



Future Rangeland Ecosystems in the Dryland Belt of Asia

Jianguo Qi (1,2)

(1) Center for Global Change & Earth Observations, Michigan State University, East Lansing, MI 48823, USA (qi@msu.edu),
(2) Zhejiang University, Hangzhou, China (jacobchee@zju.edu.cn)

One of the greatest challenges humans are facing is sustainably managing water and land resources under changing global environment. This issue is especially pertinent in dryland belt in Asia where freshwater is scarce and shared among many nations. The region is heavily dependent on the diminishing Himalayan glaciers and limited and changing precipitation patterns. With increasing climate variability and a regional warming trend water security issues are acute and if not properly addressed could affect regional stability and lead to international conflicts. Solutions to these urgent regional issues are lacking and further research efforts are needed. Adaptive strategies addressing the complex and multifaceted water resource issues in the region will require a co-design and co-delivery of knowledge specific to the region and must consider exogenous factors such as policies of neighbouring countries and changing precipitation patterns due to climate change. There is a need to determine and fund scientific research priorities and practical approaches co-developed by local stakeholders and scientists to change the region's paradigm to "science for society". This presentation will summarize the collective outcome from a focused group discussion at the international workshop on "Future Earth and Science for Society" to be held from February 25-27, 2015 at Michigan State University, including knowledge gaps, research priorities, a general framework and international collaborations to move forward to addressing the future of the dryland belt of Asia.