

In 2021, China committed to enhancing biodiversity and ecosystem functions and services by gradually advancing information disclosure and encouraging public participation (10). In light of this pledge, China's government should create a mechanism to clearly, thoroughly, and regularly report the collection and use of forest, grassland, and wetland restoration fees. The information should include government spending, ecological assessment before development begins, restoration implementation, and outcomes (11), and all data should be made available for public scrutiny. As a monitoring system model, China could use the US Regulatory In-lieu Fee and Bank Information Tracking System, a registry of conservation-related programs that has been in place for nearly 40 years (12).

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## Global goals overlook freshwater conservation

As global conservation and restoration policies focus on a land and sea framework, freshwater biodiversity and services continue to decline at alarming rates (1). If freshwater ecosystems are overlooked, their sustainability could be compromised when decision-makers evaluate trade-offs with land and sea conservation and development goals. To protect freshwater biodiversity and vital services, international agreements must explicitly acknowledge freshwater ecosystems as a unique realm and set specific goals to address their problems (2, 3).

At the 2021 UN Climate Change Conference in Glasgow (COP26), countries reaffirmed their commitments to the three Rio Conventions on Biological Diversity, Climate Change, and Desertification (4). The three respective panels are preparing reports that will shape the 2030 sustainable development goals (SDGs) and the 2021–2030 UN Decade on Ecosystem Restoration. Setting explicit objectives for freshwater ecosystems in these goals must be a priority.

Unfortunately, the recently released "Global land outlook" (5), the flagship publication of the UN Convention to Combat Desertification, a convention that defines pathways to sustainable land and water management, still mostly treats fresh water as a simple resource for services such as irrigation and consumption rather than a unique ecosystem that sustains biodiversity and a range of other services and that has particular management needs. The undervaluing of freshwater ecosystems is demonstrated by how rarely the word is used: Fresh water is mentioned twice in the summary for decision-makers, but both times as "freshwater use," with no mention of the associated ecosystems or their management. Land restoration commitments of "1 billion hectares of farms, forests, and pastures" make no explicit allusion to rivers or other freshwater ecosystems. This shortsightedness is consistent with SDG 15 ("life on land"), which discounts the uniqueness of the freshwater realm, and with SDG 6 ("water and sanitation"), which prioritizes only the most immediate services that freshwater ecosystems provide. Underestimating the value of fresh water undermines the potential for long-term sustainability.

Some recent reports provide hope that we can prioritize freshwater conservation and recognize the unique problems and

challenges that such ecosystems face. In the Intergovernmental Panel on Climate Change's sixth assessment report (AR6), the working group on "impacts, adaptation and vulnerability" breaks ecosystem impacts into terrestrial, ocean, and fresh water (6). In addition, the latest draft of the post-2020 Global Biodiversity Framework indicates the possibility of including fresh water in several goals and targets (7).

Ahead of keystone events like COP27 in November in Sharm El-Sheikh, Egypt and the UN Biodiversity Conference (COP15) finally scheduled for December in Montreal, authors of reports that influence international agreements must make the case that freshwater ecosystems require attention independent of other conservation efforts. This recognition could include, if not an additional SDG, targets addressing freshwater-specific area protection and restoration, the waterflow quality needed to maintain ecosystems and related services, and integrated water resources management (2).

Ground and surface freshwater habitats are home to more than 10% of all known species, including 30% of all vertebrates (8). The ecosystem services they provide are estimated to be worth more than US\$4 trillion annually (9). Only by explicitly recognizing the value and distinctiveness of freshwater ecosystems can we set goals that can effectively protect them.

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