

TEEB China Application shared at the Eco Forum Global Guiyang Forum 2023

Summary

On 8 July 2023, Ms. Zhang Linxiu, Director of UNEP-IEMP, was invited to the Eco Forum Global Guiyang 2023 and shared a UNEP TEEB China application at the sub-forum on "Lucid Waters and Lush Mountains are Invaluable Assets: Innovations in Practice", which is hosted by the Guizhou Provincial People's Government, organized by the China Research Academy of Environmental Sciences and the Guizhou Provincial Department of Ecology and Environment, and supported by the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP) and the China Environmental Protection Foundation.

The TEEB China application was funded by the EU and conducted in the national "Green is Gold" practice innovation base Tengchong City, Yunnan Province. Ms. Zhang Linxiu began by emphasizing that TEEB's work in Tengchong is part of UNEP's efforts to support its member countries in their green transformation and achieving the SDGs. By conducting an economic assessment of different policy pathways in Tengchong's agriculture and food systems, both visible and invisible costs and benefits are revealed to support the development and improvement of sustainable agriculture policies for agri-food system transformation. Five key messages from the TEEB Tengchong assessment were shared with the audience:

1. Tengchong City is rich in the values of ecosystem regulation services such as water regulation and purification, soil conservation, and carbon sequestration, and they are insensitive to different agricultural development pathways. This indicates that the ecosystems in Tengchong City are resilient enough to resist exogenous disturbances. Natural capital is one of the foundations of local economic and social development. For years, the forest cover in Tengchong has been maintained above 75%, which is related to the long-term protection of natural ecosystems by national and local policies.

2. Tengchong City's forest system has a strong carbon sink function, with carbon sequestration of 37.5 million tons of CO₂ equivalent in 2020. In contrast, the greenhouse gas emissions from Tengchong City's agricultural system are relatively small: in 2020 agriculture GHG emissions account for about 2.67% of its annual carbon sequestration; by 2050, the proportion is expected to be around 5%. Different agricultural development paths will not change the fact that Tengchong functions as a

net carbon sink.

3. Nitrogen and phosphorus emissions from water pollution in agricultural systems need to be taken seriously. The nitrogen consumed by the water purification function of the natural ecosystem accounts for less than 7% of the total nitrogen discharge, and the phosphorus consumed accounts for less than 25% of the total phosphorus discharge. This indicates that the water pollution caused by the agro-food system far exceeds the purification capacity of the natural ecosystem itself. Therefore, the management of manure wastewater from beef cattle breeding should be strengthened, and the leaching of fertilizers should be further reduced.

4. Comparing the different agricultural development paths, it is found that the total net value of the natural, economic, and social effects of the "positive" development path is higher than that of the "baseline" and the "negative" paths. For example, by 2050, the total net value of the "positive" pathway is 7% higher than that of the "baseline" scenario and 10% higher than that of the "negative" scenario. From a health point of view, the "positive" development path leads to less negative impacts on human health, especially in the long term.

5. Analyzing the decision-making of farmers, who are the main actors in the transformation of the agrifood system, it was found that choosing a more ecologically friendly way of farming does not entail more economic pressure than other ways of farming when only considering farming expenditures and revenues; and that in the long run, their net income can still increase by a small amount.

At the end of the sharing, Ms. Zhang Linxiu conveyed the expectation of Mr. Huang Runqiu, Minister of Ecology and Environment of China and President of COP15, on the work of TEEB in China: to further enrich the application in specific fields and scenarios, to make the socio-economic activities more biodiversity friendly. This was raised during the TEEB side event held last year in Montreal during the second phase of CBD COP15.

In total, the Eco Forum Global Guiyang attracted more than 3,200 delegates from 42 countries and regions around the world.



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