



What balance do countries exhibit between the central human resources: water, energy and food

Julian Kossak (1), Dominik E. Reusser (1), Jürgen P. Kropp (1,2)

(1) Potsdam Institute for Climate Impact Research, Climate Impacts and Vulnerability, (2) University of Potsdam, Institute of Earth and Environmental Sciences

Sufficient water, food and energy is a precondition for human activities. The water, energy and food nexus states that to some extend, these resources can replace each another: land can be used to produce food or energy crops; water can be used as direct water supply, to produce energy or for irrigation; and energy supports water treatment and agricultural yield.

We present an overview of the major components of the trade-off together with a set of indicators and data sources to assess these components. The different indicators of the trade-off are summarized and plotted in a novel way on a triangle, which we discuss in view of the resource availability of different countries.

Comparing different countries in view of their balance between water, food and energy will inform the discussion about the transition towards more sustainable societies and highlighting alternative strategies for development. This is important in view of possible synergies between the different sectors and as a tool for better coordinated governance approaches.