

Role of Indigenous Communities in Furthering Climate Action: Some Insights from Southeast Asia

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Key Messages

- ▶ **3R: Respect, Recognize, and Reward** -- Efforts to document, validate and conserve knowledge possessed by indigenous peoples (IP) on climate action
- ▶ **Multiple contributions but marginalized:** IP-based knowledge systems have been marginalized for long, despite multiple contributions related to: Weather forecasting; climate change mitigation - afforestation, reforestation, forest fire management, biodiversity conservation; adaptation - climate resilient species and varieties; innovative practices (e.g., slope stabilization, adaptive water management).
- ▶ **Decision making under uncertainty:** Climate change impacts are uncertain. IP decisions, which are based on established circular feedback systems, are of great benefit to improve decision making.
- ▶ **Need for blending indigenous knowledge with modern technologies:** IP-based knowledge can be integrated with ICT to enable scale up and replication.
- ▶ **Need for targeted financing:** DGM under CIF is a good example, but more is needed.
- ▶ **Need for mainstreaming IP-based climate knowledge in updated Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs)**

Indigenous Communities - Climate Focus

- ▶ ~ 6% of global population, up to 80% of over 370 million indigenous peoples worldwide are spread across Asia and the Pacific; IPs care for and protect 22% of the Earth's surface and 80% of the planet's biodiversity
- ▶ Hold extensive traditional knowledge related to climate actions – carbon sequestration, emission reduction, adaptation
- ▶ Mitigation angle:
 - ▶ Manage 11% of forest lands, and 22% of carbon stored in tropical and subtropical forests
 - ▶ In-depth knowledge on species suitable for afforestation, reforestation, assisted natural regeneration
 - ▶ High awareness on forest fire management approaches (knowledge on forest fire resistant species, fire management techniques)
- ▶ Adaptation angle:
 - ▶ Disproportionately vulnerable to climate change impacts
 - ▶ Resilience come from long, multi-generational interactions, in-depth knowledge, and connection to their land and environment, strong sense of identify, shared tradition
 - ▶ Developed mechanisms for adjusting to stress and improving their adaptive capacity (e.g., traditional weather forecasting, climate resilient germplasm)



Climate Change Mitigation and IPLC - INDONESIA

- ▶ Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities (IPLC) - \$80 million (12 countries, including Indonesia and Nepal)
 - ▶ A special initiative under the CIF FIP to support the full and effective participation of IPLCs in the effort to (i) **Promote sustainable forest management and forest carbon stocks, and (ii) Reduce greenhouse gas emissions from deforestation and forest degradation**
- ▶ Two broad components: (i) Provision of grants to IPLCs to develop and implement sub-projects of their choice. (ii) Capacity building for IPLC organizations.
- ▶ 400 sub-projects; 200,000 beneficiaries in 6 countries, including Indonesia
- ▶ **ADB-led and FIP-Supported Project: Community-focused Investments to Reduce Deforestation and Forest-Degradation (CFI-ADD+)**
- ▶ Location: West Kalimantan, Indonesia
- ▶ Key aspects: Afforestation, Reforestation, Agroforestry, Forest fire management,
- ▶ **Indigenous practices: Shifting fire regimes** from late dry season to the early dry season, it is possible to reduce greenhouse gas emissions from wildfire by as much as half; **Fire-resistant trees** as a buffer; **Soils developed by IP** store 200-300% more organic carbon



Climate Change Adaptation and IPLC - CAMBODIA

- ▶ ADB-led and CIF-PPCR supported Strategic Program for Climate Resilience - \$588 million - Agriculture, water resources, urban and transport
- ▶ Agriculture and Forestry:
 - ▶ Flood and drought tolerant rice varieties (e.g., Sen Pidor) – Trea village, Kagnchom commune in Prey Veng province
 - ▶ Food preservation techniques /Seed and grain storage in times of extreme climate events – Kampong Cham province
 - ▶ Mangrove regeneration techniques – Koh Kong province
 - ▶ Traditional agroforestry systems – Mondulkiri province
- ▶ Water resources management:
 - ▶ Diversified livelihood and water management practices (alternate fish and frog farming, and other diversified aquaculture techniques/fishing methods in the face of varying water levels and declining fish stocks) - Sekong, Sesan and Sre Pok rivers – Stung Teng Province
 - ▶ Rainwater harvesting – Pursat province
 - ▶ Using upland spring water for dry-season farming – Rattanakiri province
 - ▶ Mountain water storage – Mondulkiri province
 - ▶ Water allocation and mediating water conflicts



Climate Change Adaptation and IPLC - CAMBODIA - Transport

- ▶ **Khmer ancient bridge masonry** - Siem Reap province
- ▶ **Macadam base road** - building a well-compacted road using local soil and small stones covered with a hard surface to protect from water and wear. The technique uses a sloped subgrade surface to improve drainage. – Mondulkiri province
- ▶ **Rock slope protection (RSP) for erosion control** - Tatai Bridge, Koh Kong province. The rock slope protects the bridge and bank of the canal from erosion. The RSP for this steep bank acts as i) a gravity wall to protect the slope, and ii) erosion control and protection against storm water.
- ▶ **Seawater protection dykes** in Koh Kong Province



Traditional weather forecasting systems in Cambodia

- ❖ **Climate hazards:** droughts and floods
- ❖ **Indigenous/traditional practice:** Predicting the weather from the behavior of certain animals, characteristics of plants, or looking at the clouds and the sky. Some forecasts are seasonal, while others are daily or weekly.

❖ **Description:**

Ritualistic practices predict onset of wet season, such as at the end of the Royal Ploughing Ceremony

Appearance of white bugs in the soil meant few dry periods during the wet season;
darker bands on the soil meant periods of drought during the growing season

Tamarind trees observed for signs of rain

Dragonflies predict rainfall and the direction from which rain will come

Clouds and sky are used for daily weather forecasts

Red Ants predict likely occurrence of floods

Important to validate such findings



IP Knowledge - Technology blending and Financing

IP Knowledge and Modern Technology Integration

- ▶ Bangladesh - Satkhira district (salinity/coastal) Thakurgaon (drought) Manikganj (floods)
- ▶ Validation of successful IP practices
- ▶ GIS and Remote sensing - used to geo-link successful IP; characterize similar agro-ecosystems
- ▶ Identified potential areas to integrate and scale up IP practices in other ecosystems
- ▶ Opportunities for blending with modern **digital technologies**

Financing IP Knowledge Documentation and Mainstreaming

- ▶ **Empowering IPs to become agents of change** require resources
- ▶ **Mainstreaming in NDCs and NAPs** - Adaptation Committee to UNFCCC recommended integration of IP and traditional knowledge in NAPs in 2015 but progress has been patchy.
- ▶ **Article 7, section 5 of the Paris Agreement**: adaptation action should ...be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of Indigenous Peoples and local knowledge systems
- ▶ **UNFCCC - IP knowledge Database; GEF Small Grants Program;**
- ▶ **CIF - DGM under FIP- \$80 million; PPCR; GCF IP Policy and Financing (e.g., Bhutan)**

Way Forward

- ▶ Incorporating IP knowledge into climate change policies can lead to **effective, cost-efficient, participatory, and sustainable** mitigation and adaptation strategies.
- ▶ Additional efforts to **Respect, Recognize, and Reward** (3R) knowledge possessed by IP on climate action
- ▶ Further research on **validation, replication and scaling up**
- ▶ Need for effective **blending IP knowledge and modern technologies**
- ▶ Need for more **targeted financing** for IP-based climate action
- ▶ Need for **mainstreaming IP-based climate knowledge** in NDCs and NAPs

Thank you.
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