Chapter 2 Project Evaluation

Overview
Projects Evaluated in Fiscal 2001
China
Korea
Indonesia
Myanmar
Philippines
Thailand
Bangladesh
India
Nepal
Pakistan
Sri Lanka
Hungary
Jordan
Syria
Turkey
Yemen
Cameroon
Côte d' Ivoire
Ghana
Guinea
Kenya
Malawi
Mauritius
Chile
Ecuador
Jamaica
Paraguay
Peru

Overview

1. Projects Evaluated in Fiscal 2001

The number of projects evaluated in this report totals 156. Among these, projects currently in their second year after completion totals 33, and the remaining 123 are projects completed in the past, for which ex-post evaluation had not been previously carried out.

Geographical distribution of the 156 projects shows that the great majority was located in the Asian region (38 projects in Indonesia, 21 projects in China, 18 projects in the Philippines, and so on). The share by sector was led by transportation, followed by electric power, agriculture, irrigation, and flood control, etc.

Sector/Region	Asia	Middle East/ Europe	Africa	Central and South America	Total
Electric Power	25	1		2	28
Transportation	35	1	6	2	44
Telecommunications	17		2	1	20
Mining and Manufacturing	10				10
Agriculture, Irrigation, and Flood Control	19	1	1	1	22
Social Services	12	1	1	1	15
Development Loan through Banking System	15	1		1	17
Total	133	5	10	8	156

Note: Of the total of 156, 154 projects were subject to the project-level evaluation process, while the remaining two were the subject of theme-based evaluations. Because related projects were compiled into a single report, the total number of evaluation reports amounted to 146, including the two theme-based evaluations. The figure excludes eight projects for which re-evaluations (second ex-post evaluations for the same project) were conducted.

2. Project Evaluation

The following is a summary of evaluation findings for all 156 projects evaluated in fiscal 2001, based on the five evaluation criteria of Development Assistance Committee (DAC) of OECD.

(1) Relevance

Because ODA loan projects are carried out on the premise that the importance and priority of each project, within the scheme of the development plan of the developing country concerned is ascertained at the time of appraisal, the great majority of projects subjected to evaluation have already been determined inherently relevant within their sectors, and are thereby considered to have an ongoing critical role. Among the projects reported upon here, a number of them have effectively fulfilled their purpose over an extended period of time following completion. For other projects, however, the environment in which they existed, including political climate and policy as well as economic circumstances and systems, has changed since the project was initiated, to the extent that these factors have affected the standing of the projects or have compromised their effect and/or sustainability.

(2) Efficiency

Implementation of development projects in developing countries often involves a far more complicated environment and far greater risk than in developed countries, including Japan. Accordingly, among the projects evaluated in this report, there are a number of cases where original plans had to be altered due to delays in administrative procedures, geographical factors related to the project site, and so on. Further, the implementation period of some projects was compromised by difficulties with the natural environment—for example those under construction during the rainy season—or by problems with site land acquisition. Others were adversely affected by unexpected flood damage.

In addition, many projects required a longer period than stipulated in the original plans for the process spanning determination of project design details through international competitive bidding by which contractors are selected for ODA loan projects.

(3) Effectiveness and (4) Impact

Among the projects evaluated in this report, those pertaining to the top two sectors—the transportation sector (roads, ports, etc.) and the electric power sector (power generation, distribution, etc.) contribute to regional development in the form of new investment geared toward improving the state of regional logistics and electric power. Further, in the areas of agriculture, irrigation and flood control, as well as urban water supply projects, positive effects in the form of increased income for target farmers, protection against flood damage, improved living environment, and so on, have been verified not only by quantitative analysis, but also by interviews with local residents.

On the contrary, expected demand for services generated by some projects has diminished over time, while the impact of other projects was adversely affected by a diverse range of factors, including plant breakdowns, natural disasters, trade and pricing policy and the Asian currency crisis.

The following is a breakdown by sector of typical examples of projects where effectiveness and impact have been verified, as well as cases where results have so far proven limited in comparison to the original plan. With regard to the latter, in addition to steps taken by borrower country governments and executing agencies, JBIC plans to implement follow-up measures, tailored to each individual project, to the greatest possible extent, including via its Special Assistance for Project Sustainability (SAPS) program.

[Transportation: 44 projects (Roads and Bridges: 21, Ports: 8, Railroads: 10, Airports: 5)]

- Highway projects located in the Bangkok and Jakarta metropolitan areas were found to have contributed greatly to the alleviation of severely worsening traffic congestion—a product of urbanization and economic development in the central and suburban areas—and to improve logistics operations. The Second Mandaue-Mactan Bridge of Cebu, the Philippines, provided a transport route to accommodate increases in traffic volume, contributing to the development of tourism and industry of Cebu Island. The bridge was also significant as an example of transfer of Japanese advanced bridge-building technology. Other transportation sector projects (rural road projects and bridge projects) in Indonesia and the Philippines have also been positively evaluated. Prior to project implementation, unpaved roads and deteriorating bridges had been a source of traffic problems for trucks and other heavy vehicles; subsequent to project completion, traffic volume, including of vehicles in these categories, has ballooned, resulting in a higher standard of convenience for residents and facilitating the establishment of factories in areas linked by rail as well as improved transport of agricultural commodities. In addition, port-related projects implemented at Qingdao and other Chinese ports have served to accommodate the increased logistics and import/export commodity volume that has resulted from the economic development of port hinterlands.

Indonesia " Semarang Port Development Project(II)"

- On the contrary, traffic levels have not reached original targets for a highway bridge project located in China, nor for a road project carried out in Kenya. In the Chinese case, these results are attributed to delays in the construction of a road critical to the bridge project. As for the Kenyan project, delayed construction due to flood damage has left a portion of the road unpaved, and therefore underutilized. Further, levels of passenger and cargo volume transported have so far fallen short of expectations for a subway project conducted in India, and for a Paraguayan airport project, due to initially overestimated plan, competition with other means of transportation and so on. In Myanmar, a railroad built to enable transport to a cement factory has not achieved the planned cargo volume due to reduced factory production. (In efforts to resolve the problems of the Indian subway project, adjustments of bus routes have been considered by the authorities concerned, based on the recommendation JBIC's SAPS.)

[Electric Power: 28 projects (Thermal Power: 10, Hydroelectric Power: 8, Power Distribution: 10)]

- Large-scale thermal and hydroelectric plants in India and China have served to accommodate the rapidly increasing demand for electricity in these countries, and to support economic growth by providing electric power to industry in localities concerned. Further, electricity distribution projects have also promoted the process of electrification of rural areas in Indonesia (excluding Java Island) and of agricultural villages in the Philippines. In the Philippines, nearly double the original target level has been achieved, with the number of households newly provided with electricity totaling approximately 190,000. The majority of respondents in interviews conducted with local residents said they felt the impact was positive, citing enhanced business chances—including the possibility of household industry—as well as improved standard of living, the opportunity for study during nighttime hours, enhanced security, and so on.

- On the other side, three thermal power projects, in Indonesia, India, and Bangladesh, experienced operational difficulties in the form of deterioration, breakdowns, steep fuel price increases, and so on. (The executing agency is considering rehabilitation plans for the plants, substitute fuel, etc.). Power volume produced at the Indian hydroelectric plant has fallen due to deficiencies in water supply routes stemming from problems with irrigation projects which were not the ODA loan projects. (Here, the executing agency is attempting to persuade irrigation authorities to remedy the situation). As for the power distribution sector, a project in the Philippines is currently operating under capacity due to delays and reductions in geothermal electricity generation plans for power supply. (Boosting is planned for some sections of the area).

[Agriculture, Irrigation and Flood Control: 22 projects (Agriculture: 6, Irrigation: 7, Flood Control: 9)]

- In Indonesia, ODA loan irrigation projects have been implemented to increase rice production and to achieve self-sufficiency in food supply. The projects covered in this report contributed to a wider area of cultivation and bigger harvests, and to higher family incomes and savings levels, as reported in interviews with local farmers. Further, small-scale irrigation projects carried out in three provinces of Eastern Indonesia—in cooperation with the United States Agency for International Development (USAID)—introduced participatory approach to project implementation. The program entailed the formation of farmers' organizations as well as provision of guidance on commercial farming, resulting in greater areas of cultivation and richer harvests. Irrigation projects in Pakistan and Jordan, carried out with emphasis on enhancement of irrigation facilities and guidance on agricultural technology, has likewise been a positive factor for a higher standard of living for farmers through expanded site cultivation as well as improved crop volume. Flood-control projects implemented in Indonesia have brought greater lifestyle stability to a significant number of local people in the form of improved work opportunities and the removal of the threat of flooding, according to interview data with local residents.

- An example of a less successful endeavor is of an irrigation works rehabilitation project in Indonesia. Due to problems with floodgate operations, irrigation water has not reached a portion of remote paddies, resulting in failure to recover land area for cultivation. (Japanese assistance is currently being provided to improve the effectiveness of a local irrigation association as part of a new ODA loan project).

[Telecommunications: 20 projects (Telephones: 14, Telex: 1, Broadcasting and Wireless: 3, etc.)]

- In China, projects providing telephone exchange offices and installation of primary cables (for nine provinces and cities around the country, Qingdao, Hainan etc.) have served to accommodate rapidly increasing demand, both for individuals and industry. In the Philippines, telephone networks have been expanded around the country via extended communications facilities. According to interviews with local residents, the ODA loan project has resulted in first-time installation of telephones for a significant number of households, improving commu-

nication between family members and enabling a greater level of convenience in terms of work opportunities.

- On the down side, a telex project carried out in Pakistan and a coastal communications system project in the Philippines are currently experiencing declines in usage rates due to dramatic leaps in the advancement of technology subsequent to project completion. In the case of the telex project, it has been inhibited by the popularization of fax machines and the Internet, and the coastal communications system project has been plagued by jamming due to the greater number of frequencies used by mobile telephones.

[Social Services: 15 projects (Water Supply: 5, Education: 3, Public Health and Medical Care: 7)]

- Water supply projects in Beijing (China) and Jakarta (Indonesia) also saw significant positive impacts, serving to dramatically bolster water supply in response to increasing demand stemming from urbanization and population growth, and improving the standard of living and sanitary conditions. It also helped prevent land subsidence, caused by the drawing of underground water, in Beijing. In the Philippines, water supply has been extended to rural villages, and waterworks projects are being operated and maintained with the participation of local residents. As related in interviews with local people, the overwhelming majority reported that their living environment and sanitary conditions had improved, and that they had been relieved of the hard labor involved with the task of drawing water.

- In the education sector, a project conducted at Indonesia's Bogor Agricultural University resulted in increased student enrollment due to improvements made in facilities and equipment. It also served to raise teaching staff standards through study-abroad programs, which in turn led to better training for personnel engaged in the creation of superior varieties of rice and fertilizer.

- In the medical care field, enhancement of medical equipment in public health centers in Peru led to improved health care in rural areas, with the number of patients referred to urban hospitals dropping dramatically. In Korea, ODA loan projects have led to the completion of the first stage of the establishment of the country's medical system by enabling the supply of medical equipment to national and private hospitals as well as research institutes.

[Mining and Manufacturing: 10 projects (Fertilizer Production: 6, Chemicals and Paper Production: 4)]

- In China, India, and Myanmar, manufacturing and fertilizer projects have led to the production of industrial commodities utilizing domestic resources under the governments' industrialization policies of import substitution. They have also served to increase food production by enabling a stable supply of fertilizer, and have contributed to employment creation and conservation of foreign currency.

- Production levels at two other fertilizer plants in China, however, have been significantly lower than expected due to price fluctuations and low product marketability, a result of changes in the economic climate such as the trade liberalization of recent years. (In attempts to ameliorate the problem, the executing agency is implementing changes in its products and production systems).

[Development Loan through Banking System: 17 projects (Agriculture: 10, Medium and Small-scale Enterprises: 3, Shipping: 1)]

- Two-step loan (TSL) projects, in which loans are provided to farmers and small- and medium-sized enterprises via financial institutions, have resulted in larger farm harvests and increased revenues for these enterprises. Results have been particularly noteworthy in India, where the small business development projects have supported a yearly average of 30,000 enterprises. The TSLs have been shown to facilitate establishment of financial systems in the countries concerned, and to contribute to the enhancement of income and employment creation for a vast number of farmers and small and medium-scale entrepreneurs, as well as to foreign currency acquisition.
- On the down side, particularly following the Asian currency crisis, Thai and Filipino finan-

cial institutions lending to the agricultural and small business sectors have experienced declining rates of repayment due to the deterioration of business of borrower companies. This situation requires that relief such as the allowance of grace periods be taken to accommodate the delays.

(5) Sustainability

- In order to ensure that project impact is both sustainable and imbued with the capacity for expansion, it is a basic requirement that the executing agencies have appropriate operations and management systems in place, and that such systems are technically and financially sound.

- Road projects require adequate servicing in order to accommodate increasing traffic volumes and ensure sustainable effect over the long term. Securing sufficient funds for road operations and maintenance is an issue common to all countries with road projects, with some countries employing the use of special funds financed by vehicle taxes, gasoline taxes, and so on. Other issues, such as road strain caused by overloaded vehicles as well as traffic accidents, also fall under the jurisdiction of operations and maintenance, requiring system improvements as well as stricter regulations if they are to be resolved.

- Operations and maintenance of electric power and waterworks projects are greatly affected by each government's policy on public utility fees. In order to ensure efficiency of operations after project completion, in some cases services are contracted to private companies, leading to discussion as to what role public agencies should play and how private enterprise should participate in the operations stage.

- Some irrigation projects necessitate better water supply associations to strengthen irrigation water operations. With regard to flood control projects, problems such as the degradation of riverbeds (due to illegal sand taking and other causes) and resultant deterioration of embankments have been reported. Resolution of these problems requires system improvements and bolstering of related regulations.
- Regarding the development loan through banking system sector, as mentioned above, sub-loan repayment rates have declined in Thailand and the Philippines—countries hard-hit by the Asian currency crisis. The financial institutions that implemented the loans have responded by instituting debt relief measures. At the same time, efforts are being made to improve the financial structure of financial institutions, and positive results over the medium and long-term are expected of these measures.

3. Lessons Learned and Recommendations

The following is a list of critical lessons gleaned from the above evaluations findings

(1) As the factor of relevance has a significant effect on the impact of a project after completion, ODA loan projects must continue to be studied in detail, at the stage of appraisal of the projects, in the context of their priority in the development plan of the country concerned.

(2) Projects in certain sectors (electric power, water supply, manufacturing, etc.), whose economics and profitability are subject to risk factors such as the public utility and trade policies of developing countries, must be considered with great care. Further, it is advisable that ongoing policy discussions be held with the governments of the relevant developing countries.

(3) In the IT and Telecommunications sector, in addition to careful analysis of the risks that come with future technology developments, it is critical that the project system incorporate a degree of flexibility with regard to possible changes in project scope and method, even during project implementation.

(4) Regarding projects that hinge upon the progress of other projects, such as bridge projects dependent on access road construction, electricity distribution projects relying on power source development etc., the issues of whether the related projects can feasibly be completed, the possibility of delays, and so on must be taken into consideration. It is also critical that detailed follow-up of the status be carried out on related projects.

(5) At the project implementation stage, with regard to procurement procedures that may be a cause of delays, it is crucial that ongoing guidance and supervision be carried out through the local JBIC representative offices or other means. In recent years, aid agencies including JBIC have taken steps toward the harmonization of procedures in the implementation of aid projects in developing countries, and have also have engaged in joint portfolio review. Such effective measures to improve the implementation capacity of developing countries should be enhanced.

(6) In order to ensure a project's sustainable impact, it is crucial to carefully consider operations and maintenance systems, beginning with the planning stages, as well as means of adequately securing the budget required. As noted above, issues such as securing budget for operations and maintenance of road projects, the role of private participation in the operation of electric power and water supply projects, etc., are of critical importance for many countries. JBIC is expected to make a contribution to the development of management systems for these sectors by making use of SAF and other means.

(7) With regard to the methods of project implementation and operation, there are many cases, such as small-scale irrigation project in Indonesia or rural water supply project in the Philippines, where the participatory approach has resulted in more positive impacts. The lessons learned from these successes are expected to be utilized for the similar projects in the future. On the other side, the formation of sustainable organizations under participatory approach is a difficult task, requiring careful planning of effective supports in accordance with the needs of each project, including cooperation with local governments and NGOs.