

Transitions to living in harmony with nature



The Sustainable Freshwater Transition

Summary of the transition: An integrated approach guaranteeing the water flows required by nature and people, improving water quality, protecting critical habitats, controlling invasive species and safeguarding connectivity to allow the recovery of freshwater systems from mountains to coasts. This transition recognizes the importance of biodiversity in maintaining the multiple roles of freshwater ecosystems to support human societies and natural processes, including linkages with terrestrial, coastal and marine environments.

Freshwater ecosystems host a significant diversity of life. Covering less than 1% of Earth's surface, these habitats are home to approximately **one third of vertebrate species and 10% of all species** and provide **ecosystem services to billions of people**. Moreover, freshwater systems integrate terrestrial ecosystems, and their river basins or catchments, with coastal, and ultimately marine ecosystems.

The exploitation of freshwater resources for agricultural, industrial and domestic consumption has taken place with little regard to freshwater ecosystems and the services they provide. Coastal areas, wetlands and other areas near river courses, have been particularly subject to conversion or development. As a result, the current rate of wetland loss is three times that of forest loss with an estimated **30% of natural freshwater ecosystems disappearing since 1970, and 87% of inland wetlands since 1700**. Populations of freshwater vertebrate species have declined at more than twice the rate of land or ocean vertebrates. An estimated **1.8 billion people are likely to live under conditions of regional water stress by 2050**. Many inland water and coastal ecosystems are threatened by eutrophication due to excess run-off of soil and nutrients from terrestrial areas, especially from agricultural areas and degraded ecosystems. **Safeguarding freshwater ecosystems and the services they provide for nature and humanity is therefore an urgent challenge.**

While overall progress on more sustainable policies and practices relating to freshwater ecosystems has remained low, innovative approaches in this direction have been successfully implemented in different contexts and regions across the world, demonstrating the feasibility of such actions and providing guidance on scalability and replicability.

Key components of the transition:

- Integrating environmental flows into water management policy and practice.
- Combatting pollution and improve water quality.
- Preventing overexploitation of freshwater species.
- Preventing and controlling invasive alien species in freshwater ecosystems.
- Protecting and restoring critical habitats.

