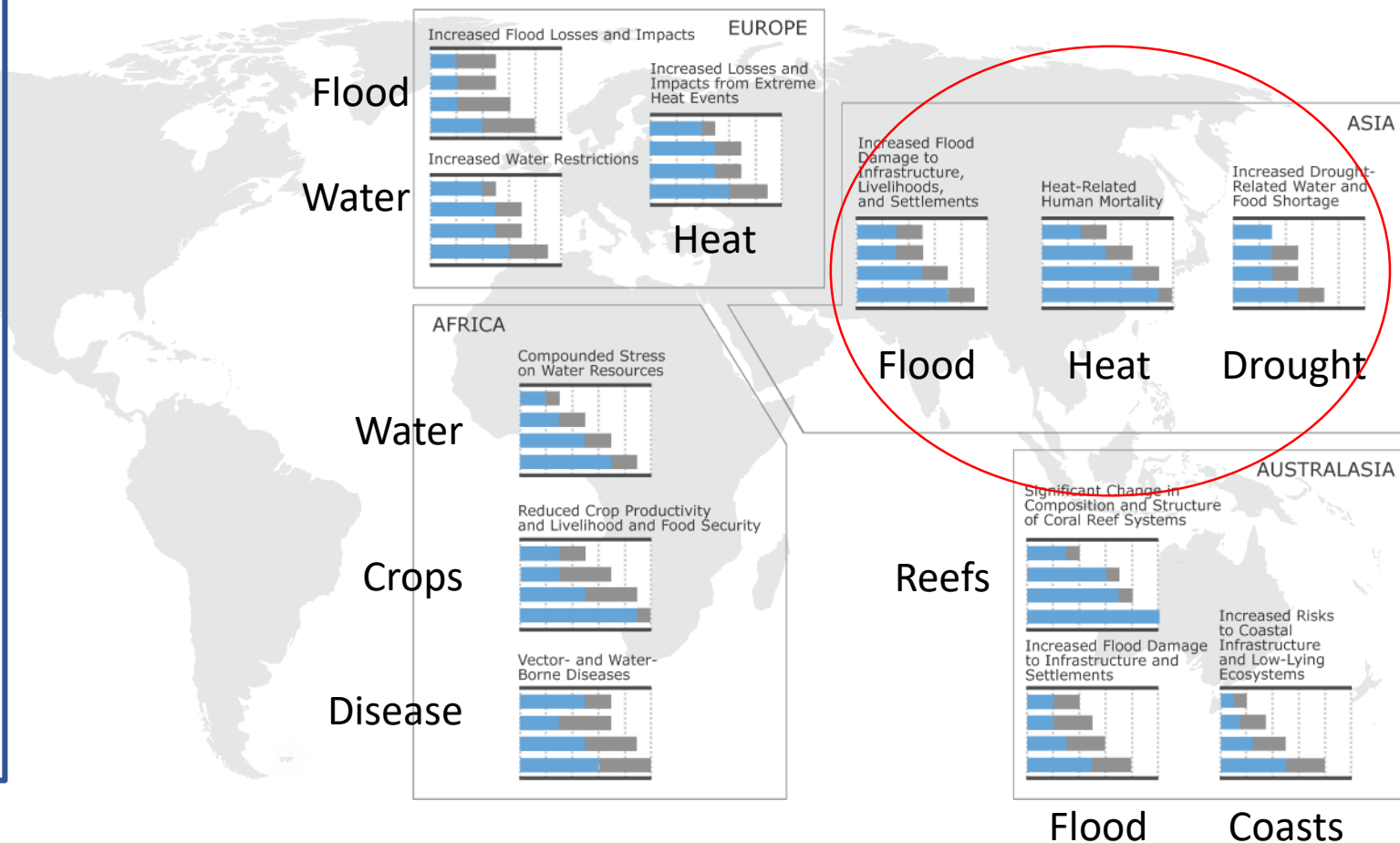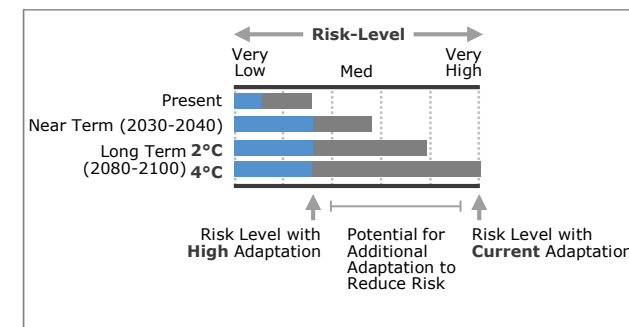
Climate change has major adverse impacts on the biological and physical systems in Asia

- Global patterns of impacts in recent decades attributed to climate change, based on studies since the AR4
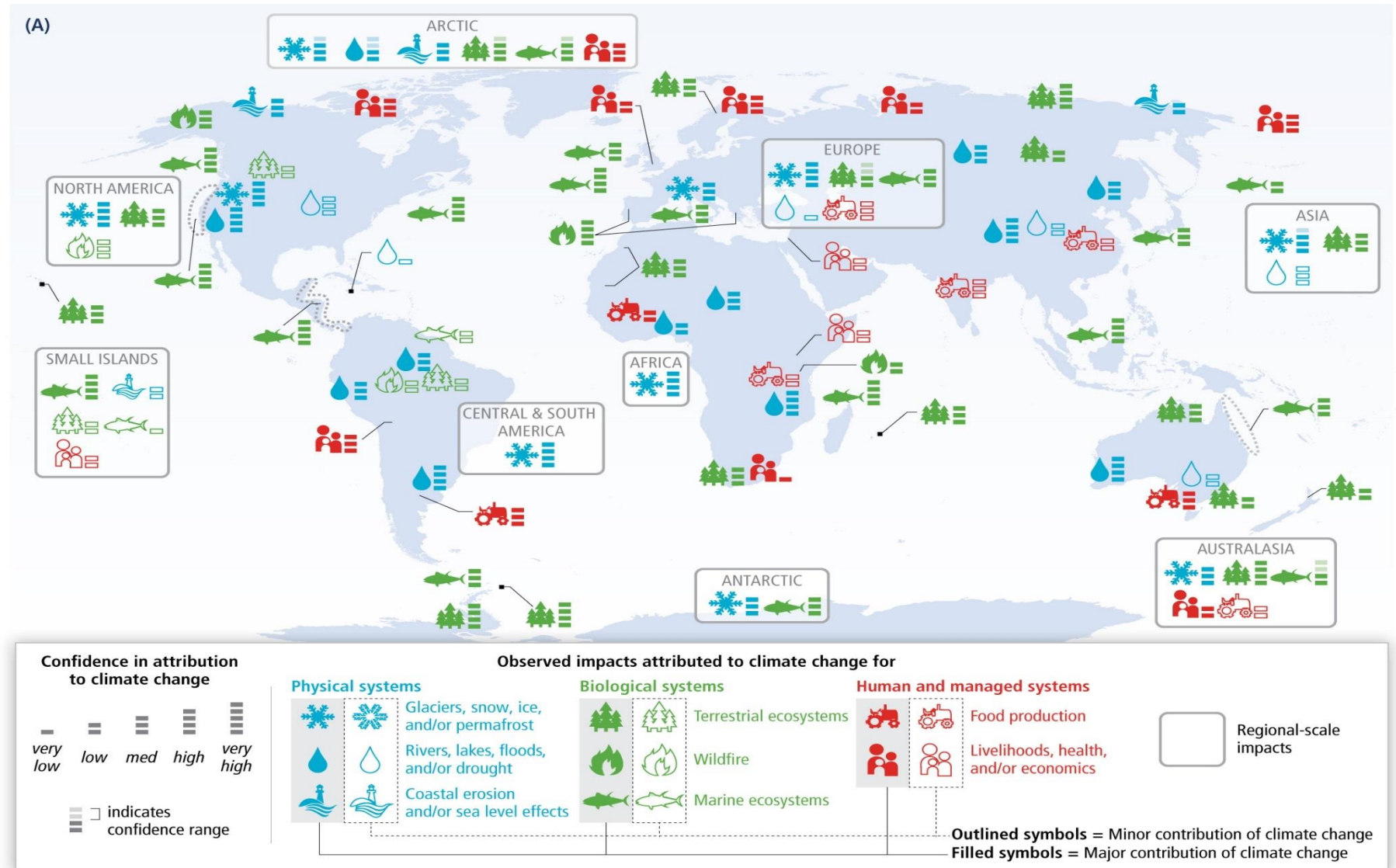

Source: IPCC (2014) WGII AR5

Common Pool Resources

Resources which**:**

1) produce a steady flow of *resource units* (benefits accruing from the resource), and

2) are so large (e.g. river basins, ocean, etc.) that excluding the individuals that use them unsustainably becomes almost impossible –hence maximization of collaboration between users becomes essential (Ostrom 1990:30).

• The success of **self-governing institutions**, proves that policies of privatization and government control are not the only alternatives available

Source: Ostrom, 1990:30
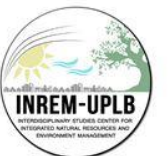
What is a Landscape?

- "A **socio-ecological system** that consists of a mosaic of natural and/or human-modified ecosystems, with a characteristic configuration of topography, vegetation, land use, and settlements that is influenced by the ecological, historical, economic and cultural processes and activities of the area." (Scherr, Shames and Friedman 2013: 2).
- Not just a geographical area but involves people and natural processes
- Socio-cultural, economic and environmental context of paramount importance
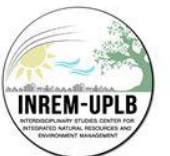
Typical Representation of a Landscape

Constitutes →
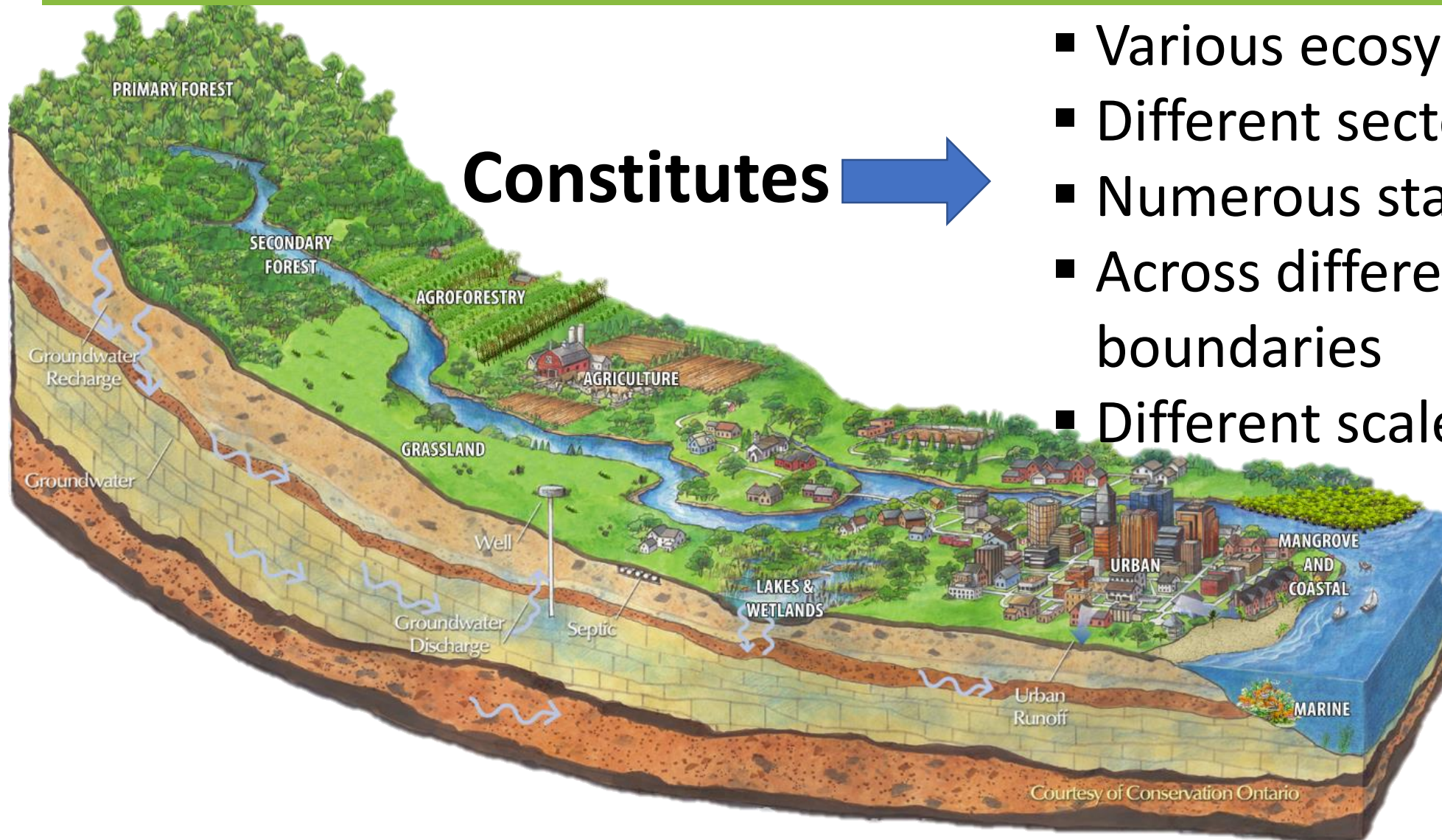
- Various ecosystems
- Different sectors
- Numerous stakeholders
- Across different political boundaries
- Different scales

What about Landscape Governance?

- "set of rules (policies and cultural norms) and the decision-making processes of public, private and civic sector actors with stakes in the landscape that affect actions in the landscape" (de Graaf et al., 2017)
- requires **effective coordination mechanisms** and application of **good governance principles**
- **good landscape governance** is a **precondition for achieving a sustainable landscape**.
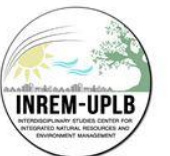
Pillars and Principles of Governance (FAO, 2011)

Accountability

Effectiveness

Efficiency

Fairness/Equity

Participation

Transparency

Policy, legal Institutional and regulatory frameworks

Planning and decision-making processes

Implementation enforcement and compliance
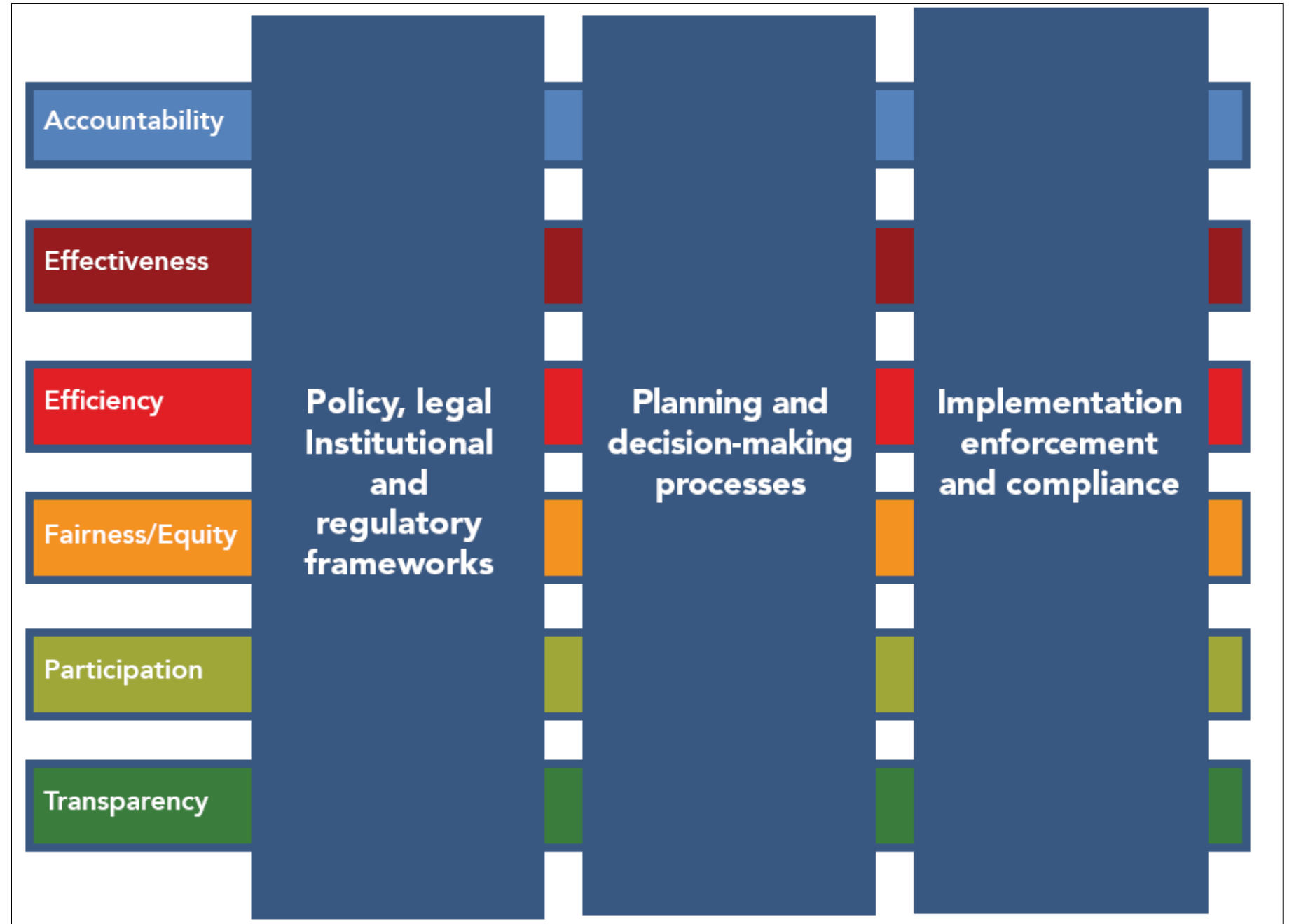
Why the Landscape Approach in Integrated Natural Resource Governance?

- Ecosystems in a landscape are complex, dynamic and interacting
- Sectoral, individual ecosystem and fragmented approach proven inadequate, inefficient, ineffective and unsustainable
- Resource management is multi-objective and comprise of many stakeholders with varying needs and interests;
- Need to bring all elements together in a landscape approach for integrated natural resource management (Castella et al, 2013).

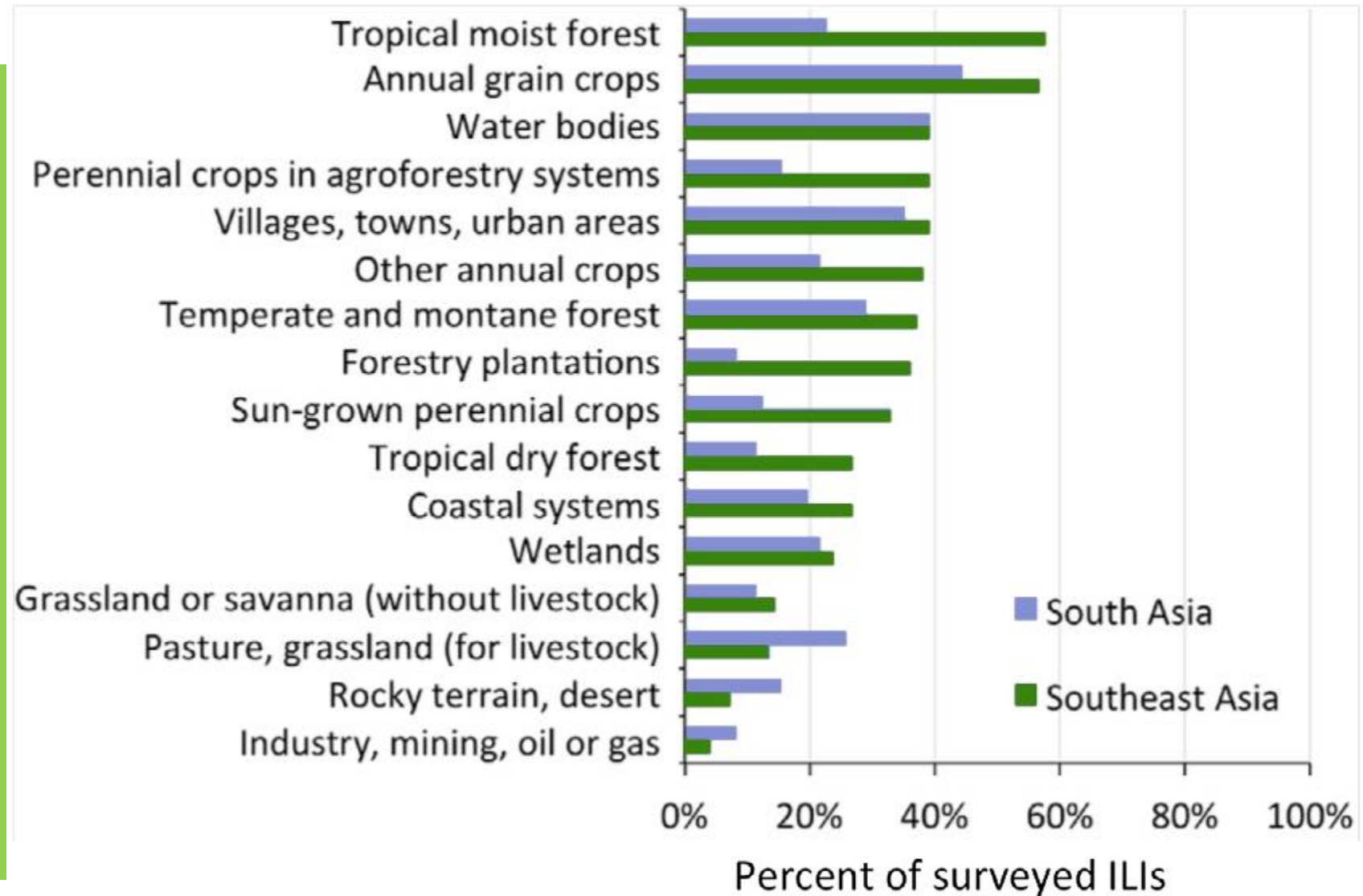Khant Zaw, 2013. SEA in Search of Food Security. SEARCA Photo Contest, 2013.
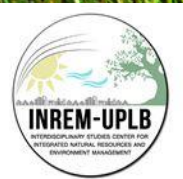
Opportunities for Integrating the Commons in Landscape Governance

Photo: Sumatra, Indonesia. Roderick Zagt/Tropenbos International

Potential to determine and employ appropriate combination of various land uses in a given landscape (implication on land use zoning and allocation)

Tropical moist forest
Annual grain crops
Water bodies
Perennial crops in agroforestry systems
Villages, towns, urban areas
Other annual crops
Temperate and montane forest
Forestry plantations
Sun-grown perennial crops
Tropical dry forest
Coastal systems
Wetlands
Grassland or savanna (without livestock)
Pasture, grassland (for livestock)
Rocky terrain, desert
Industry, mining, oil or gas

■ South Asia
■ Southeast Asia

0% 20% 40% 60% 80% 100%

Percent of surveyed ILIs

Percentage of integrated landscape initiatives (ILI's; n = 166) that include the listed major land uses in South and SE Asia. ILI's can include more than one dominant use.
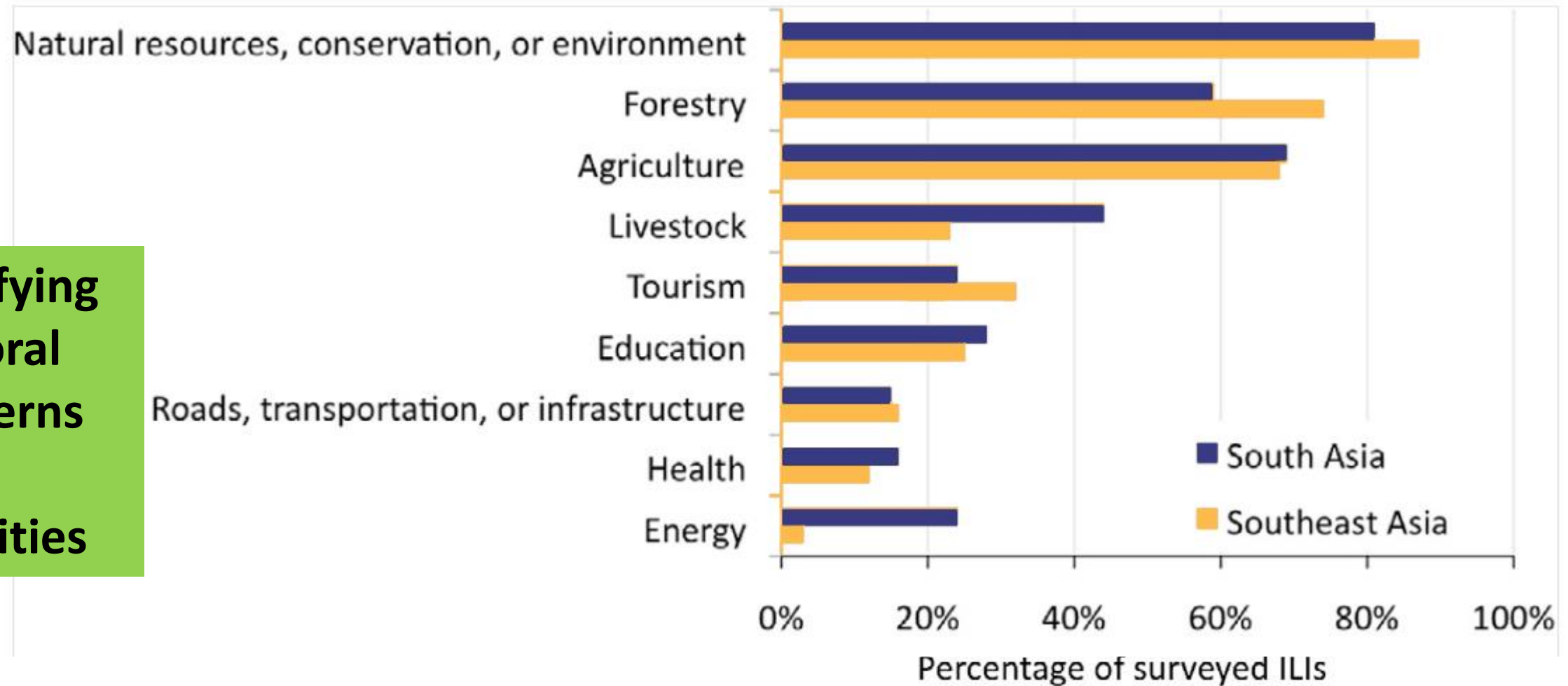
Source: Zanzanaini et al., 2017

Achieving multiple objectives in a collaborative manner including those depending on CPR for livelihoods
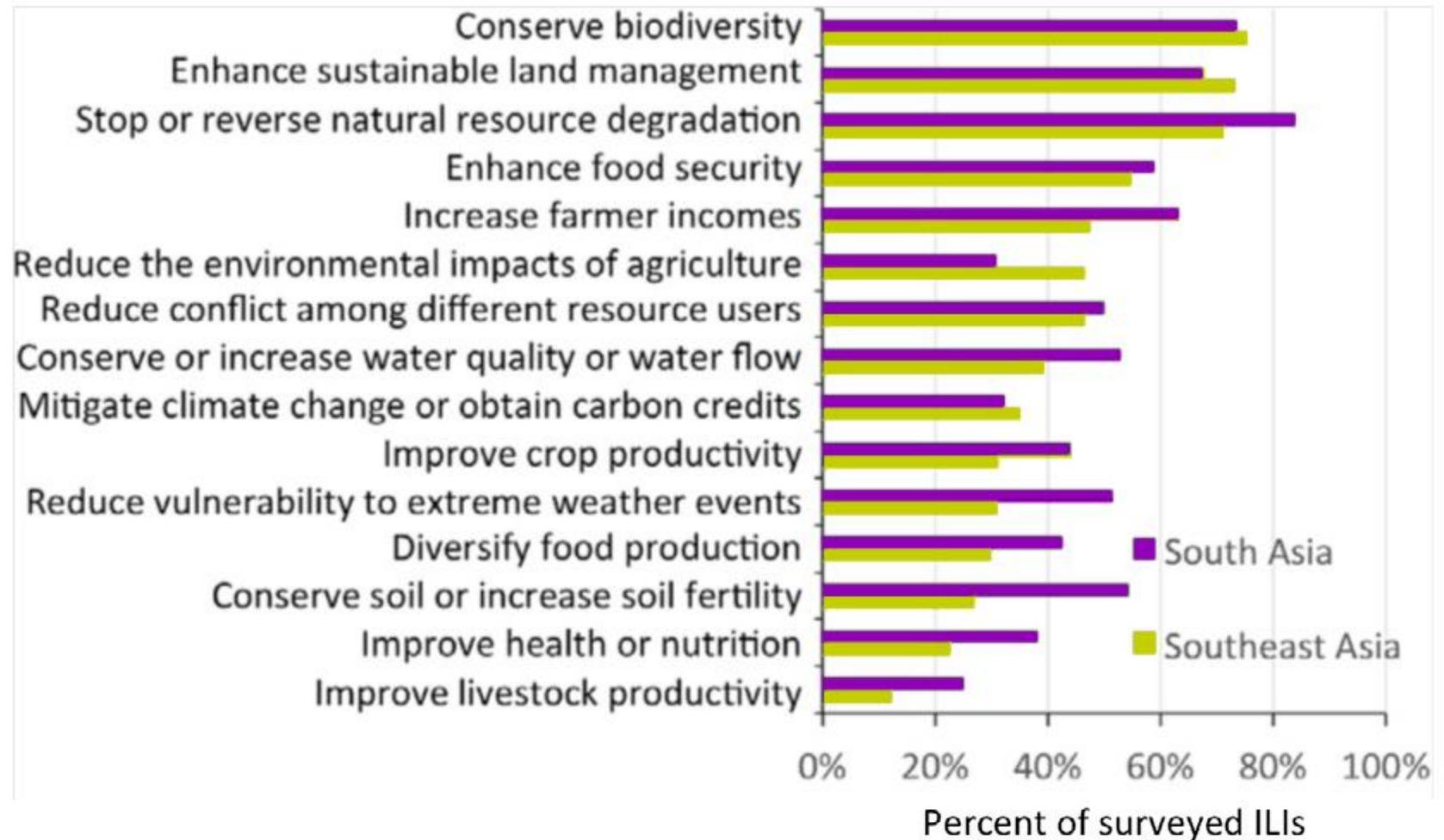
Motivations for the creation of the surveyed integrated landscape initiatives (ILI's; n = 166) in South and SE Asia.
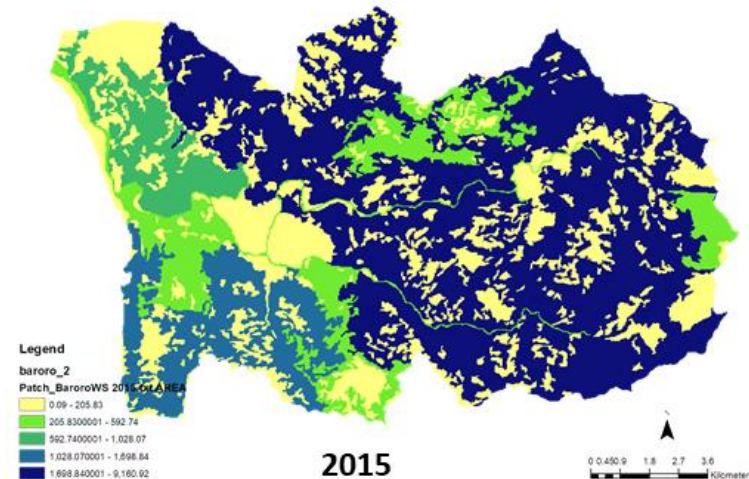
Source: Zanzanaini et al., 2017

Satisfying sectoral concerns and priorities

Percentage of integrated landscape initiatives (ILI's; n = 166) in which each of nine different sectors was involved.

Source: Zanzanaini et al., 2017

Baroro Watershed, Philippines: Fragmentation
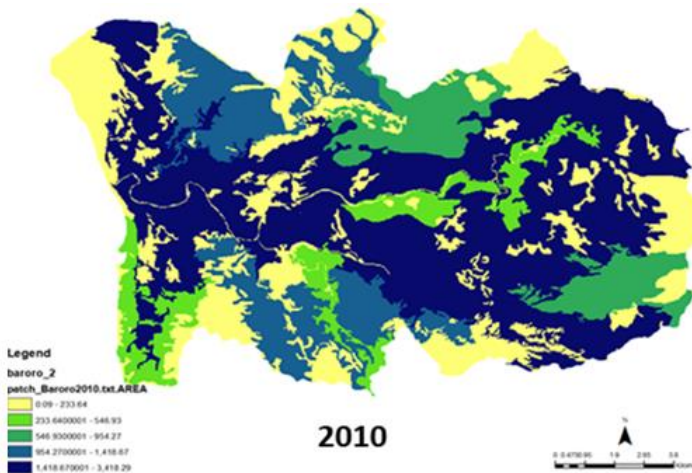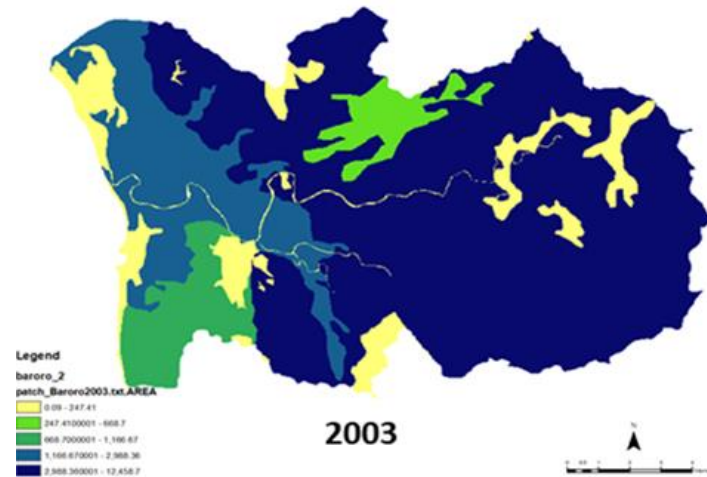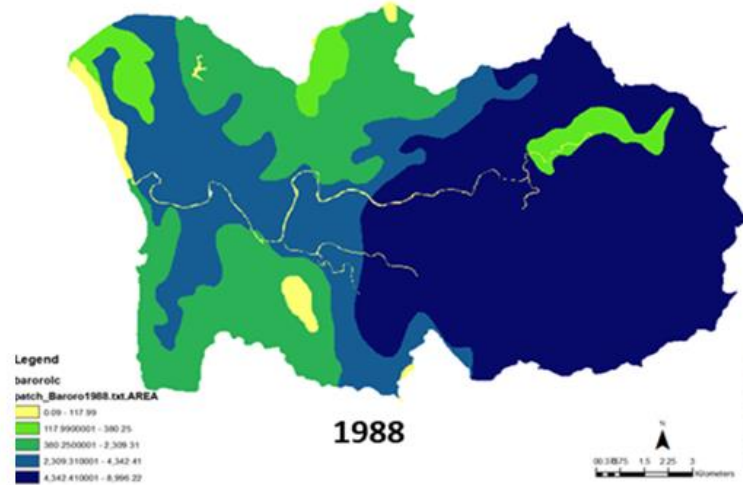
Opportunity to incorporate local and indigenous knowledge in landscape governance
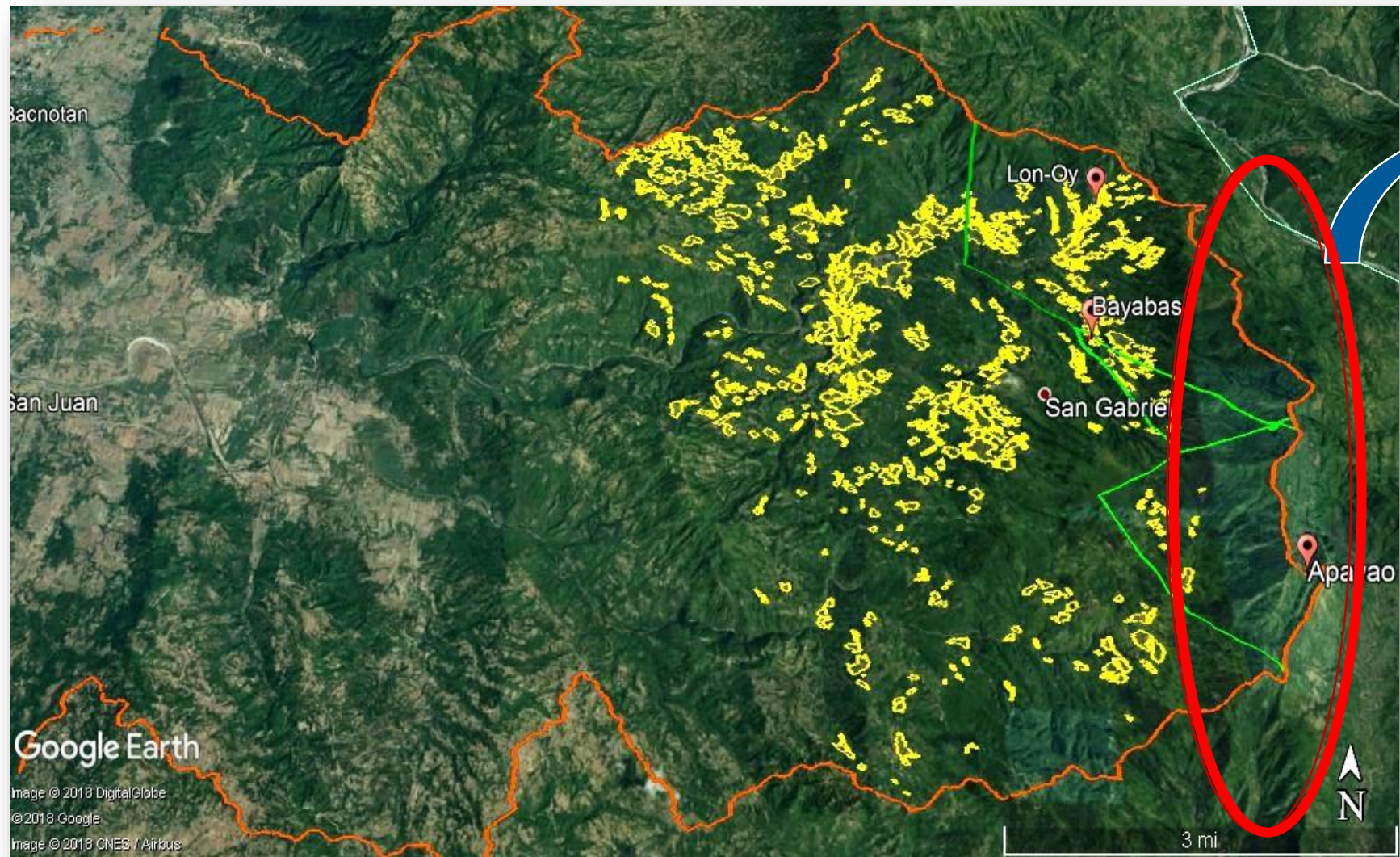
Lesser or no fragmentation in the upper area of Baroro watershed in the Philippines managed by Indigenous People

Legend: ☐ watershed boundary ☐ barangay ☐ agricultural land

Source: Google Earth Imagery 2018 CNES/Airbus/DigitalGlobe

Local Knowledge and its Importance

Importance to CCA

- Climate change adaptation is local and site-specific
- Indigenous knowledge is "locally fine-tuned, which is essential for climate change adaptation and long-term community resilience" (Victoria Tauli-Corpuz, Executive Director of Tebtebba (http://www.tebtebba.org/)

Opportunity to combine CCA, CCM and DRM interventions in a landscape (modified after Shames et al., 2011)

Restore Degraded Watershed and Rangelands
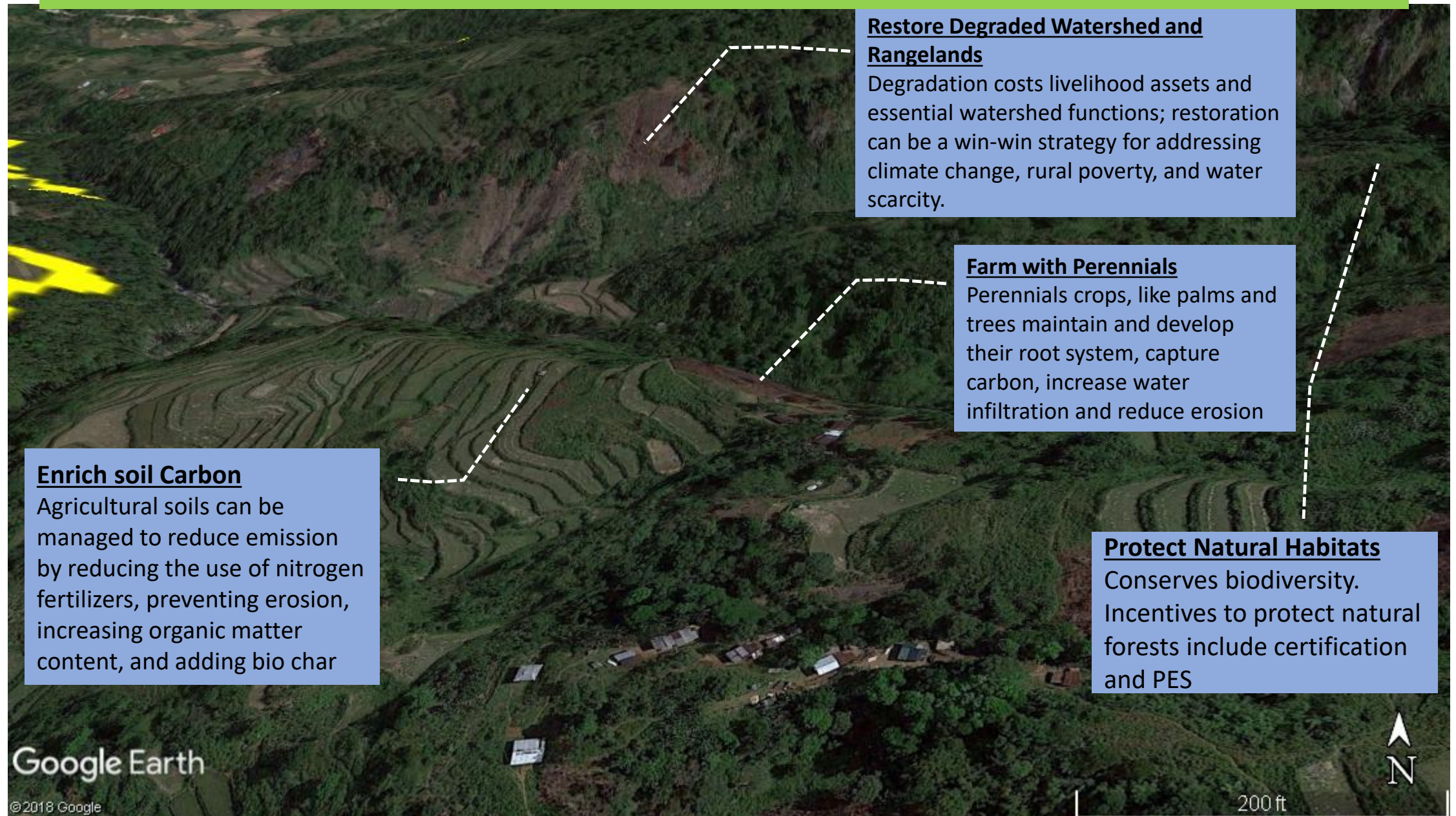Degradation costs livelihood assets and essential watershed functions; restoration can be a win-win strategy for addressing climate change, rural poverty, and water scarcity.

Farm with Perennials
Perennials crops, like palms and trees maintain and develop their root system, capture carbon, increase water infiltration and reduce erosion

Enrich soil Carbon
Agricultural soils can be managed to reduce emission by reducing the use of nitrogen fertilizers, preventing erosion, increasing organic matter content, and adding bio char

Protect Natural Habitats
Conserves biodiversity. Incentives to protect natural forests include certification and PES

Google Earth
©2018 Google

200 ft

N

Legend: ☐ watershed boundary ── river system   ☐

Source: Google Earth Imagery 2018 Data Sio, NOAA, US Navy, NGA, GEBCO

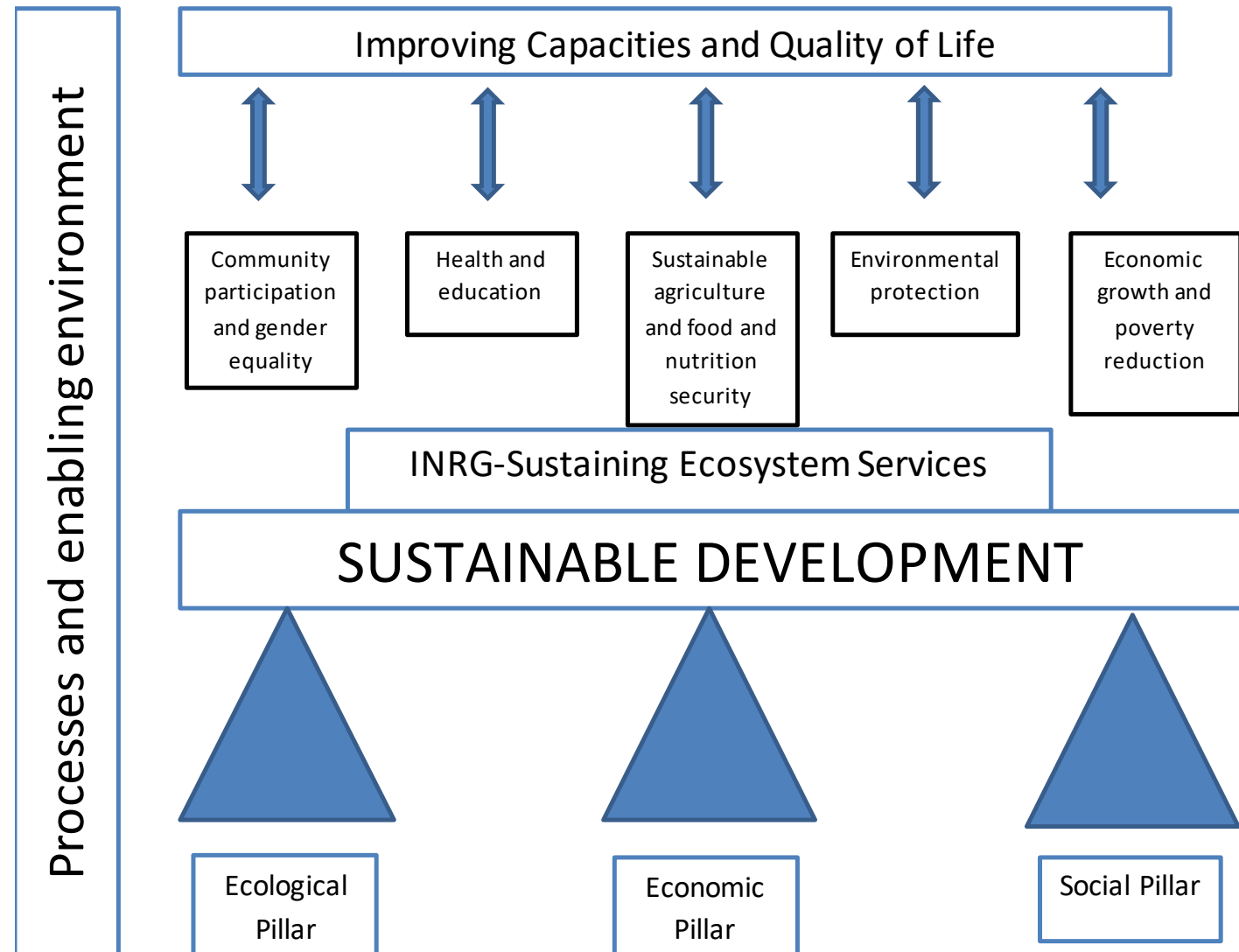# Major Challenges for the Integration

Evolving a mutually agreed framework for Landscape Governance and collaboration

Processes and enabling environment

Improving Capacities and Quality of Life

| Community participation and gender equality | Health and education | Sustainable agriculture and food and nutrition security | Environmental protection | Economic growth and poverty reduction |

INRG-Sustaining Ecosystem Services

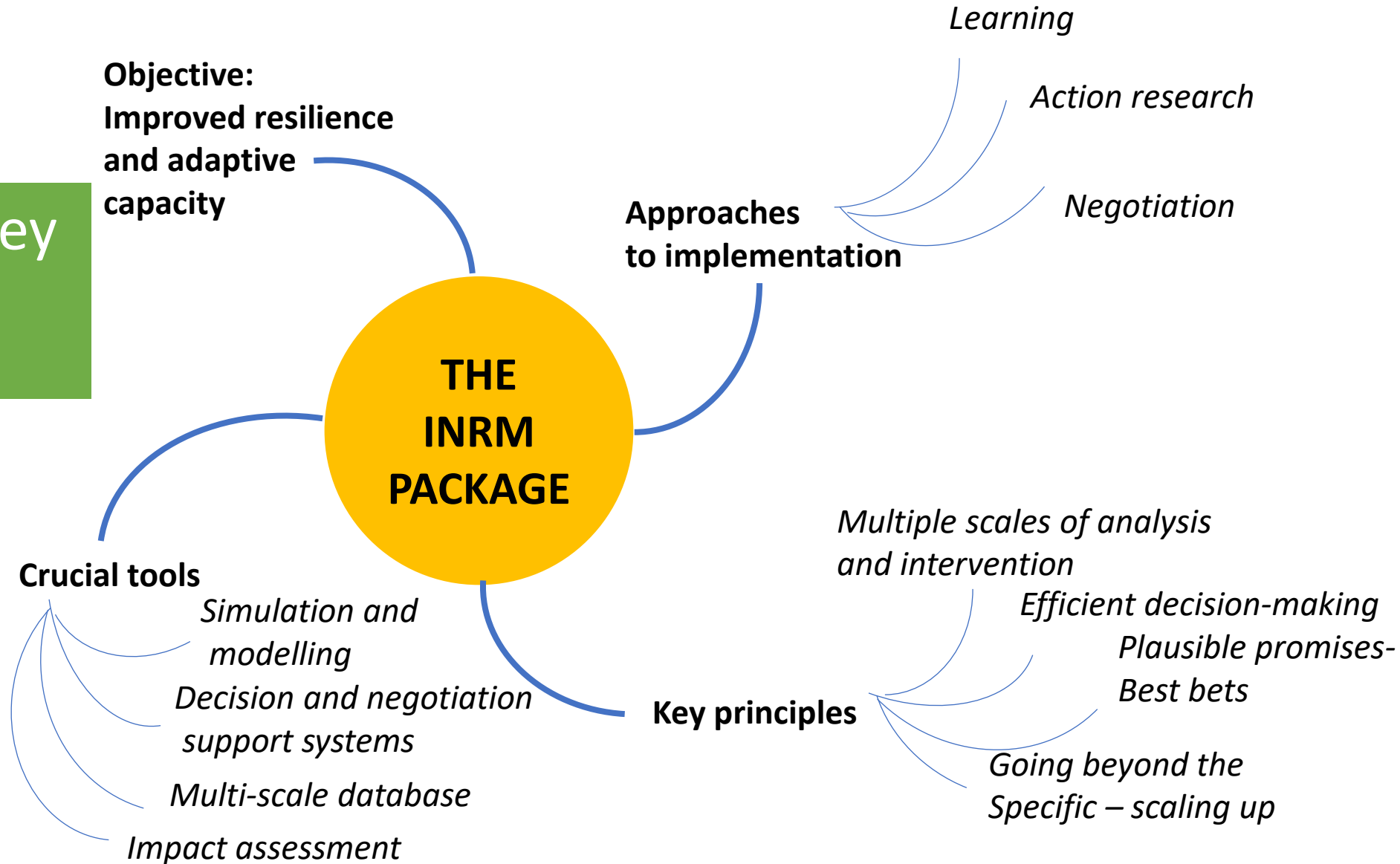SUSTAINABLE DEVELOPMENT

Ecological Pillar

Economic Pillar

Social Pillar

Source: Sajise, 2014

Major Challenges for the Integration

Building on the key features of INRM
(Sayer and Cambell, 2001)

Objective:
Improved resilience and adaptive capacity

THE INRM PACKAGE

Approaches to implementation
- *Learning*
- *Action research*
- *Negotiation*

Key principles
- *Multiple scales of analysis and intervention*
- *Efficient decision-making*
- *Plausible promises- Best bets*
- *Going beyond the Specific – scaling up*

Crucial tools
- *Simulation and modelling*
- *Decision and negotiation support systems*
- *Multi-scale database*
- *Impact assessment*

Major Challenges for the Integration

**Creating enabling policies for effective implementation**

Effective Policies to Promote the Landscape Approach in INRG (Katerere and Smith, 2013)

- Recognizing that services provided by ecosystems are not limitless;

- Promoting effective link across sectors;

- Regard agricultural systems as agro-ecosystems link to other ecosystems;

- Valuing ecosystems as productive assets;

- Strengthening local organization and amplify voices of rural communities especially the marginalized groups; and

- Support increased investments in off farm ecosystem assets or provide payment for environmental services.

Supporting integrated planning that cut across different sectors

- Agriculture
- Coastal
- Water
- Health
- Forestry
- Biodiversity
- Environment
- Energy
- Education
- Tourism
- Infrastructure
- Settlement
- Mining
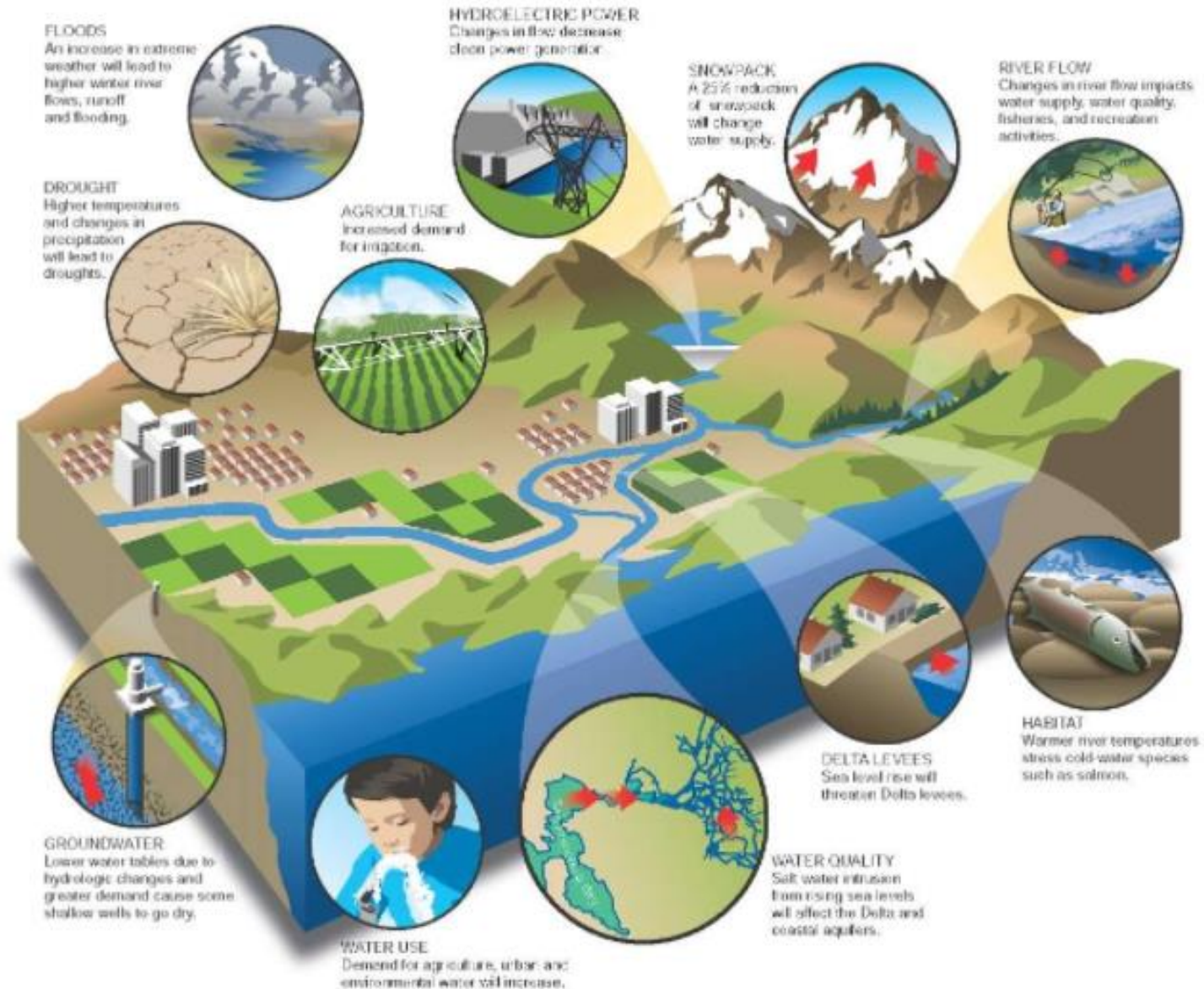
Major Challenges for the Integration

How to effectively implement necessary processes that builds local capacity

- Advocating for systems/integrated approach in natural resource and environment management
- Employing participatory methods of analysis, planning, implementation, monitoring and evaluation involving different stakeholders
- Employing interdisciplinary and transdisciplinary approaches in research and development
- Continuing capacity building at all levels but most especially at the local level
- Practicing good governance

Major Challenges for Integration

How to empower the marginalized and powerless groups for better outcomes
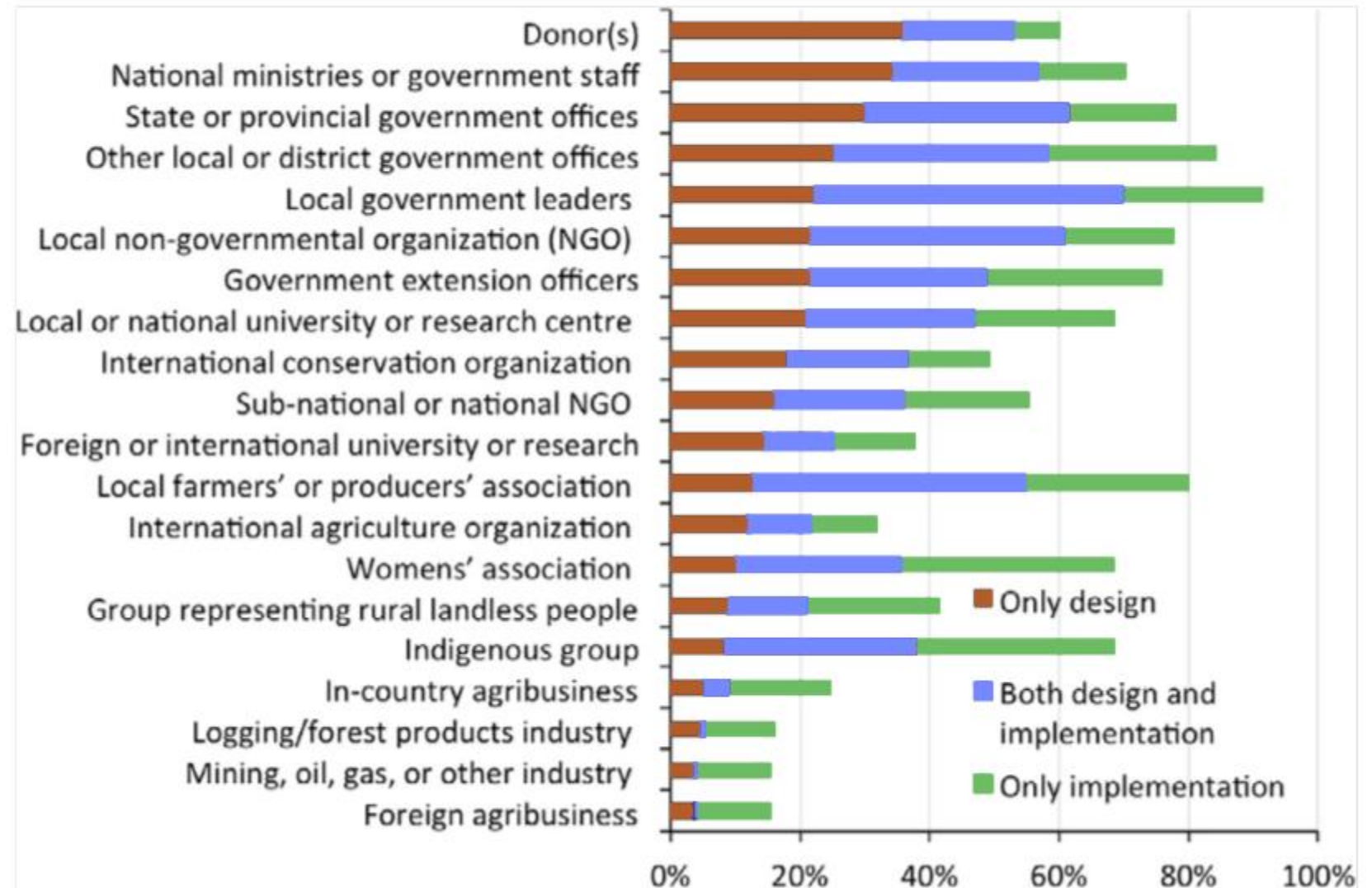

Percentage of integrated landscape initiatives (ILI's; n = 166) in which the indicated stakeholder groups were involved   Source: Zanzanaini et al., 2017

Major Challenges for Integration

Finally, looking for a champion at different levels to facilitate and bring about the integration for greater impacts

Overall challenge: Initiating and sustaining effective collaboration in a **fragmented landscape** and **governance system**
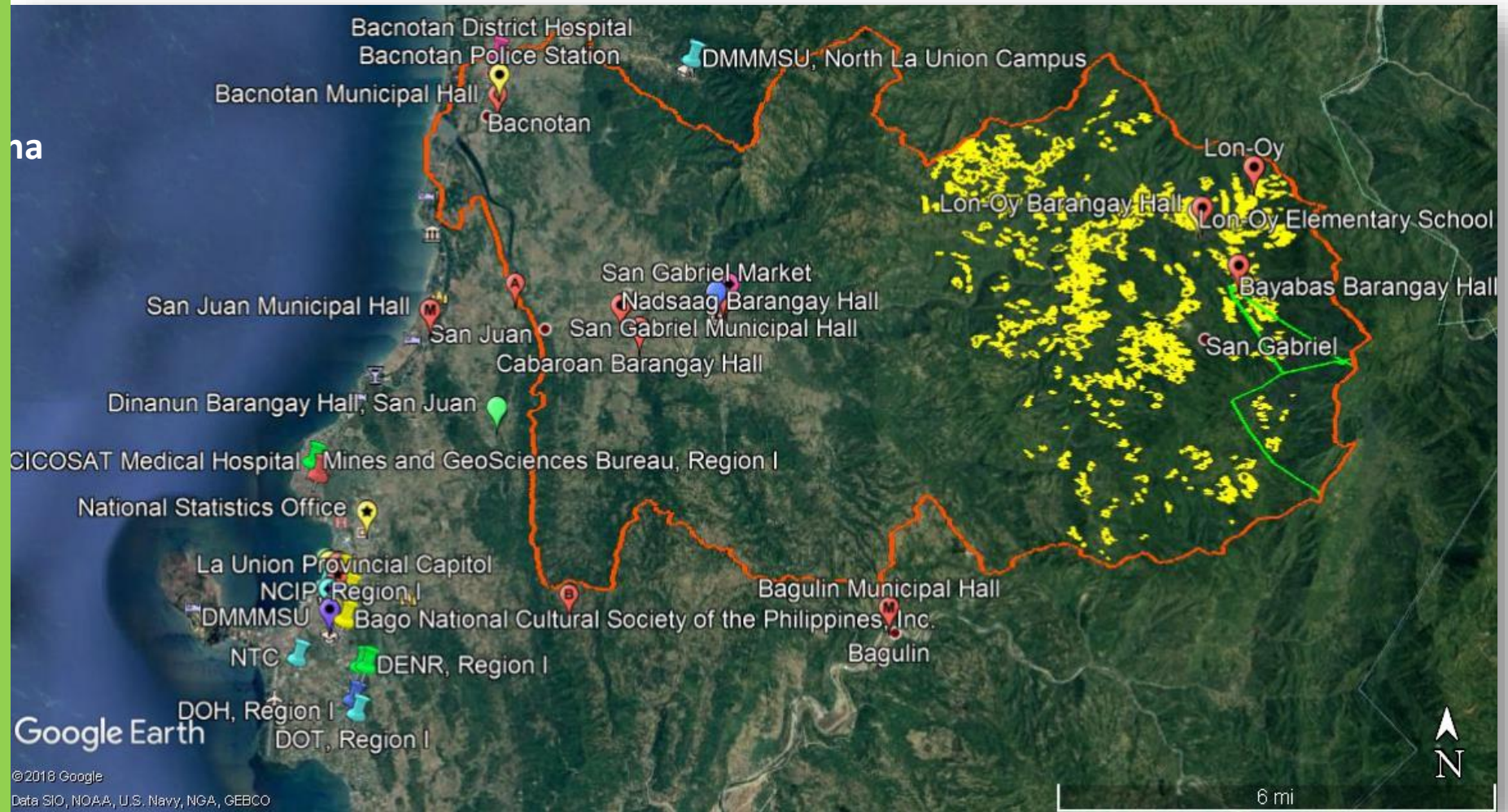
Source: Google Earth Imagery 2018 Data Sio, NOAA, US Navy, NGAm GEBCO

"**Fragmentation is our enemy and a recipe for disaster.**"

Peter Holmgren
Director General
Center for International Forestry Research

Take Home Message

- The complex and interrelated problems confronting the natural resources in Asia require a comprehensive and integrated solution
- Integrating the commons in landscape governance offers opportunities to sustainably manage natural resources and meet the needs of the people who depend on these resources for livelihoods
- Challenges of integration are multiple and context specific
- IASC can play an important role in addressing many of these challenges by providing strong scientific basis to various decision-makers through high-quality research outputs

Thank you very much and warm welcome to all participants!

La Libertad, Negros Oriental, Philippines