

# TEEB Agrifood Project INDIA PROJECT BRIEF

## Summary of the Project Brief

- ◆ The TEEB AgriFood project is being implemented in India, along with 9 other countries, from 2019 to 2022.
- ◆ The purpose of the project is to inform decision-making of both public and private sector engaged in the agri-food sector about the impacts of their decisions across the value chain of natural, social, human and produced capital.
- ◆ ‘TEEB The India Initiative’ report was released by the Ministry of Environment, Forest and Climate Change in 2011. Building on this foundation, this TEEB Agrifood project will apply the TEEB evaluation framework, for the first time to an entire value chain of a sector, the Agrifood sector in India.
- ◆ This document is intended to inform stakeholders engaged in area of economics of biodiversity and ecosystem services about the scope, progress and next steps for implementation of the TEEB Agrifood project in India.

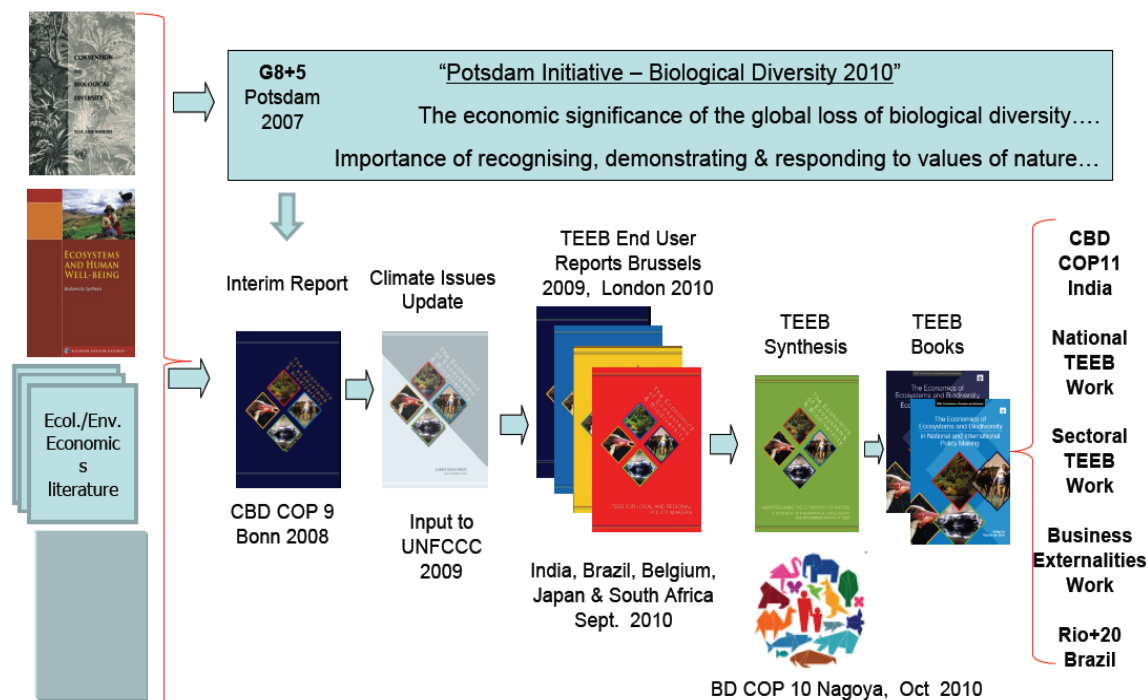
## What is TEEB ?

- TEEB, The Economics of Ecosystems and Biodiversity is a global initiative that seeks to recognize, demonstrate and capture the values of ecosystems and biodiversity in both monetary and non-monetary terms<sup>1</sup>.
- It was launched as a **biodiversity-equivalent to the Stern Review of Climate Change**, which was led by Nicholas Stern, then Head of the UK Government Economic Service.
- TEEB has provided inputs to both international and national policy work. See figure below, TEEB initiative - 2008 to 2012.

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<sup>1</sup> [www.teebweb.org](http://www.teebweb.org)

## TEEB initiative – 2008 to 2012

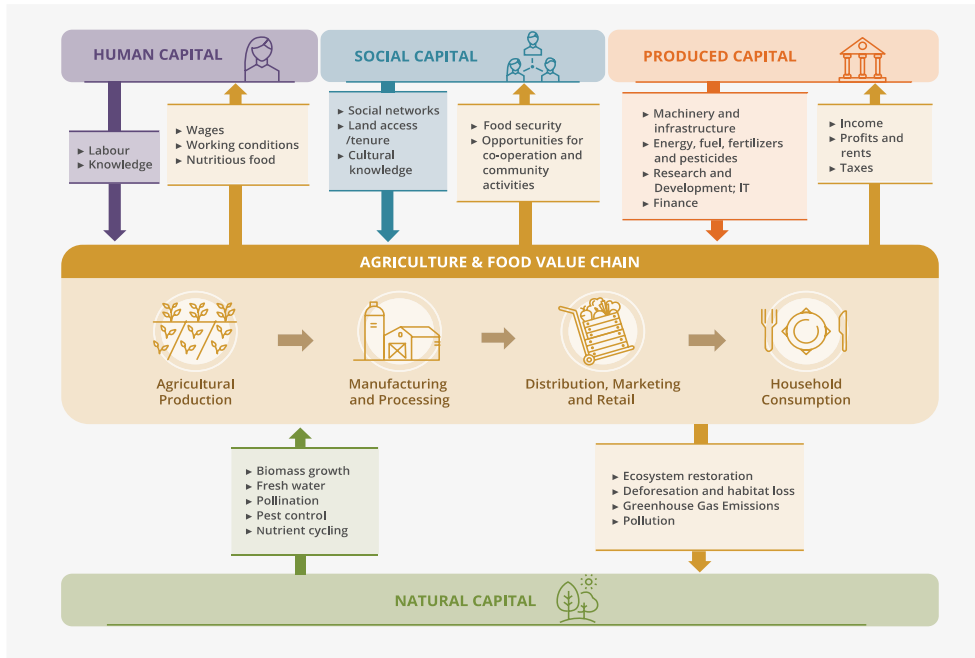


## What is TEEB Agrifood project and why is it important?

- Agriculture and food **policies are often evaluated in silos** using narrow lens such as 'productivity per hectare' to measure success. This partial assessment leads to an imperfect understanding of the inter linkages and impacts of agriculture and food systems on environmental and human health.
- **'Eco-agri-food'** systems is a collective term encompassing the vast and interacting **complex of ecosystems**, agricultural lands, pastures, farmer livelihoods, infrastructure, technology, policies, culture, and institutions that are variously involved in growing, processing, distributing, and consuming food.
- It is important to examine the **components of this eco-agri-food system** such as role of social, human, produced and natural capital. See figure below, capital Stocks and value flows in eco-agri-food systems.
- It is also important to examine, the negative and positive impacts of agriculture and food sector. Some of these are often **economically invisible impacts**, hence **unaccounted for in public and private decision-making**, for instance, while agriculture provides positive benefits such as food for humans, feed for animals, fibre for artisanal and industrial production, raw material for fuel etc, it also is a leading

driver of ecosystem degradation, biodiversity loss, health externalities, and GHG emissions.

### Capital Stocks and value flows in eco-agri-food systems



(Source: Hussein and Vause, 2018)

- The United Nations Environment Program is leading **The Economics of Ecosystems and Biodiversity for Agriculture and Food (TEEB Agrifood)**, which has developed a **TEEB Agrifood evaluation framework** to capture positive and negative impacts and externalities across the entire agri-food value chain as well as assess its impacts on human, social, produced and natural capital.
- Through TEEB Agrifood, for the first time, the methodological framework developed by TEEB will be applied to a sector across its entire value chain. The methodological framework was published in the form of foundation reports.

### TEEB Agrifood Foundations Reports



- The robustness of the evaluation framework was tested through **six explanatory feeder studies for six ecosystems**, agroforestry, inland fishery, livestock, maize, palm oil and rice, covering several countries. For example, for Ghana and Ethiopia different policy options for REDD+ were compared such as agroforestry viz maize monoculture and increase in canopy cover; for Philippines, Cambodia, Senegal, Costa Rica and California, USA, different farm management practises were assessed including options to reach synergies, and reduce trade-offs in terms of water consumption, GHG emissions and costs to farmers<sup>2</sup>.
- In general, each TEEB Agrifood case study asks **what the costs / benefits of scenarios of policy inaction are compared to the costs/ benefits of scenarios of policy action** for conserving biodiversity and ecosystems.
- With the success of these exploratory feeder studies, TEEB Agrifood Initiative is currently operational in **ten countries** under **two funding arrangements**<sup>3</sup>.

### What is the EUPI TEEB Agrifood Project?

- The **EUPI TEEB Agri food project** is an 8.5 million euro project funded by the EU Partnership Instrument.
- The main goal of the project is to **stimulate conservation of biodiversity and natural capital**. Since natural capital is fundamentally interlinked to human capital, social capital and produced capital, all these forms of capital are assessed together. The project thus considers the impact of prospective policy decisions on not just the stock and flow of natural capital but also their impact on human capital such as health or wage implications, on social capital such as land tenures and on produced capital such as agricultural technology and machinery. This helps policy makers understand explicitly trade-offs, which are usually implicit.
- The project is being implemented in **Brazil, China, India, Indonesia, Malaysia, Mexico, and Thailand**.
- The focus on these countries is justified owing to (i) the abundance of biodiversity in these countries, (ii) the cumulative pressures (e.g. agricultural encroachment onto native forests) that affect changes in

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<sup>2</sup> For details on the explanatory studies. See <http://teebweb.org/agrifood/home/exploratory-studies/>

<sup>3</sup> Under IKI funding of Germany, it is being implemented in 4 countries, Columbia, Thailand, Kenya and Tanzania. Under EU funding, it is being implemented in 7 countries, Brazil, China, Malaysia, Mexico, Thailand, Indonesia.

both their extent and condition, and (iii) the local-level and global-level dependence on the ecosystem services provided by these ecosystems.

- The project is being managed by the UNEP TEEB Office and runs from **January 2019 to December 2022<sup>4</sup>**.

### How is EUPI TEEB Agrifood Project implemented internationally?

- The project brings **stakeholders together** to identify agricultural land use decisions that would benefit from application of **TEEBAgriFood evaluation framework**.
- Stakeholders from the government drive the selection of study for the TEEB, by **identifying and refining a pilot study** to be selected at the state/ regional level. This is done by first selecting a ministry that acts as a focal point of the country government to facilitate the process. A **National Steering Committee** chaired by the focal ministry helps in the alignment of the TEEB study to policy priorities.
- The pilot study assesses the **impacts of land use changes and subsequent changes in ecosystem provisioning services, human and social capital, quantifies these under alternative scenarios**, giving policy recommendations to help in decision making of policy makers.
- The seven EUPI funded countries are at **various stages of country implementation** of this project. In some countries, pilot studies have already been shortlisted and are under implementation. For instance, in Brazil, sustainable management practices<sup>5</sup> that can be applied to increase the value-added of export-oriented agriculture are being considered; in Thailand, the trade-offs in ecosystem services between conventional and organic rice production practices are being studied.
- The **pilot studies** are providing **valuable inputs to national governments**. In Indonesia, the TEEB interim assessment report provided scientific evidence for yield improvements and livelihood impacts of cocoa agroforestry systems. The results have been used to support the **inclusion of agroforestry goals in the preparation of the Indonesia's five-year National Medium-Term Development Plan<sup>6</sup>**.
- Although these country pilot case studies focus on a particular region/state or a crop, the board objective of the project is to **mainstream and integrate natural capital and its valuation into national decision making**.

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<sup>4</sup> The project is led by Dr. Salman Hussain who is Chief of the Ecosystem Services Economics Unit and TEEB Coordinator. The project is implemented by the TEEB Office which includes national consultants in some of the seven countries in scope.

<sup>5</sup> Practises such as integrated crop, livestock/forest systems or organic sugar cane production.

<sup>6</sup> The report was submitted to the Ministry of National Planning (BAPPENAS) in Indonesia.

- Along with involving the public sector, **the project in parallel also involves private sector players**. This workstream is being managed by the Natural Capital Coalition in collaboration with the local business federations/ organizations in each of the seven countries <sup>7</sup>

### Why is the TEEB Agrifood Project important for India?

- India is not new to studies of TEEB. After the launch of the international TEEB report in 2008, a report '**The Economics of Ecosystems and Biodiversity – The India initiative (TII)**' was released by the Ministry of Environment and Forests, Government of India and the report released in 2015. The report through **14 case studies for three ecosystems**, forests, inland wetlands, coastal and marine ecosystems, tried to demonstrate practical approaches for applying ecosystem services economics to improve conservation planning and policy making<sup>8</sup>.
- TEEB Agrifood project for India, **provides the opportunity to contribute to mainstreaming biodiversity in food systems**. It will help to assess this sector in a holistic manner by examining the impacts of policy changes on human, social, natural produced capital. The policy recommendations from the study will be based on the internationally accepted TEEB Agrifood evaluation framework, being implemented in 10 countries.
- Farmer's income is a top priority for the Government of India. The Prime Minister of India announced the goal of **doubling farmers income** by 2022. A committee on doubling farmers' income was constituted in 2016 under the Ministry of Agriculture and Farmers Welfare and a fourteen volume report was documented. The TEEB Agrifood project also considers farmer's income and livelihoods integral to its ecosystem services evaluation framework, hence the study results could feed into the learnings required to meet this goal.
- The **National Green India Mission** of the Ministry of Environment Forest and Climate Change saw a significant increase in funding between 2018-19 and 2020-21. The subcomponents of the Green India Mission linked to agroforestry, degraded lands, improving and ecosystems services can directly benefit from the results the TEEB Agrifood project as it provides an integrated framework to assess ecosystems services and agriculture together.

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<sup>7</sup> Eight country webinars were conducted in April and May 2020 across these countries with the aim to inform interested organizations about the project.

<sup>8</sup> MoEFCC & GIZ. 2014. The Economics of Ecosystems and Biodiversity TEEB India Initiative: Interim Report - Working Document.

- The **National Project on Organic Farming** of Ministry of Agriculture and Farmers Welfare (MoAFW) saw a significant jump in allocation between 2018-19 and 2020-21, highlighting the importance given to organic farming<sup>9</sup>. In addition, there is also the Paramparagat Krishi Vikas Yojana which was launched in 2015 to promote organic farming among small and marginal farmers and has in the last four years covered 7 lakh hectares and 8 lakh farmers<sup>10</sup>. The Finance Minister of India in the 2020 budget speech also underlined the importance of exploring organic farming. The TEEBAgrifood evaluation framework is currently actively being used in some project countries to test scenarios of moving towards organic farming and its impacts on yield and farmer livelihoods. Such analysis can be beneficial in evaluating the scope of scaling up of natural farming in India.
- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** is a major the inter-ministerial scheme of Government of India, accounting for a major share in the budgets of the Ministry of Agriculture and Farmers Welfare, Ministry of Jal Shakti and Ministry of Rural Development. The TEEB study results can provide a platform to assess different components of the scheme, such as Per Drop More Crop, water shed management, Har Khet Ko Pani (water to every field), using scenario analysis methods.
- In addition to providing inputs to the above-mentioned policy priorities of the government, there is great scope for **synergizing the outcomes of the TEEBAgrifood project with ongoing approved projects of Global Environment Facility** in India. For instance, a project recently approved in cycle 7 of GEF, 'Transforming agricultural systems and strengthening local economies in high biodiversity areas of India through sustainable landscape management and public-private finance', with 6 million USD of GEF project financing and 70 million USD project co-financing form Government of India and expected to run for a period of 60 months.

### What has been the progress so far of the TEEB Agrifood Project in India?

- UNEP TEEB office has organized meetings with representatives from Ministry of Agriculture and Farmers Welfare (MoAFW) and Ministry of Environment, Forest and Climate Change. (MoEFCC) to introduce the project objectives.

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<sup>9</sup> The project witnessed an increase from 2 crore (20 million INR) to 125 million INR (12.5 crore INR) between 2018-19 and 2020-21.

<sup>10</sup> <https://pib.gov.in/PressReleasePage.aspx?PRID=1628285>



- On recommendation of the MoAFW, TEEB office will collaborate with the Indian Council for Agricultural Research (ICAR) to host stakeholder engagements, Inception Workshop and National Steering Committee meeting.
- The **first Inception Workshop scheduled to be held on 12th March 2020** was postponed due to COVID 19 related travel restrictions<sup>11</sup>.

### What is the way forward for India?

- Background documents for policy mapping in the Agrifood sector and for assessing important policy options are currently under preparation to feed into the decision making process for selecting the pilot study.
- **In the next step, the EUPI TEEB Agrifood India project will try to identify a policy question which will merit the application of the TEEBAgriFood evaluation framework** and will be relevant for policy makers to fill gaps in science so as facilitate evidence based decision making.
- The **pilot TEEB Agrifood study will be carried out by a policy research institution (or consortium of institutions).**
- The TEEB office, the government focal point and the selected institution(s) will work closely to make the study relevant to decision makers for conserving biodiversity and ecosystems.

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<sup>11</sup> Under the private sector component, the Capitals Coalition held two webinars, one on 29<sup>th</sup> April 2020 in collaboration with the C4RB (Centre for Responsible Business) and the other on 13<sup>th</sup> May in collaboration with WBCSD (World Business Council for Sustainable Development).