

## Stream 3 – Session 7

**Title:** Forests and Water in Action  
**Organizers:** Food and Agriculture Organization of the United Nations (FAO)  
**Day/Date:** 26 February 2016  
**Time:** 0900 – 1030  
**Venue:** Lily room, Fontana Convention Center

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### Key messages

- Forested watersheds and wetlands supply 75% of the world’s accessible fresh water for domestic, agricultural, industrial and ecological needs (MEA, 2005).
- Ecosystems and landscapes sustain water resources. Forests play a major role in the water cycle, ensuring quantity, quality and stability for human use. (CFS, 2015).
- The relationship between forests and water is important and complex, depending on scale.
- Trees can improve water availability for other species and production systems by improving water uptake, water infiltration and erosion control (Reubens et al, 2007).
- About one-third of the world’s largest cities significant proportion of their drinking water directly from forested protected areas (Dudley and Stolton, 2003). More than 11 major cities in the region, equaling over 119 million people, depend on water supplies that are from forested areas, including Tokyo, Beijing, Melbourne, Jakarta, Mumbai and Yangon; this number will continue to rise as urban centres increase in size and population.
- Nearly 80% of the world’s population is exposed to high levels of threat to water security (Vörösmarty et al., 2010).
- Currently only 25% of the world’s forests are designated to protect soil and water resources (FAO FRA, 2015).
- Single trees can transpire hundreds of litres of water per day, resulting in cooling that can be maintained even during long-lasting heatwaves (Zaitchik et al. IJC, 2006, Teuling et al., NCEO, 2010).
- Every US\$1 invested in watershed protection can save anywhere from US\$7.5 to nearly US\$200 in costs for new water treatment and filtration facility (SIWI, 2005)
- In tropical areas, air that has passed over forests produces about twice as much rain as air that has passed over sparse vegetation (Spracklen et al., 2012).

### Session description

It is widely recognized that forests have value beyond timber and goods. They provide ecosystem services, which support communities both near to and far from forested areas. Water is one such ecosystem service that connects landscapes and communities, and that can be easily measured and valued. With increased extreme precipitation events, such as flooding and droughts due to changing climate and land use, and increased pressures on water resources due to growing populations and agricultural expansions, water security is a growing issue. Sustainable forest management can be a potential solution; however,

sustainable forest management is a long-term investment that is not always appealing. Financial incentives, such as payments for ecosystem services (PES) can encourage communities to engage in more sustainable land management activities.

The session will explore how PES mechanisms can support forest management that protects water and soil resources, and thereby increase water and food security through recognizing a 'real' value for water. At least one successful example of water-related PES from the Asia-Pacific region will be showcased. In addition, the session will also highlight the Forests and Water Action Plan, launched at the World Forestry Congress in September 2015, which advocates for a greater recognition of integrated forest-water policies and practices, including PES mechanisms and improved monitoring and evaluation of forest-water interactions. Based on the Action Plan, FAO is developing a new Forest and Water Programme, which provides technical assistance to countries interested in the relationships between forests, trees and water, and would like to establish policies and activities that will contribute to SDGs 6 and 15.

### Programme

09:00-09:05	Welcome and official opening
09:05-09:20	An introduction to incentives for forest-water ecosystem services <i>Thomas Enters, UN-REDD</i>
09:20-09:35	Forest-Water Relationships: What the science tells us <i>Don Gilmour</i>
09:35-09:50	Case study: Empowering Women Entrepreneurs in Land Restoration, Khasi Hills, Meghalaya, India <i>Victoria Gutierrez, WeForest</i>
09:50-10:05	Forests and Water in Action: integrating science, policy and practice <i>Elaine Springgay, FAO</i>
10:05-10:10	Concluding remarks
10:10-10:30	Q&A and networking