

General discussion on insight into change and evolution in hydrology

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Fluctuations in the water and chemical cycles including floods, droughts, and water-quality impacts are influenced by long-term changes and/or evolutions in catchment properties and climate conditions. For example, to predict stormflow responses only from the catchment topography is difficult because the runoff mechanism is strongly controlled by bedrock-weathering and soil-evolution processes.

Such a concept of change and evolution is raised by IAHS, called 'Panta Rhei,' as its decadal initiative from 2013 following PUB (Predictions in ungauged basins), and the international discussions have started.

In parallel with this activity, we are now conducting a project on dependences of rainfall-runoff responses on a temporally-nested structure of topographic, soil, and vegetation developments under the JSPS budget from 2011 to 2015.

In this session, presentations addressing effects of natural changes and their interactions on the water and chemical cycles are encouraged, and changes originated from human influences including the disturbances and managements are also welcomed.

Keywords: general discussion