

## Compendium on Water and Economics

Given the growing and significant role played by economics in the terrain of water management this compendium provides a collection of readings covering various aspects related to water and economics. With the increasing population and pollution, there is tremendous stress on water resources. The increasing demand for water for both domestic and commercial purpose has added pressure to limited fresh water resource. The consumption of water by different competing sectors has increased the economic value of the resource. The idea behind applying economic instruments in water management stems from the fact that it ensures efficient and wise use of water that either aims to reduce the quantity of water consumed or increase the returns to the investment made on water infrastructure. Assigning economic value to water would ensure efficient use of water has been embraced by many international organisations and national governments, who are giving primacy to reforms that support application of more economic instruments.

While the issue of privatization of water, polluter pays, how to assign an appropriate price to water remains at the heart of water and economics debate the concepts of rainwater harvesting, water audits and water conservation have also attained tremendous currency in the recent times. The motive behind all these initiatives remains improving water efficiency.

That said application of economical and financial instruments in water is growing it should however not be confused that determining a suitable price, tax and subsidy is not left to the market completely as other socio-economic factors of the people are to be taken into consideration. It is here where the role of different institutions acquires significance. Institutions can be either rules, norms, legal framework, policies or procedures. These institutions evolve, maintain and change over a period of time according to change of actors who make decisions about the resource and are also dependent on availability of the resource. An analysis of these institutions thus becomes important as it helps one understand the existing legal and institutional options.

Economic and financial instruments also inform decision makers, regulators and other stakeholders about the possible costs of any proposed project that will have impact on environment and on people. To be effective, it therefore requires active involvement of all concerned stakeholders in the decision making process that leads to assigning an appropriate economic value of water.

This compendium can be used for educational programmes and capacity building activities. It provides the reader with basic concepts and principles of economic and aspects of water management with focus on South Asia region. For this purpose it is structured in eight themes that addresses the following:

Theme 1 on Introduction to Water and Economics is structured to give an overview of the intimate relationship between water and economics. It emphasises on issues of economic concept of value and how it is applied in water, the purpose of pricing water and how the different characteristics of water put together makes it as a different from other resources.

Theme 2 on Institutional Economics and Property Rights of Water sheds light on the Institutional aspects governing water, which includes the evolution of institutions, the interactions between them, how they change over a period of time and the problems that they encounter.

Theme 3 on Valuation and Pricing of Water Systems and Theme 4 on Privatization of Water deal with pricing of water, the concept of willingness to pay for services, the reforms that are underway that take into consideration subsidies to be given to poor people and the contentious debate of water privatization.

Theme 5 on Economics Associated with Floods engages with issues of economic losses incurred due to natural disaster and the uneven distribution of benefits that emerge from flood protection projects.

Theme 6 on Economics Associated with Pollution deals with the impact of water pollution on the water quality in developing countries, the contested issue of polluter pays and the cost of calculating the cost if water pollution.

Theme 7 on Economics of Community Managed Irrigation, Participatory Irrigation and Water Policy Reforms deals with a range of issues such as how to manage the common property resources effectively and efficiently, the method through which rules are developed to manage the resources, how price is set in irrigation sector, the institutional reforms in the water sector and the political economy and the risks involved in such reforms.

Theme 8 on Economics of Ground Water in South Asia covers a range of issues surrounding the application of economic instruments in ground water management and the role of ground water markets in South Asia region.

The format for this compendium has been adapted from the staff training on Water and Economics, organised during 10-17 March 2008 at Delhi, India. Majority of the readings were provided by resource persons who were participants in the training. A brief on the training is provided in the next chapter.

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