

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



HSC003-10

Room:201A

Time:May 26 17:35-17:50

Desertification control and sustainable use of ecosystem services in drylands of the North-east Asia

Toshiya Okuro^{1*}

¹The University of Tokyo

People's livelihoods in drylands rely highly on ecosystem services to provide their basic needs. Dryland ecosystems, however, are extremely vulnerable to over-exploitation and inappropriate land use. Poverty, political instability, deforestation, overgrazing and bad irrigation practices can all undermine land productivity. Recently it has been also emphasized that desertification is deeply associated with biodiversity loss and contributes to global climate change. As the causes, effects and possible policies are strongly interlinked among those issues, multiple benefits could be obtained with increased effectiveness through joint implementation of the three Rio Conventions and further strengthening of synergies based on environmental management approaches. One of the key findings of the Millennium ecosystem assessment scenarios was the importance of a proactive management approach to coping with desertification. Applying desertification early warning systems based on land vulnerability assessments may be one of the most effective preventive actions at both fine and broad scales. However, at degraded sites where land conditions have already shifted to alternate states, it will still be necessary to apply rehabilitative measures and promote restoration processes as a reactive approach. Recent studies have tried to develop methodologies to support decisions of local people on their "best choice" of most effective restoration measures based on both scientific evidence of restoration processes and careful consideration to re-construction of future sustainable land use, especially in Northeast Asia.

Keywords: desertification, ecosystem service, sustainable use, Northeast Asia, drylands