

NATURE BASED SOLUTIONS FOR WATER

2018 EDITION OF THE WORLD WATER DEVELOPMENT REPORT

The 2018 edition of the [World Water Development Report. Nature-based solutions for water \(WWDR 2018\)](#) has been launched by UN Water during the 8th World Water Forum held in Brasilia (Brazil) on the 19th of March 2018.

The World Water Development Report is focused on the potential of *Nature-based solutions* (NBS) to address contemporary water management challenges across all sectors. Nature-based solutions (NBS) are inspired and supported by nature and use, or mimic, natural processes to contribute to the improved management of water. These solutions, that can be applied at micro or macro scales, involve conserving or rehabilitating natural ecosystems and the enhancement or creation of natural processes in modified or artificial ecosystems.



Most NBS, applied even in urban landscapes, essentially involve the management of vegetation, soils and/or wetlands, including rivers and lakes.

In particular, *Nature-based solutions* can provide innovative and cost-effective options for supplementing insufficient or ageing water infrastructure. For example:

- **Water availability and supply:** Water storage via natural wetlands, soil moisture and/or groundwater recharging can be more sustainable and cost-effective than grey infrastructure, such as dams.
- **Water quality:** Pollution from agriculture can be drastically reduced by NBS such as conservation agriculture, which protects soil from erosion, or riparian buffers strips of land along water courses planted with native trees and shrubs.
- **Risk management:** The effects of climate change, such as frequent extreme flooding, can be mitigated by a range of NBS, such as riparian buffers or connecting rivers to floodplains.

The Report illustrates that currently, water management remains heavily dominated by traditional, human-built infrastructure and the enormous potential for NBS remains under-utilized. The application of certain Nature-based solutions creates a *green infrastructure*: natural or semi-natural systems giving similar benefits to conventional, human-built 'grey infrastructure'. Furthermore, NBS often produce benefits beyond water-related services. For example, constructed wetlands used for wastewater treatment can provide biomass for energy



production, improve biodiversity and create recreational spaces and associated employment.

The Report illustrates that working with nature would enhance natural capital and support a resource-efficient and competitive circular economy. NBS support a green and circular economy aiming to reduce waste and avoid pollution, through reuse and recycling. NBS can be cost-effective, and simultaneously provide environmental, social and economic benefits.

In many cases, traditional knowledge related to the use of these *Nature-based solutions* still survives in local communities. The work will consist in recovering and updating this knowledge in collaboration with universities and research centers so that it can better meet the needs of modern times and can be transmitted to the new generations. Through these initiatives it is possible to create new professional skills and new qualified jobs.

NBS for water are central to achieving the SDGs of the 2030 Agenda for Sustainable Development because they also generate social, economic and environmental co-benefits. In addition to contributing to achieve the objectives of water management (SDG 6) they have a direct positive impact on human health, food and energy security, sustainable economic growth, the rehabilitation and maintenance of ecosystems, the protection of biodiversity, the reduction of disaster risk.

The report, available in English, Spanish and French, presents the typologies and main characteristics of Nature-Based Solutions for water management and examples of their application in different countries.

Launching the [International Decade for Action: Water for Sustainable Development, 2018-2028](#), the UN Secretary-General underlined that growing demands, poor management and climate change have increased water stresses and that scarcity of water is a major problem in many parts of the world.

This 2018 edition of the World Water Development Report produced by UN Water and published by UNESCO is the result of the concerted effort with different other specialized agencies of the United Nations: FAO, UNDP, UNEP, UNESCO-IHP, UNU-INWEH and WWA.

The guidelines provided by this important Report will certainly have a significant impact to guide the choices of national and local governments and all other involved actors in enhancing the use of the Nature-based solutions to address many of the world's water challenges while simultaneously delivering additional benefits vital to all aspects of sustainable development.

To know more

[Report in UN Water website](#)

[Report in UNESCO website](#)

[Executive Summary in reliefweb.int website](#)

[International Decade for Action: Water for Sustainable Development, 2018-2028](#)



[Information in climateactionprogramme.org](http://climateactionprogramme.org)

[Nature based solutions in iucn.org website](http://iucn.org)

