The potential of wetland ecosystem services for achieving the Sustainable Development Goals

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Abstract: Wetlands are essential for local and global freshwater-related ecosystems, and sustain many of the terrestrial lifeforms. Wetlands are cost-effective nature-based solutions (NbSs), providing environmental, social and economic benefits. However, the increasing demand and exploitation of the ecosystem services adds stress on wetlands, compromising their integrity. Following a significant loss on wetlands area due to expansions of forest industries, agricultural activities, urbanizations and energy production, sustainable concerns have raised. In Sweden, for example, economic support has been provided to thrive environmental objectives for wetland conservation and restoration. Targeting such objectives and setting up relevant plans can decrease the risk of losing valuable resources, services and mitigate wetlands' degradation. The protection of wetlands have been used as NbSs for achieving multiple Sustainable Development Goals (SDGs). To make coherent policies and strategies for wetland management, it is essential to think systematically about the interactions between SDGs and their targets, beyond their synergies and trade-offs. This study classifies the SDGs and their targets according to their interactions with wetland ecosystem services and their management, applying a scoring system established to identify negative and positive connections between goals and targets. This classification helps in identifying the potential created by wetland functions, supporting conservation and restoration plans to achieve the SDGs and their targets. The scoring approach in similarity to ICSU (2017) and Nilsson et al (2016) is applied to rate seven possible types of interactions (cancelling, counteracting, constraining, consistent, reinforcing, enabling and indivisible) from the most positive (scoring +3) to the most negative (−3) between SDGs and their targets and strategies for wetland management.
The multiple services provided by wetlands as an example of NbS are essential in achieving different SDGS (e.g. good health and wellbeing, clean water and sanitation, sustainable cities and communities, climate action) , for instance by reducing greenhouse gases, environmental toxins and maintaining a stable water table and supply. To develop wetland management strategies, there is a need to end a "business as usual" approach and strive for a nexus approach, highlighting the possibilities intertwined in the wetland ecosystems to coherently address SDGs and their specific targets.

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