Payment for ecosystem services for Lake Sevan, Armenia

The study, funded by the United Nations Office for Project Services (UNOPS), aims at exploring the feasibility of using the payment of ecosystem services to restore Lake Sevan in Armenia. This report provides the preliminary findings of the pre-feasibility study on Payment for ecological services, which is a relatively younger instrument, for the water purification and waste treatment services of Lake Sevan in Armenia. The water quality of Lake Sevan is under pressure due to water diversion for energy production and irrigation, nutrients from domestic effluents, agricultural run-off, environmental toxins from domestic wastes and industrial activities. Restoring the quality of Lake Sevan requires implementation of economic instruments to internalise the externalities. One can look into a combination of command-and-control and market-based instruments that would prevent depletion of fish stocks and build up of waterborne chemical and microbiological pollutants that can harm human health, through drinking water or bioaccumulation. As this requires huge finances, the study also explores the way to raise finances for protection the quality of Lake Sevan in Armenia.

Lake Sevan Nature Reserve has been established in 1987 with the main purpose of protecting the Lake Sevan. Major protection measures currently in force include a ban on and inspection of fishing, poaching and hunting, but a potential threat for the lake ecosystem remains, due to increasing unplanned tourism and agricultural activities. The watershed provides ecological services of economic value to a wide range of stakeholders: biodiversity service and landscape services. The lake's declining water quantity and water quality is a major concern. The main pollutants come from non-point agricultural sources, mining and industries.

The study explores the feasibility of payments for ecosystem services (PES) as a solution to restored Lake Sevan. The study examines the value of Lake Sevan to the local, global and regional community and analysis whether one can link land use change practices with restoration of Lake Sevan. The study concludes with recommendations on the feasibility of the PES scheme in the Lake Sevan basin.

Prof. Haripriya Gundimeda, Department of Humanities and Social Sciences, haripriya.gundimeda@iitb.ac.in