

Thursday, December 2, 2010

Workshop

Water Stress and Biodiversity

16:00 - 18:00

[Parallel Workshop](#) related to plenary session 2

Oral presentation

How much water does an ecosystem need to sustain its biodiversity and related ecosystem services?

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Threats to freshwater biodiversity are growing and today have reached a global scale. The implications to ecosystems and humans are immense because rivers, lakes, ground waters, and wetlands provide a diverse array of crucial natural functions and services; more than any other ecosystem. A key pressure on freshwater biodiversity is increasing water stress, including more frequent and severe floods and droughts but also including water removal for anthropogenic usage. For example, previously permanent streams are becoming now temporary, and they are expected to rapidly increase in extent and duration. In the face of drastic hydrological alterations it is becoming evident that most conservation and restoration strategies probably do not achieve their goals because of non-linear relationships and time-lag effects between the causes and the effects of biodiversity decrease and complicated feed back mechanisms. Thus consequences of biodiversity loss for ecosystem functioning are difficult to predict for freshwater ecosystems, similar to what is seen for human demographic development and CO₂ increase.

In this presentation, we will discuss water requirements to maintain freshwater biodiversity and its related ecosystem services; and how well-directed manipulations of the hydrological regime may serve as a tool to manage freshwater ecosystems.