



# Proceedings of the Second state-level stakeholder consultation on TEEBAgriFood Initiative in Assam

Discussion on the scoping and scenario setting results for the TEEBAgriFood application in Assam



18 November, 2023

## Venue

National Institute of Rural Development & Panchayati Raj,  
NE, Regional Centre, Jawahar Nagar, Khanapara, Guwahati

## Proceedings of the second stakeholder consultation on TEEBAgriFood Initiative for Assam under TEEBAgriFood application - NIRDPR-NERC, Guwahati, 18<sup>th</sup> November

The Second stakeholder consultation for the State of Assam under TEEBAgriFood Application under EUPI TEEBAgriFood Initiative in Assam was held on 18<sup>th</sup> November 2023 at the National Institute of Rural Development and Panchayati Raj, North Eastern Regional Centre, Guwahati. The physical mode of consultation was attended by about 23 delegates representing major line departments under the Government of Assam, Technical and Research and selected agencies, organizations working in the field of Agroforestry and organic farming. The details of the participants are given in Annexure: I.

At the outset, Dr. A. Arunachalam, Director, ICAR-CAFRI, extended his warm welcome to all the international, national and state level delegates present during the event. During his brief outline of the works carried out post first stakeholder consultation held in September 2023, invited all to share their observations on the results of the scoping study that were scheduled for presentation during the meeting for the broader benefit of upscaling organic farming and agroforestry in the state of Assam.

Mr. William Speller, Programme Officer, UNEP, Geneva & UNEP India in his opening remarks gave a brief about the TEEB AgriFood initiative in context of its global outreach and Indian experiences during past four years of intensive works in Uttar Pradesh and Uttarakhand and later inclusion of Assam during 2023. He shared his vision of future roadmap beyond the present term coming to closure during current year and stated that despite limitations of time the results of the study on Assam would go a long way in determining the scale of organic farming and agroforestry in addressing unique challenges posed by the climate change.

Dr. Salman Hussain, Coordinator, UNEP-TEEB & Head a. i. – Economics of Nature Unit, Geneva during his keynote address gave a brief about the Economics of Ecosystem and Biodiversity framework and how it aims at promoting a sustainable agriculture and food sector with a noble and needed cause to protect the ecosystem and valuing the hidden services of agriculture. The objective is to protect biodiversity and contribute to more sustainable agriculture and food sector in seven partner countries (Brazil, China, India, Indonesia, Malaysia, Mexico and Thailand). He talked about the immense opportunities, which exists under agroforestry and organic farming in determining the lives of farmers and consumers, in the backdrop of true value realisation. The world is locked into the pathways of conventional production system leading to direct and indirect impacts and how TEEB framework adds to the economic dimensions evolved from the earlier works.

Dr. Salman further stressed the need for preservation of the biodiversity and outlined how the organic farming and agroforestry can help in improvement of the livelihoods in perspective of future scenarios vis-à-vis cost of interventions. He further outlined the scope of the TEEB

Agrifood Framework for next four years aiming at addressing constraints, policy re-orientation and developing methodology and hoped that Assam will contribute to the national pathways in big way.

A brief outline on the experiences of TEEBAgrifood India Initiative in three states was presented by Shri. Reuben Guergan, Program Officer, TEEB AgriFood, UNEP. Smt. Alka Bhargav, Senior Adviser, UNEP India also gave a over all background on the opportunities in the state of Assam and the importance of the scoping study to achieve the sustainable development goals.

Dr. Vijay Kumar Sharma, Project Manager, ICAR-CAFRI briefly presented the results of the scoping study, which was grounded during the month of July, 2023 by roping in various partners involving World Agroforestry, Tocklai Tea Research Institute, Doon University, South Asian Forum for Environment, Assam Agriculture University, ATARI, Guwahati, State Line Departments, other institutions and agencies. The state level analysis has been done using secondary data available from different sources including satellite data. The state with around 78438 Km<sup>2</sup> of geographical area is constitute nearly 36 percent under forest cover followed by 34.84 percent under agriculture. The state portrays variations in spatial distribution of different landuse classes thereby determining the degree of potentials, under the prevailing climate challenges with flood alone affects nearly 23 of 33 districts and 67 percent of population. The study has considered different national and state level policies and programmes (MOVCD-NER, PKVY, NPOP, Watershed Development, DAY-NRLM, MGNREGA etc.) that have direct bearing on agroforestry and organic farming. Besides, establishment of Assam Agroforestry Development Board with its designation as nodal agency for agroforestry under RKVY, State Bamboo and Cane Policy, Tree Outside Forest (Sustainable Management) Rules, 2022, Assam Wood Based Industries (Promotion and Development) Rules, 2022 etc. provide a greater future scope for addressing some of the challenges in upscaling of agroforestry and organic farming.

Dr. Sharma also gave an overview of elements of capitals prioritised for the study through a consultative process during the first stakeholder consultation held in September, 2023 and stated limitations posed by data gap and time for using different modes. For projecting OF and AF under three scenarios viz. BaU, Optimistic and Pessimistic respectively the time series data on APEDA Web Portal has been used for Organic Farming. Further the projections for the agroforestry area have been done using remote sensing data by overlaying layers of floods, forest cover, ToF and Tree Deficit landscape. Around 10 percent of total geographical area has been identified as the potential AF zones under riparian (High Flood Frequency but not permanent water bodies) and restoration (Tree Deficit Located within Wastelands/Highly Degraded Areas). Under RCP 4.5 the state is likely to witness intensity of the precipitation over the years till 2050. This will have more devastating effects on the western part (Lower Brahmaputra Valley Zone, and Barak Valley Zone with some parts of the Central Brahmaputra Valley Zone), which experiences maximum flood events and hence offers a scope for better policy orientation to address the challenges that will be posed by increasing floods. The mean

maximum and mean minimum temperature will also observe some variations at macro level with significant changes at micro level at various locations.

The State will witness increase gross cropped area to organic cultivated area from minimum of 0.97 percent under pessimistic scenario to 4.94 percent under BaU to highest 20 percent under the optimistic scenario by 2050. This will result in corresponding level of increase in the organic farm production as well as soil organic carbon stock from 3 to 37 and 59 million Mg. Ha<sup>-1</sup> under different scenarios. The area under agroforestry will increase from current 0.70 million hectare to projected 0.80 million hectares by 2050 with significant positive impact on the soil carbon stock to 63 million tonnes by the year 2050 under optimistic scenario. Further analysis under RCP 4.5 reveals spatial variations with both positive and negative impacts on agroforestry at various locations. Rice (major food crop), Tea (Commercial Crop) and Bamboo (traditional crop) have been considered for projections under different scenarios with valuation under natural capital.

Past trends in growth of SHGs (under DAY-NRLM) and FPOs in the state have been considered for projecting future scenarios, which shows a significant scope under all scenarios at varied growth rate under societal capital. Scenario planning for agriculture gross value added and agriculture workforce and literacy elements have been taken into considerations for making an assessment under respective category of human capital.

The presentation also outlined some suggestions for policy main streaming, which includes development of TEEB Agrifood Learning Landscape Action Plan, foster targeted investments, enabling convergence, development of skills, development of market clusters in potential areas for upscaling of agroforestry and organic farming, which will result in considerable lead to voluntary carbon market through enabling policy for climate resilience.

The presentation of the results was followed up by panel discussion and inputs from different stakeholder:.

Shri. R. S. Prasad, Additional Chief Secretary (Environment and Forest), Government of Assam appreciated the overall findings of the study carried out by ICAR-CAFRI under TEEB AgriFood Framework for Assam, and outlined the mainstreaming of outlined challenges confronting the state with reference to climate change, desertification/land degradation, biodiversity loss water and air pollution.

He also shared that the cost of action as what we are doing and not doing is going to add to the future implications in terms of cost of adaptation and mitigation, which will cost the state millions of dollars. The results presented under different scenarios the state considers the challenges with reference to the required actions on the ground for upscaling of agroforestry and organic cultivation. In context of the state Shri. Prasad shared that we also suffer lots of data gaps on various aspects particularly soil loss (severity and trends), soil organic carbon and hoped that this study confirms the results under other studies carried out in past.

He further informed that the state has changed lots of rules and regulations in recent past (wood base industries, new regime for tree outside forest and creation of Assam Agroforestry Development Board) and also taken up initiatives for enhancing the forest and tree cover from 36 percent to 38 percent in the coming 10 years. He outlined the proposal of the state government through Amrit Briksha Andolan launched in September, 2023 with the help of Self-Help Group Members, other groups of people and planted around one crore tree saplings and plans to plant nearly three crore saplings in next three years and another five crores subsequently in two years thereafter. He further informed that the state government is also focussing on promoting commercial wood plantation and hoped that many wood based industries, which are part of the state would come back to Assam and generate newer version, which will ultimately contribute to the economic growth, employment and development in the big way.

The government is focussing more on the spirit of self help and doing things by private individuals, farmers with the role of government to create a facilitative mechanism to allow positive things to happen and hoped that different players will take this forward in the years and decades to come and felt to have a positive inclination for a positive change in the years to come.

Dr. Ashis Bhutani, Additional Chief Secretary (Agriculture), Government of Assam in his reactions appreciated the work carried out by ICAR-CAFRI and from the agriculture point of view highlighted that such studies would not only benefit the Gol but also the state government in re-orienting the entire development strategy.

The state, for ages have witnessed the practice of traditional farming as a means of sustainable livelihoods, which has seen a gradual shift in last years due to green revolution and its impact thereafter. He further stated that evidence-based studies and initiatives will certainly help positioning of government entire stand on organic farming/natural farming and agroforestry.

He appreciated the study for having given importance on the existing practices of traditional forms of natural farming, organic farming and agroforestry and hoped that the findings will certainly help in strengthening our resolve in supporting it better. Despite assam by default is organic he informed that practices are changing with more and more application of chemical fertilizer and the recent initiative of the Gol i.e., PM – Pranam aiming at restoration, awareness, nourishment and amelioration of mother earth will help promote the balanced use of chemical and alternative fertilisers, generating awareness of regenerative agriculture.

He further outlined many initiatives being taken by the State Government in right direction by addressing the immediate climate challenges and sustainable ways of agriculture.

He hoped that this study would certainly help us in grounding ideas of upscaling organic farming and agroforestry in the state and address some of the hinderances particularly with regard to the marketing so that initiatives can be sustained.

He also assured that the government will take positive view of the report and inputs for further adoption at appropriate level. Taking the study findings, Dr. Bhutani also called for mainstreaming of an action plan that the Govt. of Assam would consider systematically.

Shri A. K. Saikia, Secretary, Industries and Commerce, Government of Assam shared his vision under state Cane and Bamboo Policy and the initiatives being taken up by the government under National Bamboo Mission. The state with traditional practices under bamboo sector offers a greater industrial scope for bamboo-based industries and expressed hope that recently launched PM Vishwakarma, a Central Sector Scheme will help to provide end-to-end support to artisans and craftspeople who work with their hands and tools. He also applauded the study under TEEBAgriFood -Assam initiative and extended support for providing positive feedbacks once the report is submitted to the state government for considerations.

Dr. Sonali Gosh, Project Director, Kaziranga National Park & the CEO, Assam Agroforestry Development Board outlined the mention of 'bari system' (homestead gardens) in the study and informed how these traditional practices are helping communities in Assam in different ecosystem services.

Dr. A. Babu, Director, Tocklai Tea Research Institute, Jorhat shared his experiences on how social forestry with institutional integration will help in conservation of biodiversity and multipronged benefits to the communities. He also outlined the need for organic tea cultivation and other organic practices that help in increasing the soil carbon.

Dr. Kusum Deka, Principal Scientist & OIC (AICRP-Agroforestry), Assam Agricultural University in his brief shared the importance of 27 lakhs homestead gardens, reported in Assam as a true agro-forestry models, most of which are primarily arecanut based in nature.

Dr. G Kadirvel, Director, ICAR-ATARI shared his views on how clean and green initiative aims to protect and care for the environment by engaging the community in leading an environmentally conscious lifestyle and importance of the valuation of ecosystem services as an effective tool for policy backed initiatives and climatic resilient technologies.

Dr. Diganta Sarma, State Coordinator, ToFI-Assam also mentioned that the State is proactive in promoting agroforestry through various partnerships and has also deregulated as much as 56 tree species for promotion under agroforestry.

Smt. Krishna Sarma, We Care Foundation appreciated the efforts of UNEP TEEB Team and ICAR-CAFRI for their contribution to the sustainable development planning in the state of Assam.

Dr. Sonali Ghosh, CEO, Assam Agroforestry Development Board, Guwahati in her closing remarks applauded the work carried out by ICAR-CAFRI in such a short span of time and extended thanks to all the dignitaries from UNEP, state government and other representatives for attending the consultation and adding value to the scoping study.

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List of Delegates of the Second Stakeholder Consultation on TEEBAgriFood Initiative in Assam held on 18 November, 2023.

Sl. No.	Name	Designation	Address
1.	Mr. Salman Hussain	UNEP	TEEB Coordinator, UNEP, Geneva.
2.	Mr. William Speller	Program officer	UNEP, Geneva
3.	Dr. Alka Bhargava	Senior Policy advisor	UNEP TEEB, Lodhi Estate New Delhi
4.	Mr. Reuben Guergan	Project officer	TEEB Agrifood UNEP New Delhi
5.	Ms. Ria Melhotra	Consultant	UNEP, UN-House New Delhi
6.	Ms. Shivani	Consultant	UNEP, New Delhi
7.	Dr. Ashish Bhutani	Additional Chief Secretary	Agriculture & TRD E-3, Senior officer Colony, Khanapara, Guwahati.
8.	Shri. R. S. Prasad	Additional Chief Secretary.	Environment, Forest & Soil Conservation, Dispur, Guwahati
9.	Shri. A. K. Saikia	Secretary	Industries and Commerce Department, Guwahati.
10.	Dr. Sonali Ghosh	CEO	AADB, Guwahati.
11.	Dr. Kanak Haloi	Retd. Prof. HRD & CMD FISS	FISS, Ghy-28
12.	Adv (Mrs.) Krishna Sharma	Advocate, Faculty J	J. B. Law, College Ghy-28
13.	Dr. Kusum Kumar Deka	Principal Scientist	AAU-IRS, Kahikuchi, Ghy-17
14.	Mr. Amitabh Borthakur	Secretary	We Care Foundation, Ghy-37
15.	Dr. A. Babu	Director	Tocklai Tea Research Institute, TRA, Jorhat.
16.	Dr. Rupanjali D. Baruah	Scientist	TTRI, TRA, Jorhat
17.	Dr. G Kadirvel	Director	ICAR-ATARI, Ghy-17
18.	Dr. A. Arunachalam	Director	CAFRI, Jhansi
19.	Dr. Vijay Kumar Sharma	PM , ICAR-CAFRI	Jhansi
20.	Mr. Diganta Sarma	State Coordinator	TOFI, CIFOR-ICRAF Assam
21.	Mr. Deepu Kumar Deka	Program Assistant	TOFI, CIFOR-ICRAF Assam
22.	Mr. Rauoof	Reporter	Delhi
23.	Mr. Debrup Banerjee	Facility and Logistic Manager	SAFE, Kolkata
Online Participants			
24.	Shri Akash Deep	State Project Director	ARIAS Society, Govt. of Assam
25.	Dr. A.K. Handa	Principal Scientist	ICAR-CAFRI, Jhansi
26.	Mr. Suresh Ramanan S	Scientist	ICAR-CAFRI, Jhansi

## SNAPSHOT OF THE CONSULTATION

