

# CONSTRUCTED WETLANDS IN LATIN AMERICA – SUSTAINABLE WASTEWATER TREATMENT SYSTEMS?

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## **Abstract**

80% of all wastewater worldwide is released untreated into the environment, leading to deteriorating water quality. Achieving universal access to sanitation while improving water quality by halving the proportion of untreated wastewater and increasing its safe reuse are targets 6.2 and 6.3 of the Sustainable Development Goals (SDGs).

Wastewater treatment needs to be re-thought from a linear input-output process towards a circular re-use system where additional benefits for the environment can be derived. The use of CWs can treat various kinds of wastewater such as domestic or municipal wastewater, agricultural runoff, industrial effluent, mine drainage, landfill leachate, stormwater, polluted river water, and urban runoff. CWs can additionally provide secondary benefits such as providing an ecosystem for aquatic species, energy production through the use of the harvested biomass, effluent used for irrigation, etc. Understanding the risks and benefits that a wastewater treatment system can offer to its community is not limited to the technical understanding of its components. It demands understanding the multiple dimensions of sustainability.

Constructed Wetlands (CWs), a Nature-based Solution (NbS), can contribute to the SDGs. Currently, there is little knowledge about the contribution of CWs to the global amount of treated wastewater. UNU-FLORES has initiated the development of CWetlands and produced a pilot version ([www.CWetlands.net](http://www.CWetlands.net)). Our expectation is to link CWetlands to the ongoing monitoring and reporting efforts of the custodian agencies of SDG 6.

As a by-product of the participatory nature of the project, we expect to promote and raise awareness about NbS and the usefulness of CW for sustainable wastewater treatment. The guidelines, documentation, and informational material that will be made available on CWetlands will also provide a significant contribution to raise awareness on NbS and their potential to contribute to a sustainable future, in particular for the 80% living in CELAC cities.

**Keywords:** sustainable development goals, nature-based solutions, wastewater