



Session HS3.7: Climate-soil and vegetation interactions in ecohydrological processes

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Event Information:

Spatial and temporal patterns of vegetation regulates the exchange of mass, energy and momentum across the biosphere-atmosphere interface. These structures arise from the physical linkage between soils, climate, and vegetation influencing hydrological processes through modification of rainfall interception, infiltration, evapotranspiration, surface runoff, and groundwater recharge. Similarly, the interactive manner by which resource availability are manifested within various ecological systems observed in nature is critical to the development of theories regarding the nature of competition and the maintenance of biodiversity. In this regard, the interrelationship between ecological and geophysical determinants of surface water balance is at the forefront of a number of outstanding issues in both hydrological and ecological sciences. For example, the space-time distribution of soil moisture provides a crucial link between hydrological and ecological processes through its controlling influence on transpiration, runoff generation, carbon assimilation and nutrient absorption by plants.

This session solicits papers that address the coupled ecological-hydrological processes governing surface water balance, basin response and vegetation dynamics in landscapes. We seek contributions that explore these issues through any combination of experimentation, observation, and theoretical approaches, ranging from canopy to basin scales. We are especially interested in presentations that explicitly link these approaches and explore modelling combinations and new measurement technologies, to answer challenging problems such as the rearrangement of ecosystem structure and function under directional climate change. Potential topics of interest include the biogeochemical cycling, the nature of plant community responses to variability in climate, the co-organization of vegetation patterns and surface hydrological fluxes, the occurrences of hydrological extremes (flood and drought) under various climatic forcing and physiographic conditions. Paper dealing with the impact of hydrological extremes on natural ecosystem and their mutual relationships are also welcome.

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Deadline for Receipt of Abstracts: 18 January 2010

Information at: <http://meetings.copernicus.org/egu2010/index.html>

The deadline for support application is 4 December 2009. More information are available at the web page

http://meetings.copernicus.org/egu2010/support_and_distinction/index.html.

