

“Strengthening Synergies between Climate Change and Biodiversity: From Science to Policy to Action”.
Transformative Actions for a Nature-positive Society from SATOYAMA Initiative towards 2030



ISAP 2022

International Forum for Sustainable Asia and the Pacific



Indigenous Community-led Conservation, Restoration and
Governance of Socio-ecological Production Agriscape and
Biodiversity in Arunachal Pradesh, India.
Dr. Dipayan Dey, SAFE, India



SAFE

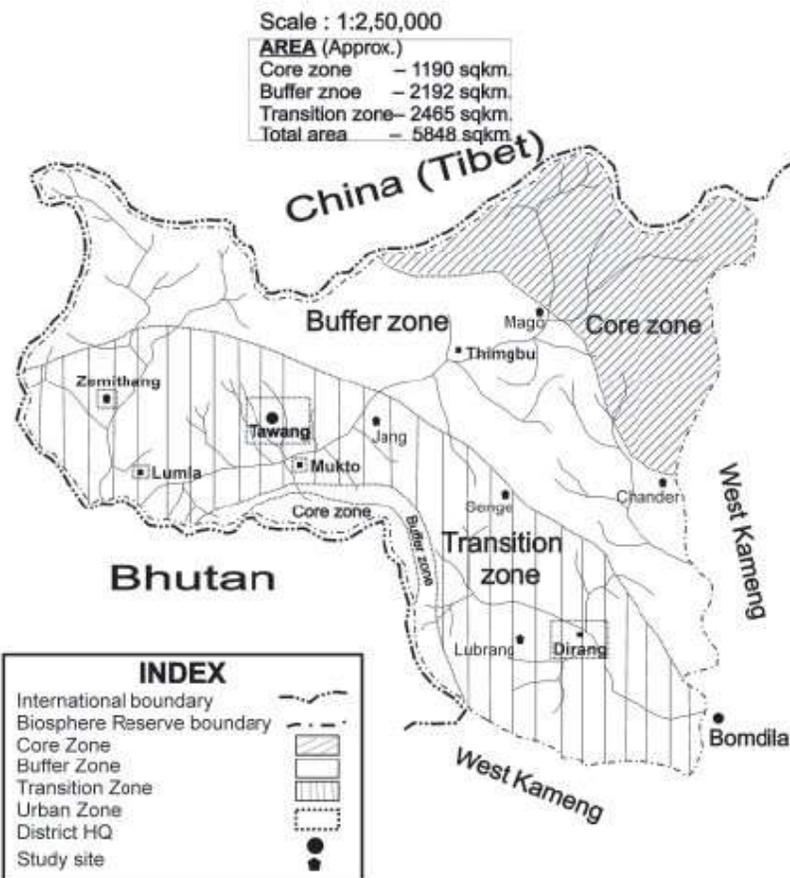
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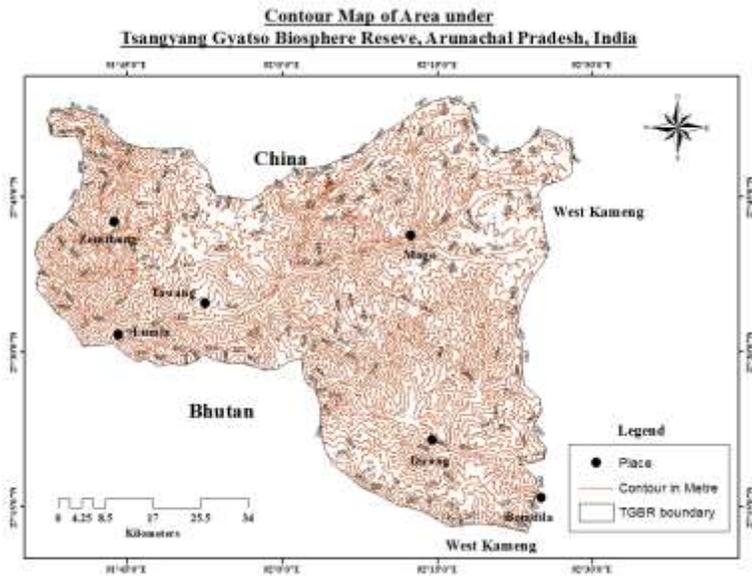
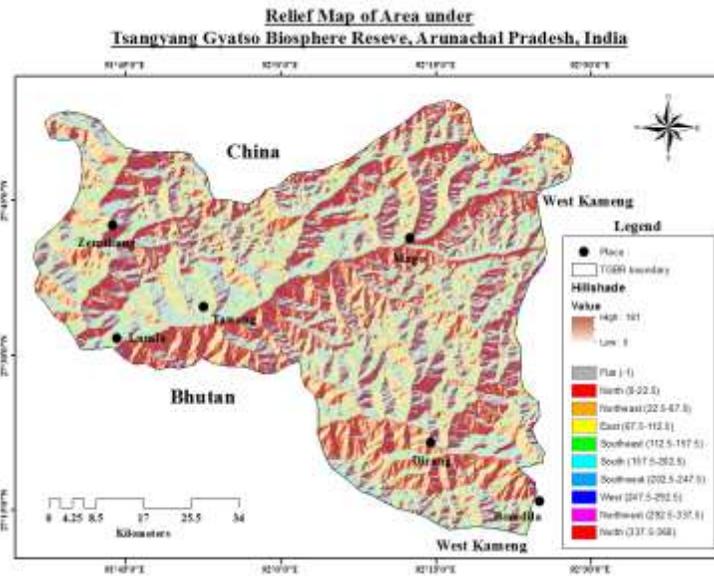
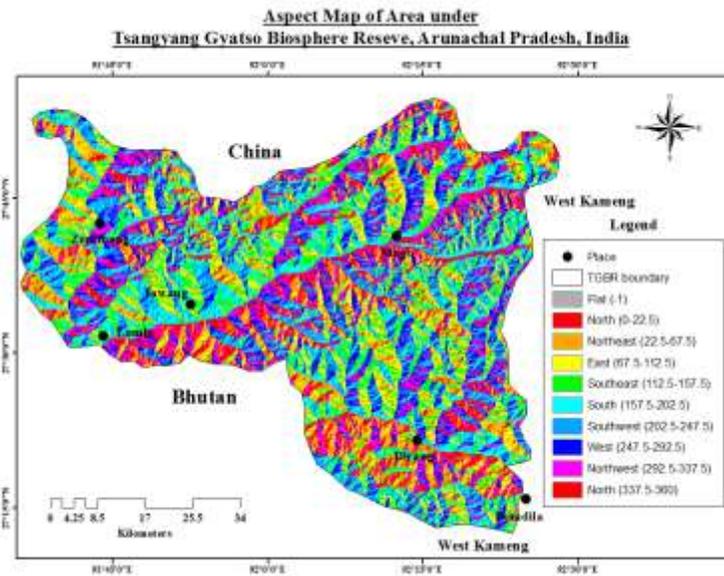
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In Consultative Status with ECOSOC & major stakeholder in UNEA

The Arunachal SEPL



- **Location:** Tsangyang Gyatso Biosphere Reserve (TGBR), & Bugun Community Reserve (BCR), West Kameng Distt, Arunachal, NE India.
- **Area:** 85000 ha, 27° 24'13'83" N, 92° 18'17.07" E, elevation 1870 m
- **Agro-ecology:** Dry Upland Rice, Maize, Millets, Wet Valley Rice
- **Biodiversity:** Endangered Black-necked Crane (*Grus nigricollis*), 09 land races of Japanese rice (*Oryza japonica*). Local agro-biodiversity.



- **Demography:** Inhabited by 12 indigenous community hamlets (mostly Nyishi, Apatani & Mismi), Altogether 270 households. Gender ratio is 489 women/1000, Literacy rate is 43%, 86.5% are below poverty level.
- **Land-use Patterns and Practice:** Subsistence rainfed agriculture (mainly rice, millet and maize) 68% land is forest cover, 22% arable land, rest 10% pastures. Traditional farming practices – climate resilient and adaptive.
- **Economy:** Agrarian economy is dependent on agro-farming, pastoral livestock rearing and ecotourism. Average Per capita income is nearly USD 85 / month.



Author in the SEPL: Sangti Valley



Farmers Thrashing Paddy in Chugh Valley



Black Necked Cranes in the SEPL



Glimpses of Socio-ecology: Sun-drying, Mulching, Farming

Women in Action in the SEPL





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Problem Statement & Project Objectives

- Introduction of 'Free Rice' scheme ensued sharp decline in farming leading to agro-biodiversity loss, introduction of exotic species and gender inequity. LUP-LC thereby changed threatening the pristine habitat.
- Black necked cranes (*Grus nigricollis*) didn't visit the corn fields for winter roosting and adversely impacted local economy, as ecotourism collapsed.
- There has been migration of youth as labourers, job-loss for women and food-livelihood insecurity. Pandemic scenario was worst.

The Objectives:

- 1) Augment local rice production through technology cooperation and capacity building, strengthening local institutions of farmers.**
- 2) Bring back traditional practices as well, like resilient crop-cycle planning, mulching, crop-rotation and integrated adaptive farming.**
- 3) Habitat restoration, water resource management, alternative livelihood.**

Training Sessions with Partners in SEPLs of Arunachal Pradesh





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Community-based Interventions



Climate Resilient Farming

1. Local Millets: No-till, least water organic farming,
2. Nutritional family farming, Storage crops,
3. Water resource management



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Impacts & Outcomes

- 17.5 ha of arable land brought under red-rice farming, along with millet, maize and resilient horticultural crops.
- 150 women farmers mainstreamed as 'Self-help Groups' through financial inclusion for strengthening local institutions.
- Restored habitat in the SEPL of Sangti & Chugh, brought back the cranes in this November. This enabled community tourism.





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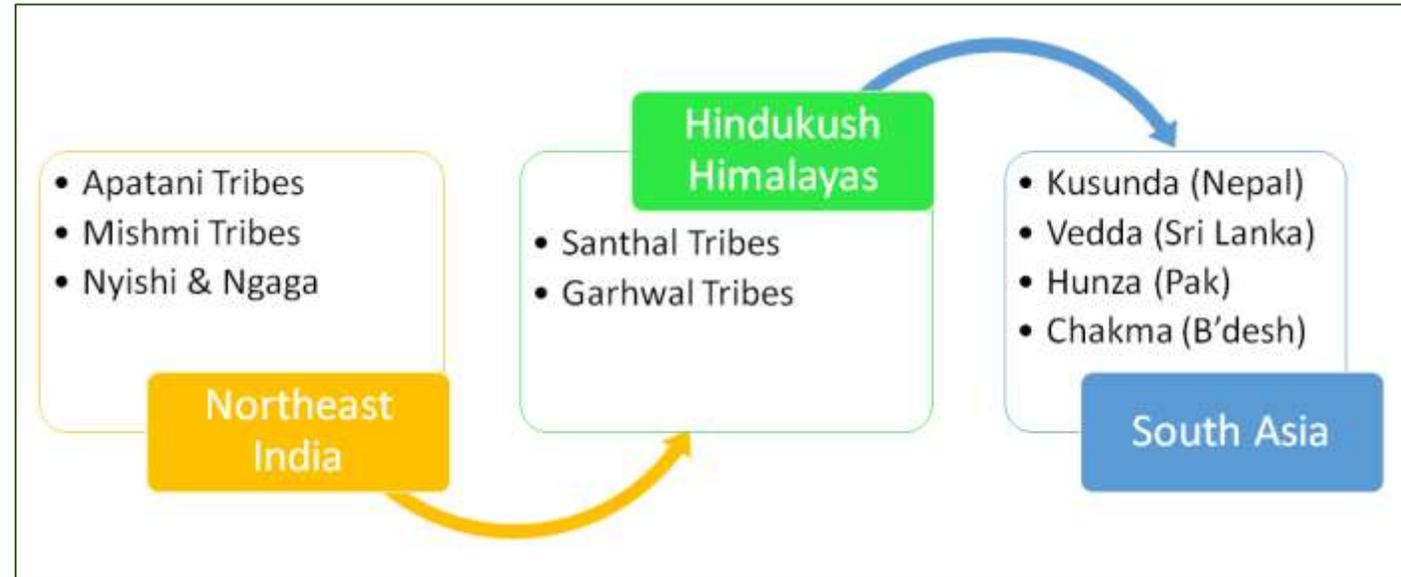
Policy Impacts and Implications



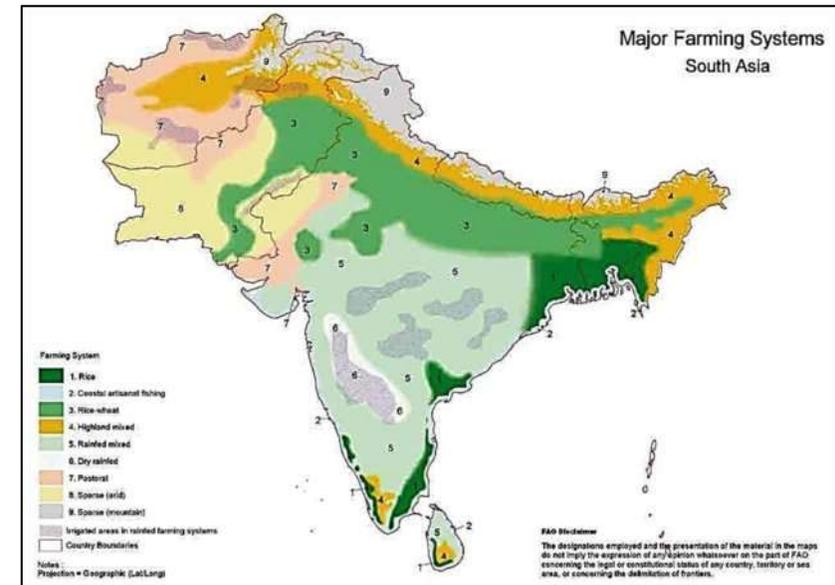
- Regional Policy Stakeholder Meetings in Guwahati, Assam with all representatives from North-eastern States of India acknowledged the SATOYAMA conservation paradigm and price of ecosystem services. The Report is available at <https://neindiabroadcast.com/2022/06/04/south-asian-forum-for-environment-stakeholders-workshop-at-guwahati/>
- The case-study report has been submitted in Planning Commission of Government of India (<http://www.niti.gov.in/>), and published as well in lead platforms like Nairobi Work Program of UNFCCC, Asia Pacific Adaptation Network, Global Development Network (World Bank), COP27 etc.
- It has been widely covered in national print media in India. <https://timesofindia.indiatimes.com/india/why-these-birds-are-skirting-arunachal/articleshow/69077719.cms>



Scale-up Potentials and Future Road-map



- Satoyama model for indigenous agrarian systems can scale-up from local to national to regional level in South Asia targeting the major farming systems.
- This translates to a benefit potential from 12 indigenous communities with a populace of 0.87 million to 683 indigenous communities with 93 million populace.





Buddhists Pray in Chugh Valley for Better Crops



Thank You...