ble water policy for our world

GWCRI

ll goal of
l Water Cycle
h Initiative
WCRI)

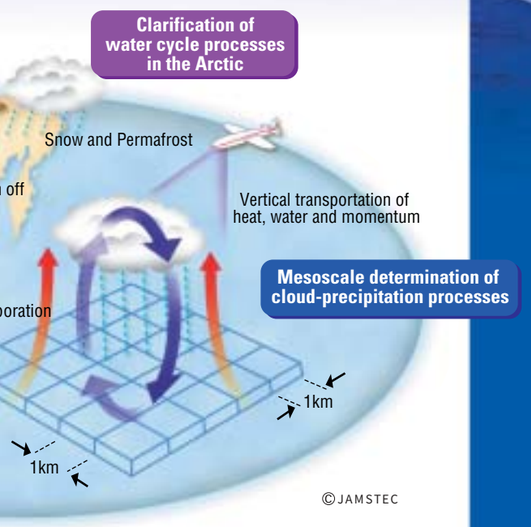
ntific knowledge and a techno-
stablishing water management
or minimize the adverse effects
demand, and circulation of wa-
stainable development into the
knowledge and foundation, it
m water management meth-
ion. In order to achieve its
has formulated four pro-
ntegrated by means of
cycle information.

Program
for interaction of water cycle and society

This program forecasts changes in the water cycle and their impact on the environment, food production, water resources, ecosystems, human health, society, and the economy.

Program
for comprehensive assessment of scenarios and technologies

This program assesses the applicability of existing technology, develops new technologies, and suggests scenarios for achieving optimum water management.



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Program for interaction of water cycle and society


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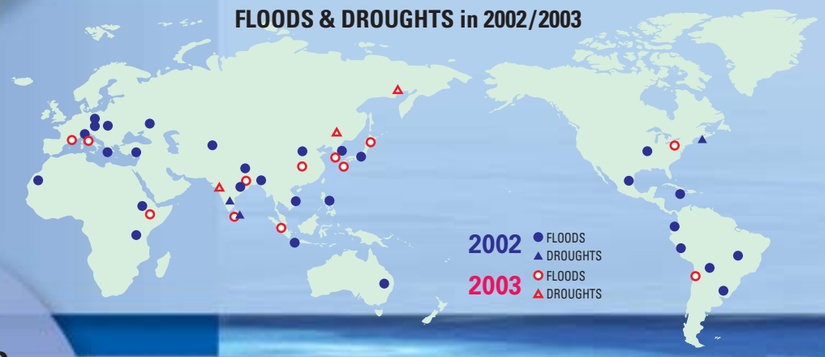

Understanding the structures of problems induced by the water cycle

The effects of the water cycle and extreme events on society

Meteorological and hydrological variations in time and space bring floods and droughts to all parts of the world. Too much water causes rivers to flood and mountain slopes to fail, resulting in severe damage. Too little precipitation causes water shortages and lowers water quality. This program looks at the influence of water cycle variations and extreme events on food production, water resources, ecosystems, human health, society, and the economy, and provides quantitative evidence that reflects the long history and role of water in our society.

Water cycles and the future of various regions: the consequences of human activities

Human activities in river basins affect the water cycle. Population growth makes the development of river basins inevitable, but this development results in deforestation, reductions in arable land, urbanization, and increased demand for both water and systems to manage agricultural, industrial, and urban wastewater. The situation is more serious in Asia and Africa where population growth is remarkably high. This program predicts how human activities affect the water cycle and what will happen in various regions in the future

Program for comprehensive assessment of countermeasures and technologies


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Exploring ways to link the understanding and prediction of phenomena and the characterization of problems to the resolution of water issues

Scientific and universal knowledge must incorporate regional experiences and wisdom

It is extremely important for the GWCRI to integrate the above three programs into a single, concrete, and practical form. This idea is closely related to the framework of the various water problems also described above, making it essential to advance these programs while maintaining a close relationship between them. It is also important to integrate observation data with other useful water information as well as with scientific and universal knowledge obtained from a highly accurate prediction model of water circulation. Finally, it is important to analyze and incorporate the regional experiences and knowledge gathered from case studies.

Scenarios for a society that can accommodate changes in the water cycle and develop new techniques

It is important to establish scenarios to accommodate future changes in the water cycle, and to predict and assess the effects of the measures proposed in each scenario. The government and people of each nation will select the appropriate scenario, but in order to preserve the global environment in the future, it is essential to have in place a readily understandable scientific foundation and the necessary political tools for developing the appropriate measures. It is also necessary to develop techniques to accommodate changes in the water cycle. Based on this research, the GWCRI will propose scenarios for creating a society that can accommodate changes in the water cycle. These scenarios will include the formation of an infrastructure, the preparation of a social system, the introduction of an economic structure and the development of new techniques.