

# IM4DC

## Action Research Report

### SUMMARY

#### Researchers:

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#### University/Institutions:

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<sup>3</sup>Imperial College London

<sup>4</sup>Consortium for Sustainable Development of the Andean Ecoregion (CONDESAN)

#### Key themes:

Community and environmental sustainability  
Operational effectiveness

#### Key countries:

South America

#### Completion:

May 2014

#### Research aims:

This project aimed to identify the opportunities and challenges for effective use of freshwater ecosystem service concepts in the context of assessing and managing sustainable development of mining in the tropical Andean nations via:

- A desk-top study
- A field visit to La Oroya mining region, Peru
- A workshop
- Preparation of research and training proposals

#### For further information on this action research:

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Powerpoint presentation series:

"Mining and River Ecosystem Services"

## Mining and River Ecosystem Services

The problem of developing common understanding and agreement about the risks and benefits of mining has been especially notable in Peru, with serious conflicts about equitable use of land and water. The concept of freshwater ecosystem services is now commonly used to identify the broad value of rivers, aquifers and lakes in terms of the services they provide to society. The concept requires us to look further than the easily quantifiable values of freshwater resources, such as providing water supply for households, agriculture and industry, to less easily quantifiable 'regulating' and 'cultural' services.

This project aimed to identify the opportunities and challenges for effective use of freshwater ecosystem service concepts in the context of assessing and managing sustainable development of mining in the tropical Andean nations. The focus was on overcoming the technical challenges associated with monitoring, modelling, evaluation of service, communication and training, rather than the institutional and regulatory challenges.

The project aims were therefore to:

- Identify the potential and challenges for more effective use of freshwater ecosystem service concepts in the context of assessing and managing sustainable development of mining, including perspectives from university, government research institutions, an NGO and industry
- Develop outlines of at least two research proposals involving collaboration between the project partners
- Draft a paper that sets a research agenda for improved application of freshwater ecosystem service concepts to mining in the tropical Andes
- Develop existing and establish new collaborations between international research institutions, NGOs, industry and government agencies
- Gather local knowledge of capacity building priorities, and outline a training proposal

The main findings are presented in the Executive Summary.