

3.9. Freshwater Resources Management Project

IGES Secretariat

In the Second Phase of strategic research, IGES will initiate a new project concerning freshwater resources management in Asian countries. As for administration of the project, there is no specialist on the subject among the researchers at IGES at the moment. Therefore, IGES plans to publicly announce the launch of a project on the theme written below, select a team with a suitable research plan, and fund it as an IGES research project for the Second Phase. What is defined below is only a basic idea for designing a plan, and the actual plan does not necessarily correspond with the content of the following, as long as it is suitable for the theme proposed by IGES.

1. Theme of the project

The project will deal with the issue of freshwater resources management, which is estimated to become one of the major global issues in the twenty-first century. It will focus on Asian countries, e.g., the Mekong River basin, and will research on new policy methodologies such as integrated water resources management. The results from the research will be presented to policy makers, to be utilized for realizing environmentally sustainable development in the region.

2. Background (need for the research)

Freshwater resources management depends greatly on the geography and climate of the region. The United Nations reports that the proportion of the global population suffering from water scarcity is expected to rise from about one-third in 1995 to about two-thirds in 2025. The World Bank also reports its evaluation that about 2 billion people are expected to be prevented from having access to a supply of safe drinking water in 2020. For these reasons, the management of freshwater is becoming a global issue, and the following concerns were pointed out in the declaration of ministers at the Second World Water Forum, held in March 2000:

- access to safe and sufficient water and sanitation,
- enhancement of food security
- protection of ecosystems through sustainable water resources management,
- trans-boundary sharing of water resources through sustainable river basin management, and
- security from floods.

The quantity of water consumed in Asia alone is 2.85 trillion cubic meters per year, more than any other region in the world, and this is expected to increase 150% towards 2025. Therefore, it is essential that research be conducted for the implementation of Integrated Water Resources Management (IWRM), which plans and manages the freshwater resources and land use of the Asian region, while taking into account the social, economic, and environmental factors of the region.

3. Objectives (linkage with policy strategies and practicability)

In order to carry out integrated water management, concrete objectives and strategies for its realization need to be identified. Moreover, appropriate indices to measure its progress must be developed, and the objective of the project is in setting guidelines for these purposes. In addition, considering that more funding is needed for the sustainable development of developing countries, such methods for using private funds need to be developed, as effective assistance for the promotion of IWRM, or application of the concept of “full cost pricing” (appropriate price to be paid by water users).

The guidelines set up by the project and other research results will be presented at “Rio+10,” the Third World Water Forum to be held in the prefectures of Kyoto, Shiga and Osaka in March 2003, and other conferences such as those hosted by ESCAP, to be presented to Asian nations.

4. Target Groups

Target groups include national governments and policy-makers of administrative organizations in the Asia-Pacific region, especially the Mekong River basin, organizations for financial support such as World Bank and Asian Development Bank, international organizations involved in environment and development such as UNDP and ESCAP, and organizations and NGOs related to the World Water Forum.

5. Research Aims and Expected Outcomes

- For the purpose of conducting integrated water resource management in the Asian region, there will be case studies, such as that aimed at the Mekong River basin, and after grasping the real situation of water resource management, the aims, such as preservation of ecosystems and the use of drinking water will be decided. At the same time as making strategies for achieving this, indicators for the purpose of grasping and evaluating the progress of the situation will be developed.
- In particular, regarding the finances that are necessary for conducting water resources management, private investment, based on introduction of “full cost pricing” in addition to ODA, will be discussed and the guidelines will be formulated.
- Research achievements will be presented at the World Water Forum, the United Nations Commission for Sustainable Development (CSD), ECO ASIA, and ESCAP conferences. Through this project, the Institute for Global Environmental Strategies (IGES) will contribute to discussions, regarding the practice of integrated water resources management in the Asian region and also future proposals for an multilateral agreement for fresh water, so called the “Freshwater Resources Convention.”

6. Method and Schedule

Method

Regarding freshwater resource management, there will be two sub-themes of strategic plan investigations for the purpose of conducting integrated water resource management and the creation of investment for that purpose.

Regarding the Integrated Water Resources Management Strategic Plans Investigation, case studies, such as that in the Mekong River basin, will be conducted and the situation of current water resource management system and issues to develop international cooperative systems and integrated water resource management will be understood.

Furthermore, the targets for international water resources management, water usage for drinking water and irrigation, the protection of ecosystems, prevention of floods, etc., will be discussed. Then strategies that examine in detail how national governments, the regional governments, residents, and international organizations can accomplish this through cooperation, and systems for integrated water resource management will be prepared.

In addition, indices for the purpose of evaluation of the progress for the integrated management resources will be developed. Based on these study results, guidelines for the purpose of enforcing integrated freshwater resources management in the Asian region will be formulated.

Regarding the investment that is necessary for conducting integrated water resource management, there will be an investigation as to how the existing ODA in the regional case studies mentioned above is used, what kind of problems there are, and the possibility of using private investment, and any bottlenecks. Furthermore, there will be research of application measures for private investment, for example by introducing the “full cost pricing approach.” The results will be included in the guidelines.

Yearly plans

First Year Plans

- **Investigation of integrated water resources management strategy**

A case study in the Mekong River basin, for example, will be conducted and themes of the real situation including land use of the basin, water use according to each usage, and the water resources management legislative system, the situation of international cooperation with related countries and international organizations, and obstacles for integrated water resource management will be investigated.

- Investigations of investment for the purpose of integrated water resource management.
 - In the case study regions, investigations regarding the ODA that is able to make use of integrated water resource management and the possibility of use of the private finances will be conducted.
 - An international seminar by experts about practical measures for private investment by the introduction of “full cost pricing approach” and proper application of the principle of polluter pays principle will be held.

The second year

- Investigation of integrated water resources management strategy
 - Case studies in the Mekong River basin, for example, will be conducted, and the targets for international water resources management, water usage for drinking water and irrigation, the protection of ecosystems, prevention of floods, etc., will be discussed. Then strategies that

examine in detail how national governments, the regional governments, residents, and international organizations can accomplish this through cooperation, and systems for integrated water resource management will be prepared.

- For the purpose of comparative discussions of the results of case studies and clarifying characteristics in the Asian region, an international workshop will be held.
- Investigation of investment for the purpose of integrated water resources management.
 - A draft of guidelines based on the achievements of case studies and international workshops will be prepared.
 - The results will be reported to the “Rio + 10” conference and Third World Water Forum.

The third year

- The results of research will be summarized and the guidelines for the purpose of enforcing integrated fresh water resource management in the Asian region will be formulated. Indices for the purpose of progress evaluation of integrated freshwater resources and measures for investment supply will be included.
- Presentations of guidelines to ECO ASIA, ESCAP, donor organizations and each government in the region, and in addition, the guideline will be utilized as one of the bases for discussion of a future water resource management convention.

7. Personnel Composition of the Project In and Outside of IGES and Cooperative Organizations

Because there are no experts on the subject among the researchers at IGES at the moment, IGES will publicly recruit researchers and research plans on this subject.

The number of staff for this project will be as follows, as a basic rule (with possible cases of exceptions):

- Project leader: 1 (may be a visiting researcher)
- Research Fellow: 1 (may be a visiting researcher)
- Research Associates: 2 (may be visiting researchers)
- Visiting Researcher: 1
- Project Secretary: 1

The following is the outline of the procedure for setting up the project:

1. Outline and draft budget of the project will be decided by the Board of Directors
2. Project Application Committee will be established by IGES members (President and Project Leaders) and specialists from outside of IGES. The announcement of public recruitment will be conducted based on 1.
3. Project plans will be recruited from researchers outside of IGES.
4. Evaluation and selection of the draft of the project by the Project Application Committee
5. The selected researcher from outside of IGES will become a Project Leader as an IGES (visiting) researcher, and start the project. IGES will employ (visiting) researchers and other

staff as necessary. The project secretary will work full-time at IGES as a basic rule, for communication purposes between the Project Leader and the IGES Secretariat.

6. At the beginning and at the end of the fiscal year, the research plan and the research results of that fiscal year, based on the research plan and the research output reports, will be evaluated at the Project Application Committee. The outcome of the evaluation will be reported by the Project Leader to the Boards of Directors and Trustees.
7. The Project Leader will attend the project leaders meeting every month, and report the progress of the research, as a basic rule.
8. The Articles of Associations of IGES should be referred to for other clerical procedures.

The possible conditions for public recruitment are as follows:

Conditions for Public Recruitment

Research Period: From fiscal years 2001 to 2003 (to be continued for three years as a principle)

Researcher: The representative will be the project leader, who will direct the project.

(see 7 for details).

Budget: About xxx million yen annually

Selection and Evaluation Methodology of the project: See 7.

Period of Recruitment: Fiscal 2001 or the period that will be posted on the IGES web site.

Application: An application form (to be drawn up by IGES) filled in English or Japanese has to be submitted to IGES

8. Project Management

This research is to be conducted by a project leader outside of IGES, but the project leader will be responsible for the appropriate progress and management of the entire project. The leader is expected to keep close ties with the IGES Secretariat via communication through the project secretary, etc.

9. Links with International Programs

Ties with activities of World Water Forum, as well as with ECO ASIA and “Rio+10,” will be important. For this purpose, the project will aim to cooperate with organizations that have links with the forum, such as World Water Council, World Bank, UNEP, and WHO. Since the research of the project will focus in the Mekong River basin, the project will seek cooperation with the Asian Development Bank and ESCAP, and with regional offices of UNEP and WHO .

10. Expected External Funding

Joint sponsorships will be sought from the World Water Council, the World Bank, and the Asian Development Bank, for the participation in the World Water Forum.