

Cooperation with Universities for Evaluation in the case of Hiroshima University

Since FY2004, JBIC has been making efforts to utilize the knowledge of universities for evaluation. JBIC appoints external evaluators from university and research institutions to undertake ex-post evaluations of ODA loan projects where the expertise and application of the theories and experimental research carried out in these institutions are needed. In these cases, in addition to ex-post evaluations based on the five DAC criteria (relevance, efficiency, effectiveness, impact, and sustainability),

which are international evaluation standards, evaluations on particular topics that both matches the expertise of the evaluator and the characteristics of the project are conducted (see page 12 for details).

The examples below present the results of evaluation studies which JBIC commissioned to Hiroshima University, a university which has concluded an agreement of cooperation with JBIC.

Example 1: Urban Development in Beijing and the Significance of Water Supply Infrastructure from the Perspective of the Water Cycle (China)

JBIC has provided assistance to China for many projects in the water sector. This year in the ex-post evaluation of the "Beijing No. 9 Water Works Expansion Project" and the "Guiyang Water Supply Project," JBIC enlisted the expertise of Associate Professor Kaneko (see profile on page 29) and his team in the area of environmental systems engineering. In addition to an evaluation using the five DAC criteria, a study of the relation of urbanization and the water cycle in the areas covered by the projects was undertaken. The summary below, briefly describes the analysis for Beijing.

Analysis of Urban Expansion and Changes in Land Use

Utilizing land use information based on Landsat satellite data and statistical data on population distribution, an analysis of

the spatial distribution of water demand in Beijing was undertaken (see Figures 1 and 2). Per capita water demand in Beijing is declining annually due to efforts by the city's residents to conserve water and the development of new technologies, but rapid urbanization (changes in land use) and population growth are resulting in an increase in water demand over a wider area. Furthermore, in contrast to the expansion of urban areas, which as shown in Figure 1 is almost concentric, demand for water as shown in Figure 2 is somewhat acentric in the northeastern area of the city where the population is concentrated. This reflects the lagging infrastructure of the south in comparison with that in the north. In the southern part of Beijing, where population is expected to grow in the future, improving infrastructure is an issue which needs to be addressed.

Figure 1. Analysis of Land Use in Beijing Using Remote Sensing Data

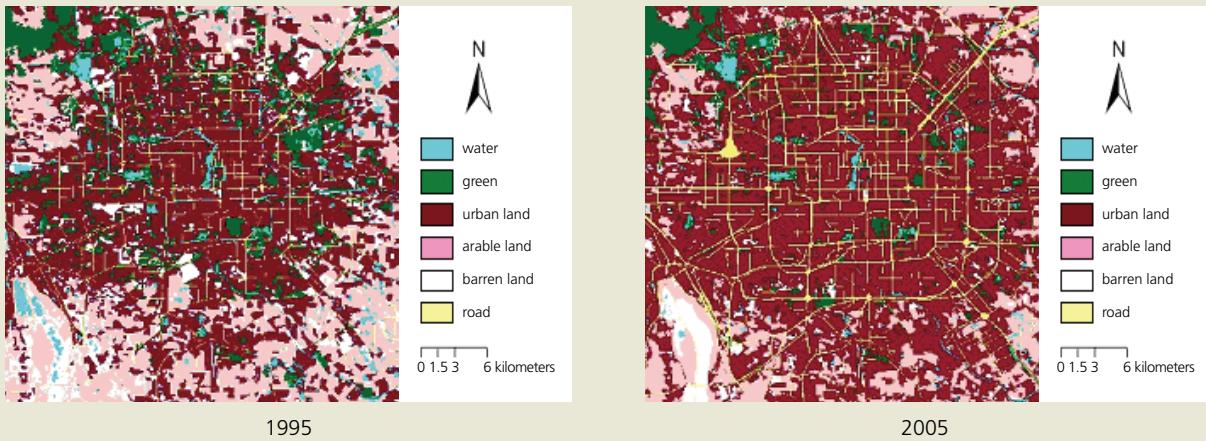
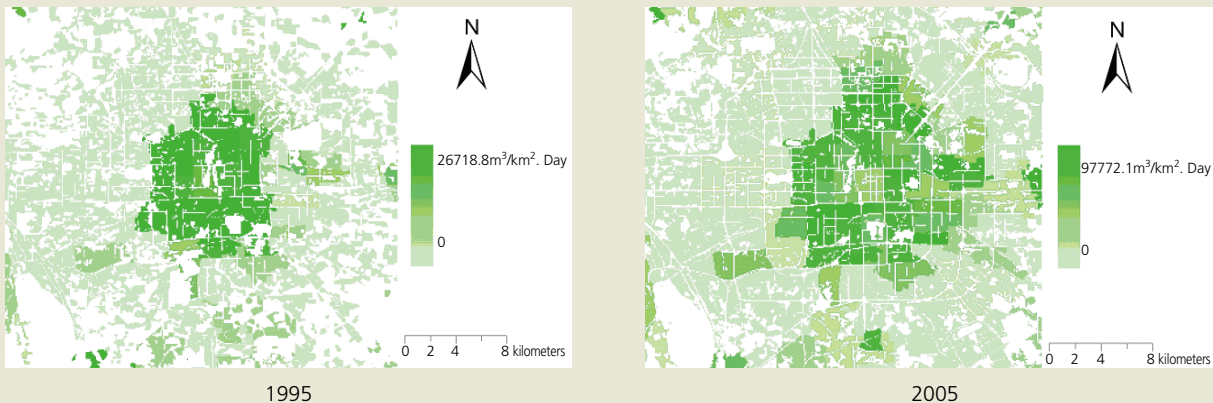


Figure 2. Analysis of Water Demand in Beijing Using Remote Sensing Data



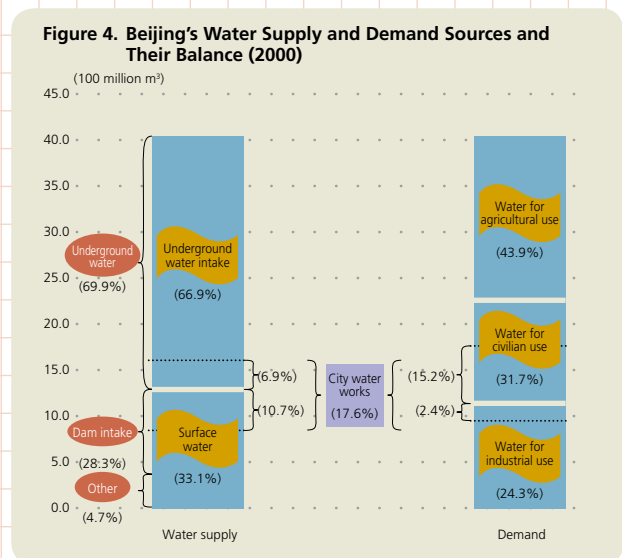
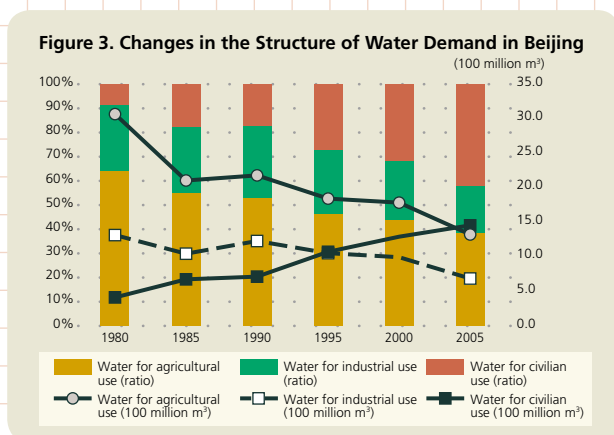
Changes in the Water Demand Structure and the Balance of Supply and Demand

In 1980, more than 60% of all water demand was for agricultural purposes. In 2005, however, civilian usage of water, which includes water for general household, increased considerably while agricultural and industrial water usage decreased in the wake of ongoing urbanization (see Figure 3). At the same time, as of 2000, underground water accounted for about 67% of all supply while surface water accounted for the remaining 33%, which indicates that dependence on underground water remains high (see Figure 4). Water supplied via water works accounted for 17.6% of all demand and this accounts for only 30% of supply for civilian and industrial use. Furthermore, there is a strong possibility that growth in water demand and the lack of infrastructure will further increase dependence on underground water. Since plans for transporting water from outside the region such as Hebei Province under the Nan Shui Bei Diao Project (i.e. transferring water from the south to the north) have begun,

demand for water treatment plants utilizing advanced treatment technology is likely to increase.

Summary

Results obtained at the ex-post evaluation were simply that, (1) water demand in Beijing is not showing a significant increase and (2) high dependence on underground water still remains. On the other hand, in the above study, it became clear that as total water demand is expected to increase in the future together with Beijing's population, the level of underground water is dramatically falling and prompt action to mitigate dependence on underground water is necessary. Therefore, infrastructure improvements for the efficient use of surface water are vital and efforts in this area must be continued in the future.



Example 2: Measuring Improvement in Capabilities of Administrative Officers as a Result of Scholarship Program (Indonesia)

Japan, including JBIC, provides assistance in a number of ways to students in developing countries whose study is financed by their governments. The Professional Human Resource Development Project (2) (see page 71) of Indonesia was undertaken to provide opportunities to study toward a degree or to provide short-term training to government officials who will become core administrative personnel in Indonesia's government agencies. In addition to the project ex-post evaluation based on the five DAC criteria, a survey was conducted on capability improvement for those who studied under this project.

Because no specific target regarding capability improvement had been set for the project, a list of competencies required by government administrative officers in Indonesia was compiled in four areas: knowledge, technical and analytical skills, attitude, and values. A questionnaire survey was then conducted of 709 Indonesian government administrative officers who had studied in their country or in Japan under this project (total respondents: 236).

As a result, 19 competencies required for Indonesian government administrative officers were identified. Rather than "knowledge," they centered on the areas of "technical and analytical skills," such as logical thinking, problem-solving skills, and the ability to collect and process information, as well as the area of "attitude" such as sense of responsibility, ethics, and goal orientation. In terms of the extent to which these particular skills improved, there were differences in survey responses depending on the item and the location of the study. However, overall the respondents reported that their capabilities had highly

improved through their studies.

In addition to the core activities such as lectures and seminars, respondents indicated that a wide range of activities were instrumental in enhancing their capabilities, such as experiencing teaching and/or research assistants, interacting with other students, etc. It was proposed that in future consideration of scholarship programs, competencies that should be improved through a scholarship program need to be clearly identified at the planning and implementation stages, and the necessary curriculum / study program should be incorporated to improve such competencies .



People studied in Japan under this project, along with the external evaluators

External Evaluators: Mr. Norihiro Kuroda, Mr. Kazuhiro Yoshida (Hiroshima University)

Profile of Mr. Kuroda

Completed Masters degree in education at the University of Tokyo, Graduate School of Education. Joined the Ministry of Education before taking up the position of associate professor in 1995 and professor in 1997 at Hiroshima University. Specializes in international comparative study of education policies and research in international cooperation and exchange in education.