

Submitted Abstract

ID IMC22-FSAbstr- 718

First Author First Name Last Name	Markus Aufleger
Submitting Author First Name Last Name	Markus Aufleger
Correspondence	markus.aufleger@uibk.ac.at
Co-Authors >> E-Mails will be not listed	
Organisations	University of Innsbruck, Hydraulic Engineering, Austria
Country	Austria
Region	Western Europe
Title	A Small "Social" Hydropower Plant In The Andes.
Keywords	Local Energy Supply, Small Hydropower, Self-Management In Alpine Agriculture
Type	List Of Focus Session
Focus Session ID	62

Abstract

Living conditions in the central highlands (Paramo) of the Andes in Ecuador are very harsh. Agriculture is practised there up to altitudes of more than 4000 metres above sea level. The soils are poor. The farmers' yields are very low. Long distances, poor educational opportunities, problems in health care and alcoholism affect living together. Many young people migrate to the regional centres and to the urban centres of Quito and Guayaquil. The possibilities for local value creation are very limited. More than ten years ago, a small hydroelectric power plant was built here at the transition of the inhabited area into the almost deserted Paramo. The planning and implementation of the high-pressure plant was very demanding. Important social issues had to be clarified in the preparatory phase. A first project approach failed due to the resistance of the population.

However, with intensive social preparation, the project was successfully built and commissioned at an alternative place nearby. The hydropower plant stabilises the grid and supplies electricity directly to the farmers in the area. The income is earmarked directly for the local population. The possibility of self-marketing their own products from agriculture is to be improved here by investing the income from hydropower in suitable infrastructure. A contract was concluded between the builders (with the participation of a German technical university, the church and charitable institutions), the regional government and a local cooperative. Basically, the operation is going well. Technical problems arise and are solved with a time lag. Nevertheless, the project is very demanding. Long-term meaningful operation in accordance with its intended purpose poses great challenges for all involved. The biggest challenge, however, remains the social and interpersonal aspects.