

## Preface

Water resources in the Asia region are very severe and scarce that should be supplying by only 36% of world's water resources amount for a half of population in the world. In addition, a very rapid population increase is apparent in recent years and the problem is getting very serious. This rapid population increase causes not only increase of water demand but also affects largely the land use change, which causes land degradation, soil erosion, change in hydrologic regimes and environmental qualities. In the past century, the land use change in the Asia region occurred from the forest to agricultural uses, but in the last few decades the land use conversion has been mostly from the agricultural to non-agricultural uses. For example, in Indonesia, the critical watershed reached up to 60 watersheds with areal extent of 43 million hectares in 1998 and has increased to 59 million hectares in 2005, and the extent of these critical watersheds influences strongly on the regional hydrological condition and the water resources status.

To overcome those water crises, it is necessary to clarify the causes and effects of watershed hydrology aspects on water resources conservation through the collaborative research among Asian countries by developing a methodology and analytical methods for the desired watershed management. It is also necessary to enhance the technology transfer, the capacity building and the water governance to maintain and continue the established watershed management for sustainable water resources development, water uses and its conservation in a future.

The JSPS-DGHE (Directorate General of Higher Education, Indonesia) Joint Research Project on "Watershed Management for Sustainable Water Resources Development in a Humid Tropical Region" has been launched in 2007 for three years continue project. The purpose of the project is to clarify what the desired watershed management should be for sustainable water resources development and water uses with an emphasis on the land use management for water resources conservation and to construct a new model of "Integrated Watershed Management" which will lead the decision making together with the capacity building and the water governance.

The Proceedings contain 9 papers of the project members presented at the International Workshop on Integrated Watershed Management for Sustainable Water Use in a Humid Tropical Region held at University of Tsukuba, Japan on 31 October, 2007. This workshop was organized by Prof. T. Tanaka, PI of the Project, Director of Terrestrial Environment Research Center (TERC), University of Tsukuba and sponsored by JSPS and TERC.

We hope that this initiative of the project and its deliberations will bring benefit to many of us and the concept of an integrated watershed management by supporting with the framework of capacity building, water governance and decision making process will be widely spread in Asia regions in near future.

29 February, 2008

Organizer

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