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“Solidarity in a competing world —
fair use of resources”

The Impact of Changing Livelihoods on Micro Water Basins in Esmeraldas, Ecuador

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Abstract

This study discusses the challenges faced by the canton of Rioverde in Esmeraldas, Ecuador in terms of integrated water management. Furthermore, it develops a methodology for the setting up of water management plans. Review of secondary information, interviews with authorities and local organisations as well as a set of focus group discussions with inhabitants revealed the environmental degradation taking place in the area. Chemical analysis of water samples showed a deterioration of water quality in the different micro basins. Factors impacting the micro basins' water quality were found to be mainly of local anthropogenic origin: bathing of cattle in the river, cleaning of laundry, discharge of excrements and sewage water in water sources, agrochemicals used for agriculture and for capturing shrimps, disposal of garbage and cleaning of spray devices and chainsaws directly in the river as well as soil erosion, contamination and alterations in the hydrological cycle linked to land use changes (e.g. deforestation). Results evidence that this environmental deterioration is related to rapidly changing lifestyles and immigration in the zone combined with a lack of mitigation and control measures by local authorities as well as a limited access to basic services. The change of livelihoods from mainly subsistence oriented activities in the 80s to cash generating activities was promoted by the credit scheme of the Ecuadorian Government 'Fondo de Fomento Popular' which encouraged inhabitants to raise cattle for commercialisation, eased by the introduction of technology and driven by market demand. The study highlights the influence of policies and changing paradigms on environmental conservation and the challenges to counter environmental degradation in the area.

Keywords: Environmental conservation, Esmeraldas, integrated water management, livelihood changes, water basin