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## Trees and Water: The Hydrological Environmental Benefits of (re)Forestation

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### Session: Basin (Andes) and Benefit Sharing Mechanisms

#### Key Message

The myth that trees bring water is a persistent one. In the Andes, it is mostly based on the natural montane forest being a good water regulator. The poor definition and understanding of hydrological benefits is a major limitation for the implementation of benefit sharing mechanisms, and calls for more and more appropriate monitoring programs.

## Summary

In a context of benefit sharing of hydrological services it is of utmost importance that the expected benefit can be delivered. This starts with a precise understanding of the benefit itself, which is often poorly defined. “More water” for example, is not a precise enough definition. In mountain environments, the most appreciated service is often water regulation, the mechanism that assures surface water flow between rainy periods, and to a lesser extent, total water yield, but local circumstances of water use, such as the presence or not of large reservoirs, can change this prioritization.

Natural montane forest is a good water regulator. Therefore it is easily thought that reforestation would recover any hydrological benefit, lost by deforestation. But in practice, this reforestation for

water conservation purposes was adapted from commercial plantation practices, which aim for rapid growth and timber production. Its contribution to the prioritized benefits is not obvious at all.

Modeling exercises and field monitoring should be precise enough to evaluate real benefits of such programs if they want to support benefit sharing mechanisms and feedback towards design of (re)forestation programs.