

# »»» Water sector and biodiversity

## – understand and shape the synergy between the two

One Pager

No. 8, 15 December 2023

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The 2022 Biodiversity Summit is considered a breakthrough in international sustainability policy. During the summit, the EU member states undertook to follow an ambitious programme based on the statements ‘water is life’ and ‘no future without biodiversity’. The long-term goal: to live in harmony with nature by 2050. This is particularly important in poorer countries, because the people there depend on nature for their livelihoods, meaning they immediately feel the downturn in biodiversity.

However, biodiversity loss cannot be stopped without considering water and wastewater, as this resource is essential for nature conservation. The water sector therefore plays a central role in this process. This one-pager provides a brief overview of exactly what this means and how the water sector can contribute to boosting biodiversity.

### Close interaction

Human beings and nature exist in a complex mutual relationship. Intact ecosystems and species diversity contribute to clean air, clean water and fertile soil, all of which are essential for the planet’s existence. However, the way of life pursued by human beings is exceeding planetary limits. The water sector offers several good starting points for bringing people and nature back into harmony. Investments in the following areas are suitable, because they contribute directly to the interaction between water and biodiversity:

**Water supply:** Intact ecosystems are the foundation of a sustainable water supply. It is essential to prevent the pollution of water bodies and to reduce raw water turbidity by protecting against

erosion. Permanent overuse of water resources should also be prevented.

**Wastewater management:** Much of the world’s wastewater remains untreated and constitutes a danger to ecosystems. This pollution must be eliminated through policies such as integrated wastewater management and sustainable sanitation. Meanwhile, the burden needs to be reduced on already polluted waters.

**Flood protection:** Modern, climate-resilient urban planning counteracts flood risks, for example by creating near-natural surfaces for water retention. This enables cities to make a positive contribution to biodiversity and contribute to improving the local climate. Modern coastal protection combines, for example, classic dykes with mangrove afforestation, thereby constituting an effective way to prevent flooding.

**Water catchment areas:** The protection, sustainable use and restoration of biodiverse ecosystems in water catchment areas are the cornerstone of integrated and sustainable water resource management. This also includes measures such as reforestation and wetland restoration. This benefits ecosystems while protecting surface water and groundwater sources.

**Agriculture:** Efficient water use in irrigation systems combined with soil-friendly cultivation methods, increased vegetation in agricultural landscapes and other agroecological measures are important starting points for biodiversity and water availability.

### “Grey” and “green” solutions

In addition to conventional solutions for sustainable infrastructure (“grey” infrastructure), nature-based solutions (“green” infrastructure or NbS) such as the restoration of water bodies or near-natural retention areas for flood protection in urban areas can be implemented accordingly. Depending on the context, these can either be an advantageous alternative or else complement the conventional infrastructure.

### Conclusion: Integrated thinking

It is essential to think of water and biodiversity aspects together in order to create better living conditions for human beings and nature. This calls for an interdisciplinary policy framework in which, for example, water utilities work together with the city administration, the town and country planning department, and stakeholders in nature conservation.

Investments in both “grey” and “green” infrastructure should be considered to ensure strong synergy between the water sector and biodiversity. It is important to carefully analyse the correlative effects. Specifically, this requires basic hydrological and ecological studies to be performed and the inclusion of local experiences.

Once these conditions are created, measures in the water sector can have a positive effect on biodiversity and ecosystem services and preserve or even improve our livelihoods. ■