



Closing the water cycle – the key role of water and wastewater management in a circular economy

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Planetary water boundaries are exceeded locally and regionally as water demand and use are escalating and per capita water availability is decreasing. However, wastewater represents an alternative yet reliable source containing for instance, nutrients (for use as fertilizer) and metals that can be extracted, and can be a source of energy. These characteristics mean that water and wastewater are set to play a key role in the circular economy. Furthermore, wastewater use can generate business opportunities and enhance water, food and energy security, therefore helping to alleviate poverty. However, to increase the collection, treatment and use of wastewater, investments in infrastructure and appropriate (low cost) technologies are needed. Ensuring the development of human and institutional capacity is also essential for proper wastewater management.

The UN World Water Assessment Programme (WWAP) produces together with several UN-Water Members and Partners the annual World Water Development Report (WWDR). Its 2017 edition “Wastewater: The Untapped Resource” focuses on the critical role of wastewater management for vibrant economies, resilient societies and the maintenance of a healthy environment. Wastewater issues play also a central role in the 2030 Agenda for Sustainable Development, most notably through Sustainable Development Goal (SDG) target 6.3 that aims to improve water quality by reducing the proportion of untreated wastewater released to the environment and increasing its recycling and safe reuse globally. This target is interlinked with several other targets of SDG 6 (‘the water goal’) as well as to several other SDGs that relate to, poverty reduction, health, energy and food security, among others.

The main policy-relevant messages of the WWDR 2017 will be introduced and linked to socio-hydrological approaches. These messages are an important input to the implementation of the water research agenda of the Panta Rhei initiative of IAHS.