



Ecohydrology is an integrative science, composed of two key elements

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The first component is based on analysis hydrological cycle - water, plant, soil interactions in terrastrial fraction of the catchment. The second one appeared decade ago in the framework of UNESCO International Hydrological Programme, as the efforts towards integration hydrological and ecological surficial processes. The main body of theory was covering by teleological components- regulation hydrology to control the biological processes e.g eutrophication, and vice versa: shaping biota to control hydrological processes, mostly water quality. After formulating of Ecohydrology principles and definitions, the key assumptions was tested in the framework of IHP activities in various geographic zones. Both aspects of Ecohydrology, integrating catchment and freshwater ecosystems are creating holistic framework for evaluation of impact and identification solutions. Moreover such systemic approach provides scientific background for not only an improvement of water quality and environment, but also there is increasing number of evidence of creation positive socio-economic feedback. The key study cases of its implementation for Europe, Asia, Africa and South America will be presented.