

Report of the TEEBAgriFood High-level Closing Forum

10 October 2023, Beijing, China



Background

In the context of the successful adoption of the Kunming-Montreal Global Biodiversity Framework (KMGBF) and the countries updating their respective National Biodiversity Strategies and Action Plans (NBSAPs), the TEEBAgriFood high-level closing forum aims to uptake the importance of applying systems thinking to understand the true cost and benefit for sustainable decision making in agriculture and food systems.

The forum is the national closing event for "The Economics of Ecosystems and Biodiversity: Promoting a Sustainable Agriculture and Food Sector (TEEBAgriFood)" project, which is funded by the EU Partnership Instrument (EUPI) and implemented globally by the United Nations Environment Programme (UNEP). The objective of the TEEBAgriFood project is to promote sustainable agricultural transformation and biodiversity conservation in 7 countries (Brazil, China, India, Indonesia, Malaysia, Mexico and Thailand) through nature and social-based economic assessments. The project's work in China is jointly implemented by the Chinese Ministry of Ecology and Environment and the Chinese Academy of Sciences.

The forum is co-hosted by the Institute of Geographic Science and Natural Resources Research (IGSNRR), the Chinese Research Academy of Environmental Sciences (CRAES), the United Nations Environment Programme the Economics of Ecosystem and Biodiversity Office (UNEP TEEB Office), and the United Nations Environment Programme-International Ecosystem Management Partnership (UNEP-IEMP). Based on the key findings of the two pilot assessments of the TEEBAgriFood project in China, the forum focuses on its communication around mainstreaming biodiversity, multiple targets of agri-food systems transformation, and enabling transformative change in the

context of the implementation of the KMGBF.

It is comprised of three parts – a welcome and setting the stage session, a project outcomes session, and panel discussions.

Part 1: Welcome and setting the stage.

At the welcoming session, 4 speakers made welcoming remarks on behalf of the event organizers, followed by two presentations setting the stage, one focusing on the implementation of KMGBF in China and another regarding mainstreaming biodiversity in the international context. The TEEBAgriFood China video was also released during the session. The session was moderated by **Mr. WANG Shenglin**, Deputy Director-General of IGSNRR, CAS.

Mr. Ning Liu, Deputy Director-General, Department of Nature and Ecology Conservation, Ministry of Ecology and Environment (MEE) of China, indicated in his opening remark that the agri-food system is an important element for the construction of an ecological civilization, and promoting the transformation of the agri-food system into a more sustainable, efficient, resilient and inclusive system is the key to addressing the many challenges and achieving the goals of China's new stage of development. Mr. Liu introduced that China is actively promoting the implementation of the KMGBF, for example, China's National Biodiversity Strategy and Action Plan (2023-2030) was approved in principle in September 2023 and will be publicly released before CBD COP16, and the *Implementation Plan for Major Projects on Biodiversity Conservation* is under preparation. He said he is happy to see the TEEBAgriFood project reach milestones, and it is a vivid exploration to promote the implementation of the relevant objectives of the KMGBF in China.

Mr. Laurent Bardon, Head of Green Transition Section & First Counsellor for Environment and Climate Change, EU Delegation to China, highly praised the results of the TEEBAgriFood. He pointed out that the project promotes the integration of the value of nature into the relevant decisions of the agricultural food systems and made a positive contribution to Goal 10 (sustainable management of agriculture, aquaculture, fisheries and forestry) and Goal 14 (mainstreaming of biodiversity) of the KMGBF; it also effectively promoted synergies in the achievements of SDG 2 (zero hunger) and SDG 15 (life on land). Mr. Bardon emphasized that the sustainable transformation of the global agri-food systems is related to the achievements of the SDGs, the Paris Climate Agreement and the KMGBF, which requires the joint efforts of all parties, including the EU.

Mr. Yan Zhuang, Head of International Cooperation Programs, Chinese Academy of Sciences (CAS) highlighted the important role CAS is playing in promoting science-policy interface in China. He said the TEEBAgriFood project's implementation in China has well supported and promoted the mainstreaming of nature values in the

agricultural sector, which was achieved through cooperation between the UNEP, the Ministry of Ecology and Environment of China and the Chinese Academy of Sciences, with guidance from experts from the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources – a good exploration and example of cross-sectoral cooperation.

UNEP TEEB coordinator **Mr. Salman Hussain** started his speech by introducing the wide UN context of the TEEB, explaining the core hypothesis on externalities and the importance of accounting for economic return instead of financial return as the former includes environmental, social, and human implications that changes wellbeing and welfare. He stressed the significance of using systems thinking (such as what the TEEB does) to support sustainable decision-making in the agriculture and food sector given its role in driving the change in ecosystems and biodiversity globally. At the end of his remark, Mr. Hussain mentioned the UN Food Systems Summit and FAO's flagship report on the State of Food and Agriculture (SOFA) which both advocate True Cost Accounting.

In his presentation *A Whole-of-Government and Whole-of-Society Approach to Promote the Achievement of the KMGBF Goals*, **Mr. Zhanjun Quan**, Director of Institute of Ecology, CRAES introduced the KMGBF with emphasis on targets related to agriculture. In terms of how to facilitate the implementation of the Framework in China, Mr. Quan highlighted the highest political will and commitment to advancing biodiversity governance. A systematic framework for a whole-of-government and whole-of-society approach in China was introduced which includes legal, regulatory, administrative and financial means that are used to strengthen the guiding role of governments at all levels, as well as the role of the business, social organizations and local communities play in China's biodiversity governance.

UNEP Programme Manager **Mr. William Speller** began his presentation with the quotes from United Nations Secretary-General and UNEP Executive Director, highlighting the centrality of food systems for all of the SDGs and the importance of science and evidence-based decision-making. He introduced the TEEBAgriFood framework which considers the impacts in terms of four capitals: produced capital, human capital, social capital and natural capital – and looks at impacts across the entire value chain, and emphasized that the purpose of applying the TEEBAgriFood framework is to change decision making by promoting alternative metrics, conversations, and incentives. TEEBAgriFood's application in Thailand, India and Brazil were mentioned as examples with significant policy relevance.

Part 2: Project outcomes.

In this session, the TEEBAgriFood China project's outcomes were presented, followed by two invited comments from experts from the Ministry of Agricultural and Rural Affairs (MARA) and the Ministry of Natural Resources (MNR). **Ms. Qian Wang** from

UNEP China Office moderated the session.

UNEP-IEMP research fellow **Mr. Mingxing Sun** presented the TEEBAgriFood China's pilot assessments in Tengchong City, one of the national "Green is Gold" innovation practice bases in China with an excellent ecological environment and a growing agriculture sector. Scenario setting, methodology and data, and key findings of the Tengchong study were introduced. In terms of policy implications, he indicated five: 1) Leveraging systems thinking for sustainable agriculture and China's Green to Gold transformation, 2) Balance conservation and development using a multistakeholder approach, 3) Use multi-pronged measures to control agriculture non-point source pollution, 4) Strengthen agricultural GHG emissions management to promote synergies of biodiversity conservation and climate change mitigation, and 5) Unlock and nurture the potential of women in agri-food systems transformation.

UNEP-IEMP research fellow **Mr. Li Li** presented the TEEBAgriFood China's pilot assessments in Heilongjiang Province, a key province for China's grain production and the implementation of the national soybean expansion policy. Scenario setting, methodology and data, and key findings of the Heilongjiang study were introduced. In terms of policy implications, he indicated three: 1) difficulty in balancing costs and benefits, and a large gap between economic costs and environmental benefits, 2) expansion of soybean planting needs to be tailored to local conditions, 3) the need to understand the value of food system resilience.

Mr. Quanhui Wang, lead expert in energy & ecology, rural energy and environment agency, Ministry of Agriculture and Rural Affairs (MARA) of China, and **Mr. Junsheng Li**, Professor, Natural Resources Survey Center, Ministry of Natural Resources (MNR) of China provided review comments to the two pilot assessments. Highlights of their comments are:

- The selection of project demonstration sites is highly representative, encompassing two very typical agricultural systems in China: one in the south and one in the north. Tengchong is one of the biodiversity hotspots both in China and globally, with multifunctional landscape ecosystems including forests, rivers, wetlands, farmlands, and grasslands supporting complex agricultural systems. Environmental challenges such as non-point source pollution, biodiversity conservation, and GHG emission reduction are common throughout our country.
- Heilongjiang is China's most crucial area for commercial grain production, yielding 11-12% of the nation's grain and 47-48% of its soybeans, making the restructuring of its planting systems vitally important for national food security and the ecological restoration of its black soil.
- The findings from the TEEBAgriFood studies in Tengchong and Heilongjiang have significant implications for advancing ecologically and climate-smart agriculture and for the rational optimization of planting structures.
- Additionally, Tengchong serves as a national practice and innovation base for the

“Green is Gold” concept. Since 2017, the Ministry of Ecology and Environment of China has annually recognized a number of bases that leverage ecological resources to foster ecological economics and promote green development, with the goal of exploring typical practices and experiences. There are 219 such bases across the nation. The application of the TEEB approach within Tengchong’s agri-food system will lay a solid foundation for the country's further promotion and implementation of the “Green is Gold” concept.

Ms. Ellie Xiang, Deputy Director of International Cooperation, GoldenBee and Representative of Capitals China Hub, introduced the achievements under the TEEBAgriFood China project’s private element. She briefly introduced the GoldenBee and its work on ESG-oriented consulting and training. Experiences in promoting the capitals thinking in China and the operational guidelines of applying the TEEBAgriFood framework in business were introduced. At the end of her presentation, a business case study of conducting capitals accounting in China Shengmu was presented.

In the Q&A session, the prospects for the application of the TEEBAgriFood evaluation framework in China were discussed. From the demand side, the Chinese government has a need for systems thinking and the TEEB approach to support decision-making, while from the supply side, the application of such an evaluation framework needs multi-disciplinary expertise, and capacity development will help accelerate this process. The GEP accounting that is now being piloted in China was mentioned as an example of linking the approach with policy. Integrating the approach into university courses is also mentioned as a useful way to foster applications.

Part 3: Panel discussion.

Panel 1. Food security, GHG emission reduction and ecosystem health

Moderator: **Ms. Mengheng Zhang**, Research Director, International Cooperation Centre, CRAES

Panellists:

- **Mr. Quanhui Wang**, lead expert in energy & ecology, rural energy and environment agency, MARA
- **Mr. Junsheng Li**, Professor, Natural Resources Survey Center, MNR
- **Ms. Chao Zhang**, Professor, Beijing Normal University
- **Ms. Qian Zhang**, Professor, China Agricultural University
- **Mr. Jun Yang**, Professor, University of International Business and Economics

Key messages:

1. The IPBES report reveals that agricultural land expansion is one of the main drivers

of biodiversity and ecosystem habitat loss. From a climate change perspective, agriculture is both a source of greenhouse gas emissions and a carbon sink. Food security is of great significance for social development and stability and for global peace. Therefore, this complex system needs to be viewed in a multi-level and multi-dimensional way from both scientific and management perspectives, and its future development should require multi-path solutions.

2. Ecological and environmental sustainability combined with agricultural industrial development should be the pathway forward. Such an approach may include various operational models according to local circumstances, such as conservation and utilization of endemic varieties, development of a landscape-level stabilized ecological-friendly and low-carbon agricultural model, and the development of an energy-efficient new rural energy system that includes renewable energy and microgrid energy storage.
3. The approach that we use to seize the last critical time window to reverse biodiversity loss and restore ecosystems would be very key. The approach that aims to integrate the value of biodiversity and ecosystem services into society development and people's livelihoods, such as the SEEA and TEEBAgriFood, will be very useful and helpful.
4. Biodiversity has been a very important contributor (along with land and water) to food production and security (e.g., mud worm's contribution to global food production is estimated to be 6.45%). Good management such as nutrient management will also contribute to efficiency.
5. Agriculture and food systems have multiple aspects, roles and provisions. It also engages multiple stakeholders. A conceptual framework for agrifood systems called PRIDE is introduced which stands for productivity, resilience, inclusiveness, diversity, and sustainability.
6. Technical transfer from developed countries to developing countries and capacity development will improve efficiency in food production globally. But policies need to consider externalities which need to change step by step. In addition, how to balance local interests and the global goal is challenging. Green value chain may be an option.

Panel 2. Enabling transformative change for enhancing the resilience of agri-food systems

Moderator: **Ms. Jialin He**, Program Officer, UNEP-IEMP

Panellists:

- **Mr. Lei Li**, Deputy Mayor of Tengchong City, Yunnan Province
- **Ms. Wenhui Liu**, Senior Engineer, Chinese Research Academy of Environmental Sciences, MEE
- **Mr. Feng Wu**, Professor, Institute of Geographic Sciences and Natural Resources Research, CAS
- **Ms. Yijiajia Liu**, CEO, Yunnan Astral Investment Co.

- **Ms. Ellie Xiang**, Deputy Director of International Cooperation, GoldenBee and Representative of Capitals China Hub

Key messages:

1. Agriculture development in Tengchong faces several challenges: 1) insufficient integration of primary, secondary, and tertiary industries, leading to inadequate driving force for agricultural industrialization and scale development. 2) incomplete benefit linkage mechanism and weak industry chain, 3) weak science and technology capacity in agricultural enterprises. The application of the TEEBAgriFood framework in Tengchong provided useful information for local agricultural planning as well as relevant decision-making, orienting towards a balanced biodiversity and climate-friendly and industrial development path.
2. The application of the TEEBAgriFood approach in China showed a process of awareness-raising, demonstration, and policy integration. How to continue using the TEEB approach especially to support China's implementation of KMGBF and NBSAP will be worth considering. One entry point could be contributing to the development of Other Area-based Effective Conservation Methods (OECMs).
3. The goal of agricultural transformation is to improve its sustainability. Increasing food diversity, improving agricultural ecosystem services, improving household livelihoods, and increasing awareness of ecological resource protection in customers have been mentioned as possible means of moving forward.
4. Challenges for businesses to apply the TEEB approach and capitals thinking include lack of awareness, lack of standards, and language use. Five elements to promote transformation in business are government guidance, industry leadership, enterprise practices, social participation, and international cooperation.
5. TEEBAgriFood's application in Yunnan Astral was introduced as an example of the use of the approach in businesses.

Closing

Ms. Linxiu Zhang, Director, UNEP-IEMP

Ms. Zhang expressed her gratitude to the EU delegation to China and the UNEP TEEB Office for the support and funding of the project, to the MEE China and CAS for their guidance, and to the technical institutions engaged in the TEEBAgriFood project. She indicated that the project is of great significance to eco-environmental protection and biodiversity conservation in the agri-food system, highlighting the merit of applying systems thinking to balance multiple costs and benefits of conservation and development, including pollution reduction and women empowerment.

For more information, please refer to:

Xinhua Finance (11 October 2023): *The Economics of Ecosystems and Biodiversity (TEEB): Promoting a Sustainable Agriculture and Food Sector (China): High-level*

Closing Forum Successfully Held.

<https://bm.cnfic.com.cn/sharing/share/articleDetail/173338398/1>

China Environmental News (12 October 2023): *What can agri-food systems do for biodiversity conservation? Find out at this high-level forum!*

<https://res.cenews.com.cn/h5/news.html?id=1088504>

UNEP China (18 October 2023): *The Economics of Ecosystems and Biodiversity (TEEB): Promoting a Sustainable Agriculture and Food Sector (China): High-level Closing Forum Successfully Held.*

<https://mp.weixin.qq.com/s/u2kTKziA8whUNiH9qbkcSg>