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## Water Footprint as a Criterion to Distribute Water Benefits

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

#### Key Message

Benefits from water for irrigation are distributed unequally between people who receive benefits from water directly and those who benefit indirectly through income and employment linkages. Very often, producers receive a lower proportion of benefits than those involved in the scheme through backwards or forward linkages. This condition makes it necessary to develop a new system to increase the proportion of benefits received by the former group. A Water Footprint is the best mechanism to increase water value in the Andes when integrating water, radiation and thermic units efficiently.

## Summary

A cost-benefit analysis was completed and presented to public authorities for decision-making purposes. This study used a policy-oriented analysis to incorporate changes in land use and water flow to fill up the dams. For this purpose, scenarios for production intensity and water use were determined.

Through the use of a Monke and Pearson policy analysis matrix, private and social returns, as well as employment and income linkages were estimated using the De Janvry and Glikman approach. Results indicate that the private internal rate of return was 4% annually (only agricultural use) and 9% if water was used for both agriculture and human consumption. Social benefits were estimated at 30% and 33% respectively. Producers captured 9% of the benefit and the remaining 91% was captured by direct and

indirect actors (through income and employment linkages) as well as consumers. Producers were not willing to incur this cost and the study shows that dam construction was not feasible unless returns to forward and backward linkages were included.