A human-centric approach for river management in the Anthropocene: an example from the large Ganga River system, India

French Translation of the title (arial 14pt)

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RÉSUMÉ

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ABSTRACT

The large Ganga River system with the main channel length of 2500 km drains around 8.6x10⁵ km² area, spread over 3 countries and 11 states within India. The Ganga River, which supports more than 600 million population is the holiest river of India. However, a huge population pressure leads to severe degradation of river health through modifications in river hydrology, morphonology, water quality and ecology. The river needs innovative efforts to revive its health.

Sustainable management practices generally emphasize for understanding river systems and to work with them. However, how can we understand a river and talk with it to provide required support against deteriorating river health? My talk will argue that identification of a river as human being through multidimensional lenses and at different spatio-temporal scales will help us to understand the river. Identification of river as a living being needs an in-depth understanding of river characteristic, its behaviour, controls at different spatio-temporal scales and sensitivity of river to these external controls. River space, connectivity, flux variability, stream power and thresholds are the key parameters to define characteristics of river as human being and to develop a holistic understanding of its dynamic behaviour. I will present examples from the Ganga Rive system. Finally, I will summaries the opportunities and challenges to achieve healthy status of the Ganga River and its sustainability.

KEYWORDS

Anthropogenic disturbances, Connectivity, River health, Sustainability, The Ganga River,

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