Simplified Ex-Post Evaluation for Technical Cooperation Project

Evaluator, Affiliation	Keiko Sakamoto Waseda Research Institute Corporation (WRI)	Duration of Evaluation Study
Project Name	Water Environment Restoration Pilot Project in Taihu Lake	January 2010 – December 2010

I Project Outline

Country Name	People's Republic of China
Project Period	May 2001-May 2006
Executing Agency	Chinese Research Academy of Environmental Science, Jiangsu Environmental Protection Bureau, Jiangsu Research Academy of Environmental Science, Jiangsu Environmental Monitoring Center, Jiangsu Wuxi Environmental Protection Bureau, Wuxi Environmental Monitoring Station
Cooperation Agency in Japan	Ministry of the Environment, Ministry of Land, Infrastructure, Transport and Tourism, National Institute for Environmental Studies
Total Cost	909 million yen
Related Projects (if any)	JICA, "Study on Integrated Management Master Plan for Taihu Lake Basin Water Environment" (1996-1998)
Overall Goal	To reduce the inflow of nitrogen and phosphorus into Taihu Lake using technologies provided by the project for remediation of the lake water environment
Project Objective(s)	To develop and transfer technology for the treatment of domestic wastewater from various decentralized pollution sources in the basin of Taihu Lake, that are suitable for the natural, social and economic conditions of the target area and that are of practical use and can be widespread throughout the area; and to make them widely recognized by the people in the area.
Output[s]	1. Technologies for the practical use of advanced wastewater treatment tanks, developed for decentralized domestic wastewater sources. 2. Information for the application of eco-engineering water purification technologies effective for decentralized domestic wastewater sources will be sorted and organized. 3. Experiments on the mechanism of water bloom outbreaks and control that will produce positive outcomes. 4. Practical technologies that have been developed in the project will be widely recognized by the people of the communities in the target area.

Inputs (Japanese Side)		Inputs (Chinese Side)	
Experts	7 long term, 37 short term	Staff allocated	Chinese Research Academy of Environmental Science : 11, Jiangsu Environmental Protection Bureau : 16, Jiangsu Wuxi Environmental Protection Bureau : 12
Equipments	350 million yen	Equipments	Unknown
Local Cost	74.5 million yen	Local Cost	Approx. 6.62 million Chinese yuan in total (or about 92.7 million Japanese yen) at the exchange rate of 14 yen to one yuan (at the time of ex-post evaluation)
Trainees Received	26	Land etc provided	A survey/research site and laboratory (with the necessary power capacity); offices for experts; an office for the project; meeting rooms
Others	Project Consultation Teams are dispatched 4 times by the Interim Evaluation.	Others	Interpreters and others

II Result of the Evaluation

Summary of the evaluation

This project was planned with the intention of contributing to the improvement of the water environment in the Taihu Lake Basin through technical development of advanced wastewater treatment tanks and transfer of water purification technology using eco-engineering. While the project objective has been essentially achieved, the stated Overall Goal in fact has been unattainable by the project. In terms of efficiency, the project period had to be extended, and in addition, it is observed that some input factors have negatively impacted the efficiency of the project. As the Chinese government is making unswerving efforts to strengthen its environmental protection policy and is tightening regulations, it is thought that the technology transferred under this project will be efficiently used, and thus its effectiveness attained by the project may be sustainable.

<Recommendations>

As recommendations to JICA, It was noted that the project was realized under the authority of seven executing agencies from three different regions. This situation necessarily involved operational difficulties in terms of the competence, authority and interrelationships among the seven that may have inherently blurred responsibility for each activity of the project. Therefore, to avoid this potential complication and malfunction caused by a similar arrangement in the case of future projects, adequate attention should be paid by JICA to reduce executing agencies to the optimal number and ensure that there is an appropriate management structure so that there is a clear allocation of tasks and responsibilities to each implementing agency, and an effective chain of command.

<Constraints of this evaluation study>
Since the PDM of this project did not set numerical indicators for the evaluation of achieved objectives and outputs, it is difficult to conduct quantitative analysis in the ex-post evaluation.

1 Relevance

(1) Relevance to the Development Plan of China

As a high priority environmental protection measure, the Chinese government (the State Council of China) adopted a systematic pollution control program for some designated lakes, including Taihu Lake, during the period of National Ninth Five-Year Plan ("11-5 Plan", 1996~2000), under the so-called 33211 Program. Further, the Water Pollution Control Plan for Taihu Lake during the period of the 11-5 Plan and the 2010 Long-term Plan"* has been devised to control water pollution, mainly by industrial and municipal effluent. The subsequent National Tenth Five-Year Plan (2001~2005) and National Eleventh Five-Year Plan (2006~2010) of the Chinese government have included environmental targets of reducing environmental contamination, mitigating ecological deterioration and of improving the water pollution control. Accordingly, various related policies have been shaped and appropriate measures have been taken.

As mentioned above, therefore, the project was in line with the environmental policy of China throughout the implementation period.

* The implementation period of this project corresponded to Phase III scheduled under the Plan (2001-2010). The main targets of the phase were as follows: (1) drastic solution of eutrophication, ecological destruction and organic pollution in Taihu Lake; (2) water environment improvement in Taihu Lake and its basin; and (3) sustainable utilization of Taihu Lake water resources over the long term and pollution source control in its basin.

(2) Relevance to the Development Needs of China

Rapid economic growth in China has accelerated eutrophication in many lakes, polluting these water bodies as drinking water sources and natural landscapes. Taihu Lake, the target lake of the project, provides a valuable water source for some 33 million people living around the lake. It is also a valuable tourism resource. Taihu Lake is visited by millions of people every year. As in the previous National Ninth Five-Year Plan, the Wastewater Control Program in Taihu Lake has been planned by the Chinese government during the period of National Tenth Five-Year Plan. The program promotes further control measures. As a result, major point-sources of pollution have been placed under control. Efforts to control area sources such as decentralized domestic wastewater sources, however, have lagged behind, requiring further measures to be taken.

As mentioned above, therefore, the project was in line with the development needs of China throughout the implementation period.

(3) Relevance to Japan's ODA Policy

In accordance with the Japanese government's Economic Cooperation Program for China, its focus was on cooperation towards resolving environmental and other global issues as one of the focus areas/issues for its assistance. This project comes under the aforementioned focus area/issue. Therefore, this project was in line with the Japanese government's ODA policy.

This project has been highly relevant to China's development plan, development needs, as well as Japan's ODA policy; therefore, its relevance is high.

2 Effectiveness / Impact

(1) Achievement of Project Outputs and Project Objective(s)

With respect to the verifiable indicator for Output 1: "Technical guidelines and evaluation method for advanced wastewater treatment tanks that are suitable for the community conditions of the target area will be developed," the compilation of the guidelines on the structure and maintenance of advanced wastewater treatment tanks suitable for the local communities has been completed, so this output has been achieved (JICA internal information)

In relation to the indicator 2-1 for Output 2: "Evaluation of eco-engineering treatment technologies as reference case," the technology transferred during the training in Japan is being used in other projects and is rated high, showing that it has been achieved (terminal evaluation report).

As to the indicator 2-2 for Output 2: "Degree of gathering of research materials on eco-engineering treatment technologies," there is a case in point that such Japanese technologies has been compiled into video CDs (VCDs) in Chinese. They were also presented in a joint symposium in the form of research papers for sharing information. Therefore, it has been achieved.

As for the indicator for Output 3: "The number of presentations/reports at learned societies and the number of research papers," it is difficult to make an evaluation because no numerical indicators were established. However, since two papers have been written by the counterparts who were trained in Japan, Output 3 can be evaluated to have been achieved to a certain degree.

As to the indicator 4-1 for Output 4: "The number of technical presentations and environmental education meetings held for agencies/persons concerned, the number of persons present, and evaluation of those present," it is also difficult to make an evaluation because of no numerical indicators were established. However, since five local seminars were held with a total of 456 participants and were favorably commented upon, it can be evaluated to have been achieved (terminal evaluation report).

With regard to the indicator 4-2 for Output 4: "Recognition level of the practical use plan in the selected model zone," although the model plan was completed, its recognition level is unknown, and thus its achievement level cannot be evaluated (terminal evaluation report and JICA internal information).

As above, while it is not possible to evaluate the achievement level of some verifiable indicators, the intended purpose has nearly been achieved according to our overall evaluation of other elements.

With respect to the verifiable indicator for Project Objective 1: "completion level of the technical guidelines for advanced wastewater treatment tanks that have been developed in the project (nitrogen and phosphorus removal percentage, stability, profitability, etc.)," it has been achieved as the compilation of both the technical and maintenance guidelines have been completed.

As to the indicator for Project Objective 2: "Recognition level of the environmental protection technologies (advanced domestic wastewater treatment tanks and water purification technology using eco-engineering) resulting from the R&D activities by related administrative agencies and facilities in the project," it can be evaluated to have been achieved as the need for utilization of these treatment tanks is recognized as one of control means for area sources (terminal evaluation report).

As above, the project objective has nearly been achieved according to our evaluation.

(2) Achievement of Overall Goal, Intended and Unintended Impacts

According to the replies received from the implementing agencies, there has been a ripple effect: efforts are being made towards establishing an effective Environmental Technology Verification (ETV) system by making use of the furnished performance evaluation testing equipment for decentralized wastewater treatment tanks (advanced domestic wastewater treatment tanks) and the transferred technologies as well.

On the other hand, as to the indicator for the Overall Goal: "Dissemination in Taihu Lake Basin, of the advanced treatment technologies for reducing nitrogen and phosphorus developed in the Project," it is not an easy task to research the dissemination rate of the developed technology that is employed as indicator data. Additionally, the intended effect has not yet been produced at the time of the ex-post evaluation (the inflow load of nitrogen and phosphorus into Taihu Lake is reduced by the application of the technologies for restoring the lake water environment that has been developed in the project).

This indicates that the Overall Goal of the project was not properly designed as a technical cooperation project corresponding to the "basic formation" stage for local dissemination of the technologies as pointed out in the expert's observation report of the project (terminal evaluation report).

As above, while the expected project objective has been achieved in some measure, the intended effect is limited due to the inappropriate design of the overall goal.

3 Efficiency

(1) Outputs

As mentioned above, the intended outputs have been produced although some problems are involved.

(2) Elements of Inputs

The inputs for this project are as shown in the Project Outline. The project activities fell behind schedule due to several factors. It took a long time for the Japanese experts and Chinese counterparts to come to agreement regarding equipment procurement and installation time. The other was the spread of the severe acute respiratory syndrome (SARS), which caused delays in sending Japanese experts to China (terminal evaluation report and materials at the completion of the Project).

Considering that the decentralized advanced wastewater treatment tanks furnished under the project were not suitable for practical use in China in terms of costs (initial and running costs) and technology (ease of maintenance) (materials at the completion of the Project), part of the inputs might have been inadequate.

(3) Project Cost, Period of Cooperation

The period of cooperation for this project was extended to make the actual duration 70.5 months against the planned 60 months (117.5% as compared with the planned period). The total cost for the cooperation was 909 million yen. Although the projected cost is

unknown, it is estimated that the actual cost should have exceeded the projection because of the extension of the initially planned period of cooperation.

Other factors that have affected the efficiency include the complex project implementation structure whereby the seven implementing agencies spanned three different cities (Beijing, Nanjing and Wuxi), the situation of which involved the complication of the communications with each other, absence of centralized decision-making, disparity in the level of understanding of the project, etc.; reportedly, all of these encumbered the progress of the project (documentation at the completion of the project). It was also indicated that Taihu Lake Basin Administration, the principal agency for administration of the lake, was excluded from the implantation structure. This fact may have hindered an efficient implementation process of the Project (terminal evaluation report).

Some of the inputs [project cost / period of cooperation] are not appropriate for producing outputs and achieving the project objective; therefore, efficiency of the project is fair.

4 Sustainability

(1) Related Policy towards the Project

In 2008, the National Development and Reform Commission (NDRC) of China framed the Comprehensive Control Act for Taihu Lake Basin Water Environment. The law sets forth the calculations of regulatory requirements for wastewater reduction as well as various projects to establish water quality improvement targets in stages (COD, ammonia nitrogen, total phosphorus and total nitrogen) during the period 2007 to 2012 and up to 2020, ensure drinking water safety (intensified water source development and water quality monitoring) and to give practical effect to the regulation for total wastewater emissions. Accordingly, the Jiangsu provincial government established its Comprehensive Control Act for Jiangsu Taihu Lake Basin Water Environment (February 2009). This law of Jiangsu Province sets forth the regulatory implementation of ten major projects including the intensified control of industrial point-sources of pollution, municipal sewage and waste disposal, control of rural area sources of pollution, ecological restoration, and so on. Wuxi City, particularly, has given effect (in April 2008) to the new environmental policy under which the first- and second-rank protection zones of Jiangsu Taihu Lake Basin are positioned within the urban planning framework as green ecological functional zones (ecotourism model zones).

As above, the relevance of the project is judged to be sustainable.

(2) Institutional and Operational Aspects of the Executing Agency

There is no particular problem in these aspects according to the report of the implementing agency. The project for dissemination of advanced wastewater treatment tanks is addressed by the Chinese Research Academy of Environmental Science, Jiangsu Environmental Protection Bureau, and Wuxi Environmental Protection Bureau in their respective areas. Additionally, in keeping with the control policy intensification for Taihu Lake in recent years, Taihu Lake Water Pollution Control Office (a branch office of agency level) was newly established (in July 2009) as the comprehensive supervisory agency for water pollution control in the zone of Taihu Lake located within the Jiangsu Province.

(3) Technical Aspects of the Executing Agency

In the Chinese Research Academy of Environmental Science, the project activities are carried out mainly by the counterparts who were trained in Japan. There is no particular problem in these aspects.

(4) Financial Aspects of the Executing Agency

The aforementioned Comprehensive Control Act for Taihu Lake Basin Water Environment states that a total of 111.498 billion yuan will be invested by the central government of China on behalf of the water environment control of Taihu Lake Basin (the Jiangsu provincial government will receive 58.373 billion yuan from the said amount). The Environmental Resources Local Compensation Act for Jiangsu Taihu Lake Basin was put in force (in March 2009). This law provides that any upstream municipality or district that generates wastewater flow in excess of the regulatory target shall pay compensatory damages to its downstream municipality or district or the Jiangsu provincial government (15 thousand yuan per ton for COD, 100 thousand yuan per ton for ammonia nitrogen and total phosphorus, respectively, in 2009). The Act provides that all the collected compensatory damages shall be used to cover the costs of water pollution control of the lake.

In view of these legal provisions, the funds required for controlling the inflow load of nitrogen and phosphorus into Taihu Lake will be invested over the long term as the national policy of China. Moreover, according to the information provided by a former expert, the project activities being carried out in the Chinese Research Academy of Environmental Science fall under the coverage by the Wen Jiabao Project (one trillion yen for a period of 10 years), and receive a substantial amount of funds from the government budget.

Because no data or documentation could be obtained from Chinese counterparts in this evaluation study, the financial aspects of the project are unknown. Nevertheless, judging from the above observations, it is anticipated that financial resources will be provided for sometime in the future.

(5) Continuity of Effectiveness and Impact

According to the information from the implementing agency, the equipment and materials furnished under the project are being used for R&D activities. In particular, the performance evaluation testing equipment is used mainly for R&D activities for advanced wastewater treatment tanks as the first performance evaluation testing laboratory for decentralized wastewater treatment tanks. This is instrumental in establishing an effective Environmental Technology Verification (ETV) system. According to the reply received from the implementing agency, the guidelines prepared in the project are also in use for the guidance of operation and maintenance of the wastewater treatment tanks. Therefore, it can be evaluated that their impact is sustained. Likewise, the progress and dissemination of the transferred technology are expected as the reply from the implementing agency indicates that some projects are being carried out in Taihu Lake Basin using them.

As above, it is expected that the impact of the project will be positively sustained in the future in spite of unclear financial aspects of the Project.

Simplified Ex-Post Evaluation for Technical Cooperation Project

Evaluator, Affiliation	Keiko Sakamoto Waseda Research Institute Corporation (WRI)	Duration of Evaluation Study
Project Name	Model Planning Project for Water-Saving Measures on Large-Scale Irrigation Scheme	January 2010 – December 2010

I Project Outline

Country Name	People's Republic of China
Project Period	June 2001-May 2006
Executing Agency	Ministry of Water Resources (Department of International Cooperation of Science and Technology (国际合作与科技司), Department of Rural Water Management, China Irrigation and Drainage Development Center (Beijing)), Gansu Province Bureau of Water Resources, Shaanxi Province Bureau of Water Resources, Hunan Province Bureau of Water Resources
Cooperation Agency in Japan	Ministry of Agriculture, Forestry and Fisheries of Japan
Total Cost	910 million yen
Related Projects (if any)	N.A
Overall Goal	1. To improve irrigation efficiency and water use efficiency in the priority model irrigation zones 2. To prepare appropriate water-saving improvement plans in at least the model irrigation zones
Project Objective(s)	Water-saving irrigation technology that can be spread all over the land of China will be established through verification in the priority model irrigation zones.
Output[s]	1. Survey and planning methods will be developed for the preparation of appropriate water-saving improvement plans. 2. Water management technologies will improve. 3. Paddy field-level water-saving technologies will be developed

Inputs (Japanese Side)		Inputs (Chinese Side)	
Experts	10 for Long term, 14 for Short term	Staff allocated	82
Equipments	220 million yen	Equipments	
Local Cost	120 million yen	Local Cost	63.4 million Chinese yuan
Trainees Received	49	Land etc provided	Land and facilities
Others		Others	

II Result of the Evaluation

Summary of the evaluation

The relevance of this project is very high. In terms of effectiveness, its objective and outputs have been essentially attained. The expected effect of the overall goal has also been produced. The project was implemented mostly as planned except for the delay caused by the prevalence of the severe acute respiratory syndrome (SARS). As both the interim and terminal evaluation reports stated that the execution process was very smooth. It could be said that the project had high efficiency. There were no problem associated with any aspect of the project, including the government's policy, counterpart organization's system, technologies, and financial position. Its sustainability was also high.

<Recommendations>

In the project design matrix (PDM) of this project, the verifiable indicators for outputs were higher than those for the project objective in the level of difficulty. Seemingly the actual operation process was not affected because these inconsistencies were shared among the interested parties of the project (Japanese experts and Chinese counterparts). However, these logical inconsistencies in the PDM, together with some ambiguous notation, constitute serious obstacles to proper evaluation of the achievement results of this project. Therefore, it is desired that JICA, in the future, should prepare and modify as well the PDM in a right way at the right time during the implementation of the project and at the time of evaluations, so that in-house and outside interested parties can judge the achievements of this project with common understanding.

<Constraints of this evaluation study>

Since the PDM of this project has some inconsistencies in the level of difficulty between the verifiable indicators for the project objective and those for outputs, which posed a problem in the terminal evaluation, the achievement results of the project were assessed in this ex-post evaluation by taking such inconsistencies into account.

1 Relevance

(1) Relevance with the Development Plan of China

The National Tenth Five-Year Plan with Long-Term Goals (2001-2005) of the Chinese government sets down two long-term goals to be accomplished by 2015: the first is to extend the country's effective irrigated area of 53 million ha to 58 million ha, and the second is to raise the irrigation water utilization rate in the country from the current 40% to 60%, with special focus on water-saving improvement projects in large-scale irrigation zones. China's National Eleventh Five-Year Plan (2006-2010) also calls for development of water-saving agriculture in the regions suffering chronic water shortage. To this end, the Chinese government mapped out its policy course: the irrigation water utilization coefficient needs to be improved from the current 0.4 to 0.5 while restraining the total volume of agricultural water (zero growth) in the whole country; water-saving irrigation technology needs to be fostered; and water-saving irrigation facilities are to be constructed.

As explained above, therefore, the project has been consistently relevant to the development policy of China during the implementation period.

(2) Relevance with the Development Needs of China

China is poor in water resources. The volume of water resources per capita in China is not more than 1/4 of the world average level. Agriculture cannot function without irrigation especially in arid and semi-arid regions in northwestern China. On the other hand, the increasingly accelerated change of China's socioeconomic system has caused a harsh struggle among agricultural, industrial and household sectors competing for water resources. Appropriate distribution of water resources to the respective sectors is one of the crucial policy issues the Chinese government is currently facing. Large-scale irrigation zones, particularly, may have a great impact on the local economy as they need a large volume of irrigation water while they are the principal production bases for supply of agricultural products in China. It is a pressing need for China to drastically improve technology and systems so that the improvements of obsolete water facilities can be carried out systematically and efficiently. China is also experiencing growing urgency to address this issue in order to solve the problem of wasteful use of water resources. As explained above, therefore, the project had been relevant to the development needs of China during the implementation period.

(3) Relevance with Japan's ODA Policy

In the Japanese government's Economic Cooperation Program for China (planned in 2001), focus was on cooperation towards resolving environmental and other global issues as one of the focal area/issue for assistance. Encompassed in this scheme of cooperation is the assistance to China in the area of water resources. In addition, it is addressed in the Country Assistance Plan that the cooperation projects for China is to focus on environmental and other global issues and it has decided to start support to China in the "sustainable use of water resources."

As above, therefore, the project was relevant to the Japanese government's ODA policy.

This project has been highly relevant to China's development plan, development needs, as well as Japan's ODA policy; therefore, its relevance is high.

2 Effectiveness / Impact

(1) Achievement of Project Outputs and Project Objective(s)

The verifiable indicator 1-1 for Output 1: "verification of water-saving effects in the priority model irrigation zone is practicable," has been achieved (terminal evaluation report). As to the indicator 1-2 for Output 1: "developed methods (manual) are being utilized in the model zones," the manual has been distributed to large- and medium-scale irrigation zones nationwide and is being used, thus it is thought to have been essentially achieved (terminal evaluation report). As to the indicator 1-3 for Output 1: "farmers' awareness of water saving improves," a survey has been conducted using questionnaires and hearings, and it is recognized that awareness of water-saving among farmers themselves is improving, thus it is thought to have been achieved (terminal evaluation report).

The indicator 2-1 for Output 2: "appropriate water management methods that are based on facilities improvement and system reinforcement and their water-saving effects will be compiled," has been achieved (terminal evaluation report). With respect to the indicator 2-2 for Output 2: "the amount of water lost for each area unit will be reduced within the scope of the model project," it is thought that water loss is being reduced considering the improved results in "water supply efficiency," thus it is judged to have been achieved (terminal evaluation report). With respect to the indicator 2-3 for Output 2: "compiled methods are incorporated into the model irrigation zones," specific water-saving improvement plan for each model irrigation zone has not been reviewed as yet (information from JICA), thus it has not been achieved.

The indicator 3-1 for Output 3: "paddy field-level water-saving methods and their water-saving effects will be compiled," has been achieved (terminal evaluation report). The indicator 3-2 for Output 3: "the amount of water lost per unit area will be reduced in the model paddy field," has been achieved as the water use volume is being reduced (terminal evaluation report). As to the indicator 3-3 for Output 3: "compiled methods are incorporated into the model irrigation zones," specific water-saving improvement plan for each model irrigation zone has not been reviewed as yet (information from JICA), thus it has not been achieved.

The verifiable indicator for the project objective "water-saving improvement planning manual is framed by the Ministry of Water Resources," is same as the indicator 1-2 for Output 1 and it has been achieved as mentioned above. The Manual was officially published in November 2005 (6,000 copies) and the copies were distributed among farmer representatives at a national assembly hosted by the Department of Rural Water Management of the Ministry of Water Resources. Since then, it is required for all large- and medium-scale irrigation zones nationwide to follow the model irrigation schemes provided for in the Manual (according to the executing agency).

As above, some output indicators are still expected to be achieved, though, considering the other factors together, it could be said the intended project outputs have essentially been achieved.

On the other hand, as to the project objective, though its indicator overlaps with that of the output level (indicator 1-2 for Output 1), it could be concluded that the objective (water-saving irrigation technology that can be spread all over the land of China will be established through verification in the priority model irrigation zones) has been fully achieved as the Manual has been distributed and is being utilized in the model irrigation zones nationwide.

(2) Achievement of Overall Goal, Intended and Unintended Impacts

In relation to the overall goal indicator that states "To reduce source water intake volume per area in the priority model irrigation zones," the 'source water intake volume' criterion was changed to 'water supply efficiency' at the time of terminal evaluation in view that source water intake volume is affected by weather conditions and farming operations. This has been followed in this ex-post evaluation. As a result, improvement in water supply efficiency has been observed in all priority model irrigation zones (Jingtaichuan River Irrigation Zone: 0.64→0.66; Jinghuiqu Irrigation Zone: 0.578→0.583; Shuangpai Irrigation Zone: 0.46→0.49 These values denote: Values in 2006 [completion of the project] → Values in 2009). Thus, it can be judged that this indicator has been achieved. As above, therefore, it can be judged that the intended overall goal has been achieved. The second overall goal indicator that states "To prepare appropriate water-saving improvement plans in at least 20 large-scale model irrigation zones," water-saving improvement plans have been completed in all large-scale irrigation zones, and work to revise these plans is being carried out step by step (according to the executing agency). Thus, it can be said that this indicator has been achieved.

As one of the ripple effect of this project, the reply from the executing agency mentions the diffusion of the project cycle management (PCM) method that was introduced into China during the implementation of the project. It is reported that the application of the PCM method greatly contributed to the progress management of the project in terms of smooth implementation and achievement level of various stages when China Irrigation and Drainage Development Center, Beijing, was engaged in the World Bank's "Agricultural Water Use Reform Project for Poor Population" as the executing agency.

There were no reports of serious adverse impacts.

This project has largely achieved its objective; therefore, its effectiveness is high.

3 Efficiency

(1) Outputs

As mentioned earlier in the effectiveness and impacts section, the intended outputs of this project have been achieved.

(2) Elements of Inputs

The inputs for this project are as shown in the project outline. Inputs from both the Japanese and Chinese sides were accomplished in a smooth and efficient way almost as planned except for delays in dispatching Japanese experts to China for about two months due to the prevalence of SARS (according to the interim and terminal evaluation reports).The delayed arrivals did not affect the outcome of the expected outputs. The smooth advance of the project may be attributable to the following facts: the Chinese counterparts were well familiar with cooperation projects with Japan; they have sufficient knowledge and experience of irrigation; and finally, there was almost no change in staffing from the start of the project.

(3) Project Cost, Period of Cooperation

Both the original plan and actual project period were 5 years, so the project was accomplished as planned (100%).

The actual total cost for the cooperation was 910 million yen. However, comparative analysis is not possible, because the projected cost is unknown.

The inputs are appropriate for producing outputs and achieving the project objective; therefore, efficiency of the project is high.

4 Sustainability

(1) Related Policy towards the Project

As described in the Relevance section, China's ongoing National Eleventh Five-Year Plan calls for development of water-saving agriculture. It is also obvious in the Eleventh Five-Year Plan for Water Resources Development (水利发展十一五规划) (2007) that the Chinese government places emphasis upon water-saving reform of large-scale irrigation zones. It is thought that diffusion of water-saving awareness and irrigation is China's important national long-term policy and will be sustained in the future.

(2) Institutional and Operational Aspects of the Executing Agency

There is no particular problem in these aspects of the counterparts. China Irrigation and Drainage Development Center has already given an assured status nationwide as various projects related to irrigation and rural drinking water as well as those related to comprehensive agricultural development and utilization of water resources are strengthened in recent years here and there in China. More specifically, while there was no change in the number of professionals (40 persons), the number of the staff members of organizations under direct control increased (112 persons at the time of ex-post evaluation) according to the reply received from the center, as compared with the completion time of the project. The institutional structure of this organization is therefore firmly sustained or strengthened.

(3) Technical Aspects of the Executing Agency

It is reported that the technical level in the field of agricultural water-saving/irrigation of the staff of the Ministry's Irrigation and Drainage Development Center, who were counterparts of the JICA's technical cooperation projects for the center (1993-2000), has improved in full measure and individual skills through project management operations over the years. These counterparts have already reached a level that allows them to provide technical support and services in the fields of agricultural irrigation and drinking water safety throughout the country, and thus they play a central role in special technical research and central-level project management in the field of irrigation and wastewater nationwide. Therefore, there is no particular problem in technical aspects of the counterparts. Maintenance and management of the equipment and facilities furnished under the project is appropriate and there is no particular problem, according to the center's reply.

(4) Financial Aspects of the Executing Agency

After the implementation of the project, the budget for the Irrigation and Drainage Development Center constantly increased. According to the center's information, the budget for the center in FY2010 is 1.5 times that of FY2006 (the last year of this project). They expect that the budget will increase further, considering China's economic growth, expansion of fiscal revenues, and central and local governments' policies focusing on agriculture.

(5) Continuity of Effectiveness and Impact

As mentioned in the Effectiveness section, it is confirmed that the Manual prepared by the project is still being utilized in a useful way in model irrigation zones nationwide. The Department of Rural Water Management of the Ministry of Water Resources is the highest administrative body in China's rural water resources sector, and thus, the use of the Manual required by the Department implies binding force as a logical consequence. In addition, plans framed by large- and medium-scale irrigation zones will be examined based on the Manual in the future, meaning that those not in line with the Manual are unlikely to be approved, and consequently may not be given the government's financial support (according to the executing agency).

The Manual is on sale by the publisher and is also distributed at the Irrigation and Drainage Development Center's office. There are many contacts and inquiries every day with questions about the Manual, requesting information on actual implementation procedures. Most of these contacts/inquiries come from experts belonging to provincial bureaus of water resources and their planning divisions, and administrations of model irrigation zones (according to the executing agency). Ripple effects of the project are observed in water-saving improvement plans prepared by large-scale irrigation zones nationwide in addition to the priority model irrigation zones that are the targets of the overall goal. At present, the project effects are also shown to begin utilizing in water-saving improvement plans prepared by medium-scale irrigation zones (according to the executing agency).

Additional information received from China Irrigation and Drainage Development Center is given below:

* The model paddy fields created and established in the Shuangpai Irrigation Zone, Hunan Province in the project even now receives many inspection visits and interchange groups from neighboring regions and southern irrigation zones. The Shuangpai Irrigation Zone Administration is planning to set about researches on rice planting and water management in cooperation with universities and research institutions.
* The Ministry of Water Resources has decided to develop a uniform national model of large information system along with database so as to promote information management environment in large-scale irrigation zones throughout the nation. The "facility information management system" operated on a trial basis during the project implementation will be incorporated into the "large-scale irrigation scheme information management system" for which R&D activities are ongoing.

No major problems have been observed in the policy background, the structural, technical, financial aspects of the executing agency, therefore, sustainability of the project effects is high.

Simplified Ex-Post Evaluation for Technical Cooperation Project

Evaluator, Affiliation	Keiko Sakamoto Waseda Research Institute Corporation (WRI)	Duration of Evaluation Study
Project Name	The Technology Center of Environmental Protection and Energy Saving of Metallurgical Combustion	January 2010 – December 2010

I Project Outline

Country Name	People's Republic of China
Project Period	September 2002-August 2007
Executing Agency	Central Iron & Steel Research Institute
Cooperation Agency in Japan	The Japan Iron and Steel Federation
Total Cost	844 million yen
Related Projects (if any)	N.A
Overall Goal	Technology for energy conservation and environmental protection in metallurgical combustion processing are widely accepted by the iron and steel industry in China.
Project Objective(s)	Enabling the Energy Saving and Environmental Protection Center for Metallurgical Combustion (the Center) to teach technologies related to energy conservation in metallurgical combustion processing at ironworks in China.
Output[s]	(0) Project becomes operational. 1. Equipment is furnished. 2. Capability to improve combustion technology is increased. 3. Exhaust gas treatment technology is mastered. 4. Factory audit technology for combustion and the environment are mastered. 5. Activities for dissemination of environmental protection and energy conservation technology in metallurgical combustion can be carried out.

Inputs (Japanese Side)		Inputs (Chinese Side)	
Experts	5 for long term, 27 for short term	Staff allocated	28
Equipments	194 million yen	Equipments	
Local Cost	123.4 million yen	Local Cost	22.07 million Chinese yuan
Trainees Received	50	Land etc provided	Management office; laboratory
Others		Others	

II Result of the Evaluation

Summary of the evaluation

The relevance of this project is high. Also, in terms of effectiveness and impacts of this project, the objectives and outputs were essentially realized as planned. Although data related to the overall goal are not available, there are some indications of spillover effects of this project and therefore, it could be concluded that the anticipated effects of this project have been basically achieved. Regarding efficiency, in spite of the delay of equipment installation, which was caused by some incidents such as the outbreak of severe acute respiratory syndrome (SARS), these events did not hinder the project from achieving its accomplishment within the planned period. On the other hand, however, the project cost was considered not to be used efficiently. Even though there is some uncertainty regarding the financial aspect of the project, considering the other various factors taken together, it could be said the sustainability of the project effect is high.

In light of the above, this project is evaluated to be highly satisfactory.

<Constraints of this evaluation study>

The indicators set for the Overall goal of this project were reported to be achievable without intervention of this project. Therefore, there is a possibility that the indicators were inappropriate to be used to evaluate effectiveness and impact of this project.

1 Relevance

(1) Relevance with the Development Plan of China

Rapid economic growth in China is increasingly aggravating air pollution in urban areas. As such, the Chinese government established the objective of saving energy equivalent to 400 million tons of standard coal* in total in the National Tenth Five-Year Plan (2001-2005). Achievement of this objective required improvement in thermal efficiency of industrial furnaces (30% energy saving) to improve air quality. Under these circumstances, the Technology Center of Environmental Protection and Energy Saving of Metallurgical Combustion was established within the organization of Central Iron and Steel Research Institute as a laboratory dedicated to development of environmental protection technologies required in the iron and steel industry, such as improved energy utilization efficiency and flue gas treatment. The subsequent National Eleventh Five-Year Plan (2006-2010) continued to emphasize the environmental protection policy and one of its priority objectives was intended to realize a recycling-oriented economy through environmental protection and energy saving during the period of this five-year plan. Other objectives include decrease of energy consumption rate per unit GDP by 20% (to be achieved by the end of the plan), and reduction of total emission of pollutants by 10%. The Iron and Steel Industry Development Policy framed by the National Development and Reform Commission (NDRC) of China in 2005 addresses the subject that companies in the iron and steel sector should make efforts towards self-active technological reform, optimal selection and replacement of outdated techniques and equipment, intensification of environmental conservation and promotion of efficient use of resources. Furthermore, the "Government Action Plan 2007" announced by Wen Jiabao (Premier of the State Council of the People's Republic of China) emphasizes efforts for energy saving, reduced consumption of raw materials, and environmental protection, and proclaims that the government will take a firm stand in exercising control of these issues, including issuance of business suspension or closing orders for companies with low production efficiency. As above, therefore, this project was relevant to China's development policy all the while during the implementation period.

*) Standard coal equivalent ton (in China): Energy quantity is calculated in terms of coal.

(2) Relevance with the Development Needs of China

Urban air pollution in China is a matter of grave concern. According to the air pollution monitoring and assessment research conducted by the World Health Organization (WHO) covering 54 countries throughout the world, 7 cities out of the 10 worst air-polluted cities in the world were in China (1998). In keeping with the nation's rapid economic growth, the iron and steel industry maintained high growth, and the industry's flue gas emissions accounted for 15% of the whole industrial sector, whilst its emissions of sulfur dioxide (SO_2), which is one of the major air pollutants, accounted for about 7% of the whole industrial sector. Furthermore, as compared with other industrial sectors, the desulfurizing percentage of the iron and steel industry was low (16%) and the industry also fell behind in SO_2 control. In addition, while its energy consumption accounted for 10.6% of the whole industrial sector, its energy efficiency was very low (30%), and thus it was said that China's iron and steel industry was 20 years behind counterparts in developed countries. As mentioned above, China's iron and steel industry was in need of achieving technical development for environmental protection, and requisite human resources development for achieving that end. Further, it was necessary to act on internal dissemination of localized technologies as quickly as possible. Therefore, the project was relevant to the development needs of China.

In 2009, China produced approximately 570 million tons of crude steel, which accounted for 46.6% of total global steel output in that year. Today many steelmakers in China are furnished with state-of-the-art equipment and facilities to comply with the legal requirements set in the specifications for installing equipment for environmental protection. Nevertheless, energy consumption per ton of crude steel production in China is still about 30% higher than that of Japan's steel industry. Therefore, it can be said that there is much need for the project even at the time of this ex-post evaluation.

(3) Relevance with Japan's ODA Policy

Of the environmental protection issues required for the iron and steel industry, this project focuses on global warming gas (greenhouse gas) emission reductions agreed upon by the signatories to the Kyoto Protocol and on reductions of SO_x emissions that physically affect Japan through acid rain, etc. The Japanese government's Economic Cooperation Program for China also focuses on the cooperation in resolving the global issues including environmental issue in particular. This project comes under the aforementioned focus issue. Therefore, the project was relevant to the Japanese government's ODA policy in view of the fact that Japan can contribute by using its state of the art technology in the field of the environmental protection and energy saving of metallurgical combustion.

This project has been highly relevant to China's development plan, development needs, as well as Japan's ODA policy; therefore, its relevance is high.

2 Effectiveness / Impact

(1) Achievement of Project Outputs and Objective(s)

The results of each indicator which was set for each achievement (output) in PDM of this project are as follows.

The verifiable indicator for Output 1: "the entire equipment is perfectly furnished by December 2003 as planned and becomes operational," it has been achieved as initially planned, except for delays in the installation of some equipment (8-month delay for multifunction combustion experimental oven, 2-month delay for ABB automatic gas analyzer, etc.) partly because of the belated procurement and partly due to the prevalence of the severe acute respiratory syndrome (SARS)(terminal evaluation report). The achievement level is judged to be medium.

The indicator 2-1 for Output 2: "At least 90% of the Chinese-side staff will understand/master new knowledge and technical skills of combustion improvement technology in comparison with those they had before the implementation of the project," has been achieved (the achievement level: 100%)(terminal evaluation report). The indicator 2-2 for Output 2: "At least 90% of the Chinese-side staff will perform operations using the new knowledge and technical skills they mastered under the project," it has been achieved as they can operate the newly installed multifunction combustion experimental oven and carry out necessary experiments on their own (according to information from JICA).

The indicator for Output 3: "At least 90% of the Chinese-side staff will understand/master flue gas treatment technologies in comparison with those they had before the implementation of the project," has been achieved (the achievement level: 100%)(terminal evaluation report).

The indicator 4-1 for Output 4: "At least 90% of the Chinese-side staff will understand/master factory audit technologies for combustion and the environment in comparison with those they had before the implementation of the project," has been achieved (the achievement level: 100%)(terminal evaluation report). The indicator 4-2 for Output 4: "factory audit of 6 industrial furnaces will be performed," has been achieved as the factory audit of 6 furnaces was performed and completed before the terminal evaluation (the achievement level: 100%). The indicator 5-1 for Output 5: "At least 8 seminars, factory visits, demonstrations and technical presentations will be held for steelmaking engineers," has been achieved perfectly as more than 30 sessions of symposiums, lectures, presentations, technical guidance, etc. were given (terminal evaluation report). The indicator 5-2 for Output 5: "positive opinions and comments (such as "I've learned new lessons, thank you") are received from at least 75% of the participants in the seminars, etc.," it can be judged to have been achieved since it has a favorable feedback from participants in the hearing survey (17 participants in the guidance for flue gas treatment technology and 7 participants in the guidance for slag treatment technology) (terminal evaluation report).

With respect to the verifiable indicator for project objective: "10 improvement proposals related to environmental protection in steelmaking industry are submitted to ironworks or steelmakers," it has been achieved as a total of 15 improvement proposals were prepared, submitted and approved before the terminal evaluation.

As above, the achievement level of the project outputs and project objective is very high.

(2) Achievement of Overall Goal, Intended and Unintended Impacts

With respect to the indicator for overall goal: "furnace with regenerative burner accounts for 30% of the total number of furnaces equipped at member companies of China Steel Industry Association," no numerical data was obtained from the Association at the time of terminal evaluation however the Association commented that it was certain that the intended target of 30% would be achieved by the end of the project. Nor any numerical data was given during this ex-post evaluation. On the other hand, however, it is reported that the project made ironworks/steelmakers aware of the importance of environmental protection and energy saving of metallurgical combustion, so as to lead them to take positive action on their own or to introduce effective environmental protection technologies by themselves (executing agency). Therefore, although quantitative analysis is not possible, it could be said that the effects of the project are evident to a certain extent.

This project has largely achieved its objectives; therefore, its effectiveness is high.

3 Efficiency

(1) Outputs

As mentioned in the "Effectiveness and Impacts" section, the intended outputs have been produced.

(2) Elements of Inputs

The inputs for this project are as shown in the "Project Outline". According to the initial plan, the long-term experts specializing in environmental protection technologies in the iron and steel industry were intended to arrange and supervise the project operations. However, in view of the actual workload, the operations coordinators were dispatched only after 2005. Short-term experts are being dispatched as needed basis. In addition to the delays in installation of some units of the equipment, caused by the belated procurement and the prevalence of SARS, it happened that the experimental oven had to be moved to another location because of the redevelopment of the laboratory building of the Central Iron and Steel Research Institute. This, however, did not affect achievement of the final outputs of the project because minor arrangements were enough to deal with the change.

(3)Project Cost, Period of Cooperation

Bothe the original plan and actual project period were 5 years. The project was accomplished as planned (100%).

Total project cost was 844 million yen; the planned amount was 550 million yen, so the project was completed at 153% of the planned amount. Although details are unclear, the discrepancy between the planned cost and the actual cost might be attributable to some additional equipment (simultaneous thermogravimetry and differential scanning calorimetry, automatic fuel gas analyzer, and non-mixture burner head) whose supply was decided after the commencement of the project, or to a partial change of inputs as described above.

Some of the inputs are not appropriate for producing outputs and achieving the project objective; therefore, efficiency of the project is fair.

4 Sustainability

(1) Related Policy towards the Project

The Flue Gas Desulfurization Project for Coal Fired Power Plants and Iron Ore Sinters (sulfur dioxide from existing power generating units is reduced by 4.9 million tons; desulfurizing equipment capacity is enhanced to 213 million kw; desulfurizing capacity is raised to 300 thousand tons) is included in the priority projects covered by China's Tenth Five-Year National Environmental Protection Program together with the priority investment areas. Although details of the National Twelfth Five-Year Plan (2011-) are unknown, according to the responses from the executing agency, the regulations for environmental protection are increasingly severe, and rigorous restrictions have been established for emissions of pollutants; strict criteria have been set not only for the total emissions but also for emission rate, its time, and its emission concentration, etc. In addition, critical emission units of equipment are under regular monitoring and surveillance. Judging from the above, it could be said that Chinese government will continue to impose restrictions on emission substances and energy-saving policy.

(2) Institutional and Operational Aspects of the Executing Agency

No detailed data were available, but according to the executing agency, currently the Technology Center of Environmental Protection and Energy Saving of Metallurgical Combustion have 7 dedicated experts. Since no particular change is observed in the organization of the Central Iron and Steel Research Institute. There seems to be no specific problem in sustaining the effects of the project.

(3) Technical Aspects of the Executing Agency

There is no particular problem in technical aspects as the executing agency is in a position to play the central role in national-level technical researches, as described in the Continuity of Effectiveness and Impacts below.

(4) Financial Aspects of the Executing Agency

No detailed data about settlement of the accounts of the project were available, but according to the executing agency, 3 million yuan was funded from the Science Research Fund of the National Development and Reform Commission (NDRC) from 2007 to 2009, whilst others say that it constantly faces a shortage of funds (500 thousand yuan/year).

(5) Continuity of Effectiveness and Impacts

According to the information from the executing agency, the center is taking an active role in carrying out R&D activities for "System Integration for High Efficiency Combustion Equipment," which is one of the major industrial issues designated by the National Development and Reform Commission (NDRC), technical exchange with ironworks/steelmakers about combustion testing, paper presentation at symposiums, promotion for construction of combustion test facilities at large steelmakers, and so on. On the other hand, implementation and PR activities for the guidance of factory audit technologies for combustion and the environment, which were expected much at the time of the terminal evaluation, have been suspended; this is because leading steelmakers have already organized their proper expert teams (according to the executing agency).

R&D activities based on the technology transfer by the project are still ongoing and show some positive results, as some of which have grown to joint research projects with external organizations. Therefore, it could be concluded that the effects of the project will be sustained.

It is expected that the impact of the project will be positively sustained in the future in spite of some unclear financial aspects of the project.

No major problems have been observed in the policy background, the structural, technical, financial aspects of the executing agency; therefore, sustainability of the project effects is high.

Simplified Ex-Post Evaluation for Technical Cooperation Project

Evaluator, Affiliation	Keiko Watanabe Foundation for Advanced Studies on International Development	Duration of Evaluation Study
Project Name	Disaster Mitigation Support Program Project (DMSP)	January 2010 – December 2010

I Project Outline

Country Name	Federal Democratic Republic of Nepal
Project Period	1 September 1999-31 August 2004 (5 years)
Executing Agency	Department of Water Induced Disaster Prevention (DWIDP) of the Ministry of Water Resources
Cooperation Agency in Japan	None
Total Cost	678.413 million yen
Related Projects (if any)	Grant Aid: The Project for Department of Water Induced Disaster Prevention (DWIDP)" Technical Cooperation: "Water Induced Disaster Prevention Technical Centre Project" (Oct. 1991-Mar. 1999) Grant Aid for Grassroots Project: "Kathmandu - Naubise Model Project"
Overall Goal	Capacity of Her Majesty's Government of Nepal (HMG/N) and communities to cope with water induced disasters will be strengthened
Project Objective(s)	Countermeasures for water induced disasters by HMG/N and communities will be promoted
Output[s]	1. Disaster mitigation measures and construction methods suitable for local environment will be identified. Target Group: (1) Community, (2) Counterpart of DMSP 2. Disaster rehabilitation will be strengthened through technical supports of Department of Water Induced Disaster Prevention (Disaster Mitigation Support Programme) Target Group: (1) Concerned central government offices, (2) Concerned agencies = Central and local Government offices, ICIMOD, NGOs, etc. 3. Sharing of disaster information and disaster mitigation technology will be improved. Target Group: (1) Counterpart of DMSP, (2) Concerned agencies' staff, (3) Institute of Engineering, Tribhuvan University 4. Awareness on disaster mitigation among HMG/N and communities will be raised. Target Group: (1) Concerned agencies (JCC), (2) Communities (All Nepal)

Inputs (Japanese Side)		Inputs (Nepalese Side)	
Experts	14 Long term, 40 Short term experts	Staff allocated	41 C/Ps
Equipments	92 million yen	Equipments	N/A
Local Cost	68 million yen	Local Cost	Rs 160 million (Budget for 2003/04)
Trainees Received	26 C/Ps	Land etc provided	DWIDP, The laboratory at Godawari, The garage of the construction machines
Others	N/A	Others	N/A

II Result of the Evaluation

Summary of the evaluation

The Project clarified the responsibility of the executing agency, the Department of Water Induced Disaster Prevention (DWIDP) central role in water induced disaster management, establishing a coordination mechanism with other water induced disaster related organizations and sharing technical and updated information by publishing periodicals and establishing a DWIDP website. By doing so, the Project also upgraded the capacity of the water induced disaster related agencies as well as the coordination skills of DWIDP. As a result, the countermeasures against water-induced disaster have been to some extent furthered. The Project was relevant in response to the high demand from communities affected by water-induced disasters because of Nepal's steep topography and heavy rain during the rainy season. The government also developed a water induced disaster related policy paper.

Part of the project outputs were not realized, resulting from uncontrollable factors, such as poor security situation and deployment delays by the counterparts. Therefore, the Project was unable to completely achieve all its objectives. However, the training courses (both General and Advanced) introduced by the Project were still conducted and a certain level of project sustainability was observed. In addition, indirect impacts were also observed. The Project helped establish a Master's course on Water Induced Hazard at the Institute of Engineering at Tribhuvan University. Now after the Project, with the technical support of DWIDP, new Master's courses have been conducted on Disaster Development Study at Tribhuvan University and on Disaster Risk Management at the Nepal Engineering College, Pokhara University since September 2010. Regarding the remaining issue of establishing the local disaster rehabilitation mechanisms at district and village levels, which could not be completed during the project period, the DWIDP has been making efforts to enhance countermeasures at the local level including conducting mobile seminars in districts. When the answered questionnaire was obtained in July 2010, some concerns about continued sustainability were observed, including the lack of funds for maintenance of procured equipment which left some broken machinery unrepaired, but, at this moment, DWIDP commented that all procured equipment are well maintained and in working condition. However, the financial shortage was also reported to implement Disaster Mitigation Support Programme by DWIDP in full scale, although the budget of DWIDP has been increasing.

In light of the above, this project is evaluated to be satisfactory.

<Constraints of this evaluation study>

The evaluation relied mostly on qualitative analysis of actual achievement since the measurable numerical targets and the degree of achievement have not been set for Project Purpose and some of the Outputs.

1 Relevance

(1) Relevance with the Development Plan of Nepal

"Mitigation of natural disasters" was not clearly mentioned in the Ninth National Five-Year Development Plan which was in effect at the time of the Project started. However, the poor are the people most affected by the natural disasters. Since natural disasters are one of causes of poverty, the mitigation of these disasters is aligned with poverty reduction, the Nepal's most important development priority. The next Tenth Development Plan included water-induced disaster mitigation for the first time, ensuring the relevance of the Project.

(2) Relevance with the Development Needs of Nepal

Nepal is prone to the water-induced disasters such as mud and landslides, and flooding caused by the heavy rains during the rainy season because about 80% of the land is mountainous and the geological condition is very precipitous and fragile. Under these circumstances, the communities are frequently affected by the water-induced disasters. Therefore, the Project was in line with the development needs.

(3) Relevance with Japan's ODA Policy

The issue of disaster management including prevention of landslides has been recognized in the "Support for Economic Infrastructure" as one of the priority issues in the Japan's assistance policy to Nepal.

From the above, this project has been highly relevant with the country's development plan, development needs, as well as Japan's ODA policy; therefore, its relevance is high.

2 Effectiveness / Impact

(1) Achievement of Project Outputs and Project Objective(s)

Regarding the Output 1, "Disaster mitigation measures and construction methods suitable for local environment will be identified", appropriate disaster prevention activities were identified in all four model sites and model construction was initiated. However, two out of four model sites produced only the limited outputs because of the poor security situation and deployment delays by the counterparts. In implementing model activities at all four model sites, the participatory approach was taken, for example, by introducing "disaster mitigation education" in primary schools in order to create community awareness. Moreover, the Project strengthened relations among related water-induced disaster organizations/agencies at the central level through establishment of a "Disaster Survey Committee" and sharing information on the project achievement and technical issues by publishing periodicals and developing a DWIDP homepage. The Project also tried to involve other agencies such as the Ministry of Education and Sports (MoES) in order to create a multi-tiered platform to address the problems. The DWIDP initiated a discussion with the Curriculum Development Center of MoES to incorporate disaster mitigation education in the environmental education curriculum. Furthermore, a "Disaster Protection Activity Plan" was developed in cooperation with related organizations, which fulfills the one of the indicators of project purpose, "The Formation of a plan of actions/operations by DWIDP to prevent/mitigate water induced disaster". However, the degree of the success could not be assessed without a measurable target. At the same time, It was not possible for the disaster rehabilitation mechanism established by the Project to cover the entire Nepal system. It only covered the central level but not extend to the district and village levels, which was a desired effect of the Project.

(2) Achievement of Overall Goal, Intended and Unintended Impacts

Several positive impacts were observed after the project completion. "National Interim Three-Year Plan (2007-2010)," which was formulated after the project, specifies the importance of water induced disaster mitigation and its central role of DWIDP. This was realized because of the recognition by the Government of Nepal of the importance of the issue as a result of the project achievement,

and it is concluded that government countermeasures were strengthened. The DWIDP capacity was increased and this contributed to some extent to mitigate water-induced disasters as can be seen by the number of disaster mitigation activities (plantation, construction, trainings, etc) initiated at many sites in addition to the pilot model site. The "Disaster Protection Activity Plan" was completed at the time of the ex-post evaluation. In addition to the Institute of Engineering at Tribhuvan University, which the Project supported, the Pokhara University launched a Master's course on Disaster Risk Management with the technical assistance of DWIDP. Moreover, indirect positive impact was observed such as the establishment of the "Nepal Landslide Society" which is the first academic society of natural disaster mitigation in Nepal. There are not any negative impacts by the Project.

From the above, this project has somewhat achieved its objectives; therefore, its effectiveness is fair.

3 Efficiency

(1) Outputs

As stated in the above "Effectiveness / Impact", a part of output could not be produced by the Project. Some of the reasons were unavoidable factors such as the security situation and the delay of the counterparts deployment.

(2) Elements of Inputs

The appropriate Japanese experts were dispatched as planned. They were highly commended by the related organizations. Other inputs for example equipment and material were carefully selected for appropriateness and the needs for disaster rehabilitation activities.

(3) Project Cost, Period of Cooperation

The Project implementation period was as planned; the planned period was 60 months and actual period was 60 months (equal to 100% of planned period). The planned cost was not confirmed but the actual cost was 678.413 million yen.

From the above, the inputs are appropriate for producing outputs and achieving the project objective; therefore, efficiency of the project is high.

4 Sustainability

(1) Related Policy towards the Project

Several political policies and strategies including "Water Induced Disaster Management Policy 2062 (2005)" and "National Interim Three-Year Plan" identified the importance of the pertinent issue which features high on the government's list of priorities.

(2) Institutional and Operational Aspects of the Executive Agency

The "Disaster Survey Committee," which was established in order to coordinate all disaster related organizations by the Project, was not active after project termination. Currently, DWIDP is individually coordinating the activities with related organizations; however, there is no integral body for coordination.

(3) Technical Aspects of the Executive Agency

Out of 41 counterparts only three (3) are still remaining in DWIDP. However, according to the DWIDP, newly recruited staff is receiving technical transfer by general and advanced technical training courses organized by DWIDP. DWIDP has been continuously implementing natural disaster management activities and using the provided equipment without any technical problems. Therefore, it is reported that there is no serious technical problem.

(4) Financial Aspects of the Executive Agency

The budget of DWIDP has been increasing by 20% annually after the project termination. The allocation from the Ministry in charge (Ministry of Water Resources) also has been increasing. However, there has not been enough funds budgeted for the full implementation of Disaster Mitigation Support Programme by DWIDP. It was reported at the timing of the survey in July 2010 that because of the lack of maintenance resources, some equipment such as dump truck and excavator were not in use; however, all procured equipment are well maintained and in working condition at this moment.

(5) Continuity of Effectiveness and Impact

DWIDP has been implementing the disaster mitigation/prevention activities such as community training and tree planting not only at the four project model sites but also at more than eight other sites. The information on the achievements of these activities is also shared through DWIDP periodicals and mobile seminars.

From the above, some problems have been observed in the structural and financial aspects of the executing agency; therefore, sustainability of the project effects is fair.

Simplified Ex-Post Evaluation for Technical Cooperation Project

Evaluator, Affiliation	Maki Hamaoka Foundation for Advanced Studies on International Development	Duration of Evaluation Study
Project Name	The Project for Improvement of Public Administration for Local Governments in Punjab	January 2010 – December 2010

I Project Outline

Country Name	Islamic Republic of Pakistan
Project Period	August 2004-August 2006 (Extension) August 2006-February 2007
Executing Agency	Local Government and Community Development Department, Government of the Punjab (LGCD) District and Tehsil Governments in Hafizabad
Cooperation Agency in Japan	Supporting Committee (Prof. Nakamura from Meiji Univ., Prof Kawamura from Ryukoku Univ., Prof. Kurosaki from Hitotsubashi Univ.)
Total Cost	226million yen
Related Projects (if any)	Support for Improvement of Public Administration in Local Government in Punjab (Follow-up Phase)
Overall Goal	The model of basic project cycle management on Citizen Community Board (CCB) Program is developed by improving components of CCB Improvement Activities in the model district.
Project Objective(s)	Citizen Community Board (CCB) Program becomes more effective and efficient by improving local government performance in the model district.
Output[s]	1. Obstacles and needs in communities and people for the implementation of CCB activities in the model district are identified by the local governments through a socio-economic survey. 2. Room for improvement in public administration of the CCB program in the model district is identified by the local governments through organization analysis. 3. CCB Improvement Plan (CIP) is created and implemented with the concept of project cycle management in the model district. 4. The local government executives, officials, and public representatives in the model districts acquire necessary skills and knowledge of the project activities.

Inputs (Japanese Side)		Inputs (Pakistani Side)	
Experts	3 for Long term, 3 for Short term	Staff allocated	10
Equipments	N/A	Equipments	Nil
Local Cost	10.4 million yen	Local Cost	31.66 million Rs.
Trainees Received	5 persons	Land etc provided	Office spaces and facilities
Others	N/A	Others	Nil

II Result of the Evaluation

Summary of the evaluation

The Government of Islamic Republic of Pakistan introduced a new local government system under the Local Government Ordinance 2001. Under the "bottom-up" concept of this Ordinance, Citizen Community Board (CCB) was newly introduced as a system to fund community-based development projects in various sectors such as health, education, water supply and sanitation and agriculture. However, the CCB implementation stagnated since the concrete operation of the CCB system was not sufficiently understood by both local government and residents. Thus, strengthening the system for efficient implementation of CCB was required.

In response to the above situation, the project implemented a number of activities including strengthening the local administration support system, formulating guidelines and stakeholders' capacity building to achieve steady and efficient CCB implementation. As a result, 100 CCB were registered and 13 projects were completed during the latter half of the project period. In comparison with the situation in the Punjab Province as a whole, i.e. the registration of 320 CCB and completion of 16 projects for 4 years, it could be concluded that the initial project objective, "CCB program become more effective and efficient by improving local government performance", was well achieved in terms of efficient CCB program implementation. However, Monitoring and Evaluation (M&E)of the implemented projects were not sufficiently covered as planned in the Community Improvement Program (CIP) formulated by the Project due to limited human and financial resource capacity, although the Project had been making a great deal of effort.

In the terminal evaluation, possible follow-up action was recommended to sustain supporting service functioning of the CCB program established by the Project. In response to this recommendation, a 2-year follow-up Project commenced under a JICA follow-up scheme (F/U) 6 months after project completion. In the F/U, the number of CCB projects increased remarkably. M & E was however, not yet sufficiently followed. In this regard, the utilization of experiences achieved by the Project (Phase-1) seemed limited. The overall goal, "Development of the basic project cycle management model for the CCB program by improving components of CCB improvement activities in the model district", was probably not achieved, through the F/U project helped the target local stakeholders to secure resources to better improve the implementation of the CCB program including M & E.

After the change of government in February 2008, the new government decided to amend the CCB system. This political change has affected every aspect of the system and it is not likely that the CCB system will remain as it is. Though the provincial government stated that community participation in local development process is expected to be incorporated in the new local governance system, it

is unknown when the current ordinance will be amended. Due to the uncertain political situation, the sustainability of the project effect is expected to unforeseeable.

In light of the above, this project is evaluated to be unsatisfactory.

<Recommendations to JICA>

In implementing a project in a relatively short period like this one, it is recommended to limit the number of sites and target groups according to a period to establish a CCB model by following a complete project cycle of "planning-implementation-M&E". In addition, Project Design Matrix (PDM) and Plan of Operation (PO) should be reviewed at least once every project period by adjusting the PO and concretizing indicators according to the progress of the Project activities and achievement expectations as one of project management.

<Constraints of this evaluation study>

In the ex-post project evaluation, insufficient information and data were collected through questionnaires sent to the two executing agencies due to following constraints;(1) the Local Government and Community Development Department, Government of the Punjab (hereinafter referred to as "LGCD") was too busy to respond to the questionnaires and the person in charge had been replaced. Therefore, a district officer (budget &finance) from the Hafizabad District Government answered the questionnaires. (2) Most of the indicators in the PDM are described as a "comparison between before and after survey" without any specific targets (e.g. comparison of the number of CCB activities before and after Project) and they were not updated during the Project period to specify objectively verifiable targets. It was therefore difficult to verify the project effects in an objective manner.

1 Relevance

(1) Relevance with the Development Plan of Pakistan

"Poverty Reduction Strategy Paper (2003)", a national development plan of the government of Pakistan specified "improvement of governance" as one of strategies emphasizing decentralization and empowerment of citizens, and providing resources to provincial and local governments as well as community groups to identify development activities, to allocate resources, and then to strengthen service delivery. The CCB program, in particular, was considered to be an important means to accelerate economic development and poverty reduction. At the provincial level, the Government of Punjab enacted the "Punjab Local Government Ordinance (LGO) in 2001 which required local governments to allocate 25% of their development budget for the CCB program.

(2) Relevance with the Development Needs of Pakistan

LGO made it possible to deliver administrative service according to the needs of local people. Since the construction of basic infrastructure such as health, education, and water supply facilities in rural areas was seriously behind schedule, service delivery for this basic infrastructure was responsive to the needs of the people. However, the concrete operation of the CCB program had not been sufficiently understood by local government and residents. Therefore, the implementation of the CCB system stagnated. Efficient system of CCB implementation was, thus, an urgent issue.

(3) Relevance with Japan's ODA Policy

The Japanese ODA charter stipulated "Supporting self-help efforts of developing countries as one of basic policies" based on good governance, by extending cooperation for human resource development, by institution building including development of legal systems. "Country Assistance Program (February 2005)"also mentioned an assistance to "governance" as one of cross-cutting issues.

This project has been highly relevant to the country's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.

2 Effectiveness / Impact

(1) Achievement of Project Outputs and Project Objective(s)

Following outputs were produced through the implementation of the Project.

- Output1: Issues and development needs in the target 42 unions were identified by a general condition survey and a community survey. The result was summarized in "Union Sheets" and sent to respective target union and shared by local governments through the result sharing workshop.
- Output 2: Administrative issues were identified through an organization analysis survey and an institutional survey. The results were explained to the target district officials in the Project Coordination Committee and workshops. According to the trainer evaluations, the understanding level of 17 participants regarding the CCB program was improved.
- Output 3: The objective of this output, "Formulation and implementation of CCB Improvement Plan (CIP) with the concept of project cycle management", was achieved to some extent through the formation of CIP and implementation of CCB projects. M & E included in the CIP was not fully covered.
- Output 4: A total of 16 seminars, workshops were held concerning "Project Cycle Management", "Organizational Capacity Building", "LGO2001 and CCB rules" etcetera. According to the evaluation by lecturers/trainers, the local government executives, officials and public representatives in the model district acquired necessary skills and knowledge of the CCB program.

Through achievement of these outputs, 100 CCB were registered and 13 projects were completed in the target district. At the same time, 320 CCB, 16 projects were completed for 4 years in the Punjab Province. Compared with the situation in the whole province, it can be concluded that the CCB program implemented under this Project was much improved in its implementation pace. Considering the situation before the Project, the initial project objective, "CCB Program becomes more effective and efficient by improving local government performance", was achieved in its efficient implementation and the Project played an important role in improvement of CCB project implementation. However, M&E of the implemented projects were not sufficiently covered as planned due to limited human and financial resource capacity, although the Project had been making a great deal of effort.

(2) Achievement of Overall Goal, Intended and Unintended Impacts

The CCB program was continuously supported through the F/U scheme. The CCB implementation procedure was improved by the F/U. As a result, 50 projects were allocated funds, of which 37 projects were completed. Different indirect impacts were reported: timely medical treatment especially in case of emergencies through the provision of ambulances, increase in production of meat, milk, and income through a breeding bull project. The initial overall goal, "Development of the model of basic project cycle management on CCB program by improving components of CCB improvement activities in the model district", has not been fully achieved, due to limited monitoring of projects undertaken by CCBs. Insufficient monitoring were caused by insufficient budgeted funds including transportation for district officials, and the lack of awareness of functions and responsibilities of the district monitoring committee by its members. Moreover, the freeze of CCB program due to political decisions affected the uninterrupted implementation of the CCB program. Coping with such constraints, the F/U project promoted alternative community development activities which were not limited to CCB program.

This project has somewhat achieved its objectives, therefore its effectiveness is fair.

3 Efficiency

(1) Outputs

As mentioned above, the achievement of the outputs was partially limited.

(2) Elements of Inputs

Quality, quantity and timing of inputs were mostly appropriate except for the frequent transfer of C/P. Formulation of Project activities, and the limited project period seemed to have affected the achievement of outputs rather than the input elements.

(3) Project Cost, Period of Cooperation

The actual Project period was 30 months, as compared to a planned period of 24 months, which was slightly longer than planned (equal to 125% of the planned period). This is because of 6 months extension of Project period due to a serious earthquake that occurred in October 2005 affecting the progress of the Project activities. This extension was regarded as inevitable force. However, the entire Project length was too short given the limited achievement level of the project purpose and outputs. The actual cost was 226 million yen, as compared to the planned cost of 270 million yen, which was lower than planned (equal to 84% of the planned cost).

The period of cooperation was not appropriate for producing outputs, therefore efficiency of the project is fair.

4 Sustainability

(1) Related Policy towards the Project

The CCB system is not expected to be continued due to the change of government. However, "community participation" in local development process is expected to be incorporated in the new local governance system after a future amendment of the LGO. In this regard, policy aspects of the Project are acknowledged; therefore, the project effects should be sustainable.

(2) Institutional and Operational Aspects of the Executing Agency

For this Project, the LGRD secretary, an additional LGRD secretary of the district Nazim, a district coordination officer, and executive district officer of community development were involved as counterparts. The assignment of the personnel was decided without ample consideration of projects to be implemented with donors. The terminal evaluation pointed out frequent transfer of officials in charge of CCB program as a factor impairing the Project efficiency. This aspect was also pointed out by the evaluation of the F/U as well. The CCB Support Centre, the CCB supporting unit introduced by the Project, was not functioning at the time of the ex-post evaluation due to the freeze of the CCB system.

(3) Technical Aspects of the Executive Agency

According to the F/U project, LGCD officials were more active, supportive to facilitate CCBs compared to phase-1. The CCB project implementation procedure was reportedly much improved. It is thus judged that delay in administrative procedure, one of issues pointed out previously, was much improved. Meanwhile, district government officials did not reportedly assume their responsibilities fully as expected. For instance, they delayed appraisal of documents during the F/U.

(4) Financial Aspects of the Executive Agency

The CCB Budget was deemed to be allocated appropriately during the F/U as planned in the inputs by the Pakistani side. In fact, funded by the district government, 37 CCB projects were completed. At this moment, however, financial support to CCB projects is not recognized due to the freeze of the CCB system. Though the CCB system itself is not anticipated to be continued, financial sustainability seems high since the provincial government has budgeted funds for CCB program so far and it is expected that funds will be appropriately budgeted in a same manner when similar community-based development programs resume.

(5) Continuity of Effectiveness and Impact

As mentioned above, community development activities were promoted beyond the CCB program. However, continuity of project effectiveness and impact has been limited since the CCB system has been frozen after the completion of F/U even at the time of the ex-post evaluation.

Major problems have been observed in the policy background, structural, technical, and financial aspects of the executing agency, therefore, sustainability of the project effects is low.