

Session Report:

Water Resources and Integrated River Basin Management

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Co-existence with Floods and the IHP Asian Pacific FRIEND

by Kuniyoshi Takeuchi

Selected Experience and Emerging Challenges on International River Basin Management in Asia

by Ti Le-Huu

Introduction of the Projects for the Mam Ngum River Basin Development and Management in Lao PDR

by Langsy Sayvisith

Integrated River Basin Management

by Masato Toyama

Integrated River Basin Management Fosters Sustainable Development

by Dr. Ralph R. Peterson



Prof. Kuniyoshi Takauchi



Dr. Ti Le-Huu



Dr. Langsy Sayvisith



Dr. Masato Toyama



Dr. Ralph R. Peterson

1. Summary

The panelists, who are all experts on water resources management, addressed complex issues related to various aspects covering both the present and future developments in integrated river basin management. The contents of presentations and discussions focused mainly on the current efforts in terms of programs of international cooperation aimed at mitigating threats and exploiting sustainable opportunities.

Integrated river basin management (IRBM) has been widely recognized as an effective way of managing the environment and human activities as they interact with each other. This involves taking account of the interdependency of natural and human factors within a catchment and has evolved to include not only scientific and technical assessments but also consideration of socio-economic issues. Successful IRBM programs involve local communities and their representative organizations and must integrate land use planning and development control into planning the use of water. Since it is consistent with basic ecological principles, IRBM is more likely to result in plans that are sustainable in the long term.

The ideas presented by these speakers were mostly interrelated and emphasized the need for efficient and sustainable utilization of rivers to solve water problems. The mission statement, objectives and solution principles of CALFED can be adopted universally to ensure sustainability. The effectiveness of integrated river basin development depends on the cooperation among the riparian communities or countries that share the benefits. Shared vision of cooperation, mutual understanding, trust, respect, and the pursuit of a common goal are key to the success of development cooperation.

As international waters becoming a critical issue, there is now an urgent need for regional collaboration and international cooperation. This is also absolutely necessary for promoting best practice and to help poor countries to carry out their proposed projects in a sustainable manner. Also, the need for regional cooperation arises for sharing information. For instance, sharing information on weather and hydro-meteorological forecasts and relevant data are essential for emergency measures to be taken to mitigate losses due to floods. Recognition of the diversity of river functions and rethinking a river as an integral unit are also necessary for successful integrated river basin management.

Professor K. Takeuchi addressed some detailed concepts of co-existence with floods and also introduced the activities of the UNESCO IHP and Asian Pacific FRIEND.

Dr. Le-Huu Ti focused on the experiences and challenges on two selected international river basins in Asia; Mekong River Basin and Ganga-Bramaputra-Meghna River systems.

Mr. L. Sayvisith introduced the projects proposed for Nam Ngum river basin development and discussed its current status.

Mr. M. Toyama, on behalf of Mr. Oda, discussed the key issues related to integrated river basin management, and introduced the Third World Water Forum.

Dr. Ralph Peterson presented how integrated river management fosters sustainable development using an example of CALFED Bay-Delta program.

2. Presentation Highlights

More lives are lost in floods in Asian countries. Co-existence with floods should be the basic strategy for flood management. Professor Takeuchi explained several concrete measures that can be taken for co-existence such as preparedness, evacuation, zoning, flood insurance, flood proofing, flood insurance, and emphasized the requirement of accurate hydro-meteorological forecasts. For these purposes, fourteen countries have assembled under projects of UNESCO IHP and Asian Pacific FRIEND. Catalogues of rivers and Asian Water Archive were published and a distributed hydrological simulation model was developed as applicable to largely sparsely gauged basins. Finally he stressed on the necessity of more regional collaboration for disaster managements.

Mekong River Basin and Ganga-Bramaputra-Meghna River systems are the most important river basins in South East and South Asia. Dr. Ti addressed some lessons of past development cooperation in Mekong Basin, such as shared vision of cooperation, mutual understanding, mutual trust, the prosperity of regions, as a common goal. Then, he introduced recent major initiatives for better development in the Mekong River basin in the context of national efforts for the better management of these international water resources. Finally he attempted to draw up a general observation for possible application to other international river basins in the region.

Although Laos is rich in water resources, seasonal fluctuation is tremendous. Dr. Sayvisith pointed out that this natural endowment has been currently threatened by deforestation, soil erosion, floods etc. To solve these problems, the Government of Laos has started the integrated development and the management of water resources in a sustainable manner, considering environmental protection and conservation as the first priority. As a result, the Water Resources Coordination Committee has been established and the Forest Conservation and Afforestation Project has been implemented. Also, Nam Ngum Watershed Management Study has been undertaken by ADB. Water Control Project was proposed by the Lao Ministry of Agriculture to expand irrigated areas, to control flooding and drought control by diverting water from the reservoir and constructing river regulation structures.

Mr. M. Toyama presented the key issues particularly related to integrated river basin management. In considering water problems from the perspective of the river basin, the following aspects are needed to be taken into account: to consider the river basin as an integral unit, to recognize the diversity of river functions, to cooperate closely and collaborate harmoniously respecting the regional needs and the natural, social and cultural features. Then he talked about the World Water Council and World Water Forum, with the message for river basin management dispatched in the Second World Water Forum. Finally, he introduced the Third World Water Forum, to be held in Kyoto in March, 2003.

Sustainable development requires use of the natural systems on which society depends for economic and social health in a manner that balances human activities with the long-term carrying capacity of these systems. Dr. Peterson introduced the CALFRED Bay-Delta Program implemented in California. The objectives of CALFRED Bay-Delta Program were to provide good water quality for all beneficial uses; improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species; more supplies of water and its projected beneficial uses; and reduce risk to land, economic activities, water supply, and ecosystem function from catastrophic levee breaking. Solution principles for these objectives were also introduced.

3. Discussions

After presentation of each speaker, discussions were made not only on the presented issues but also on other related topics. Major points discussed were on various kinds of conflicts, which arise especially related to scarce resources; how to overcome disagreements; funding systems including the method of tax mobilization, such as the application of contingent valuation methods and the dependency on the relation with resource richness; the relation between economic and environmental issues and the removal of dams in the USA; dependency on perception of conflicts, and several other future problems. These issues were intensively discussed.

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