

## Post-audit of watershed management- a case study in Japan

Guangwei Huang

Sophia University, Japan

### Abstract

Current scientific literature provides insufficient information and analysis on how today's environmental state of a watershed was shaped by management practices taken in the last century. Such a look back is crucial to better understand and predict how policy and countermeasure choices today may shape the world in the future. Following this line of reasoning, this paper presents a post audit analysis on the long-term consequence of a countermeasure against a major heavy metal pollution case caused by the operation of the Ashio Copper Mine in Japan. It examined this issue from both environmental and societal perspectives by document analysis, field investigation of soil and water quality, numerical simulation of water quality and questionnaire survey on the public knowledge with regard to the copper mining contamination case as well. It shed new light on how environment may evolve via the interaction with human activities by identifying drivers behind major changes. It also revealed a gap between the reality and the public perception towards the consequence of the copper contamination. Such insights will deepen the discussion on what is water security and motivate further study to pursue sustainable development.