

Cross border Climate Change Impacts, part 1: Agriculture and Drought

Tuesday, 3 November 2015
13:45 – 15:15, Room I

With contributions from a.o.:

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ABSTRACT

Droughts have significant economic, environmental, and societal impacts and are regarded as the world's costliest natural disasters. In recent years, the concern has grown that the frequency of occurrence and severity of droughts are on the increase, fueled by the changes in the hydrological cycle relating to global climate change. Many of the economic impacts of droughts hit agriculture and related sectors, like forestry and fisheries, because of the reliance of these sectors on the availability of surface and subsurface water supplies. This, in turn, has strong societal impacts because of the threat to food security. Responses to these droughts are generally reactive in terms of crisis management and often untimely and poorly coordinated.

Nations need to move from a reactive crisis management approach to droughts to a more pro-active attitude. Effective science-based Climate Services should be quintessential in such a program towards more drought resilient societies.

The session will focus on how Climate Services can contribute to National Drought Policies, by giving a brief overview of several existing approaches, and what type of Climate Services information are most beneficial for decision and policy makers. Elements from Climate Services discussed include

- characterizing drought and its severity
- a common language for describing drought in terms of probabilities
- drought monitoring and early warning systems
- future changes in drought occurrence and severity based on climate scenarios

Among droughts there are further extreme weather events, which can cause losses in crop yield (frost, heat, too low or too high soil moisture). The growing conditions alter with climate change. The comparisons of observed changes in the past and the predicted changes for the future are necessary to estimate the impact on agriculture. The development and application of models for agricultural production, soil climate and soil moisture regime as well as the agroclimatological evaluation of extreme events are important part of such analysis.
