

Terminal Evaluation

Asia

I. Outline of the Project

- Country : Viet Nam
- Project title : Enhancing Capacity of Vietnamese Academy of Science and Technology in Water Environment Protection
- Issue/Sector : Environment
- Cooperation scheme : Technical Cooperation Project
- Division in charge : JICA Viet Nam Office
- Total Cost : 709 million Japanese yen
- Period of Cooperation : (R/D) September 10, 2003
November 1, 2003 – October 31, 2006
- Partner Country's Implementing Organization:
Vietnamese Academy of Science and Technology
- Supporting Organizations in Japan : Ministry of Environment
- Related Cooperation
Technical Cooperation Project (Policy Adviser (Environmental Management) to MONRE)

1-1 Background of the Project

Rapid socio-economic development continues since the Doi Moi (the Reforms) in the Socialist Republic of Viet Nam, and the economic growth rate is in a high level of about 7% from 1990's, and will be maintained this high growth rate for the present. On the other hand, rapid industrialization that supports the high economic growth rate brings serious environmental problems because of waste and exhaust gas, etc., discharged by the factories without treatment. At same time, the urbanization causes an increase of domestic wastewater and the municipal solid waste resulting in accelerating environment deterioration. Such environmental problems begin to be paid attention to by not only the government authorities but also community and people. Among those problems, water environment pollution is recognized as the most serious because it is easily perceivable in the living circumstance of Viet Nam. There is increasing evidence of pollution of Viet Nam's surface, underground and coastal waters. Although the quality of upstream river water is generally good, downstream sections of major rivers reveal poor quality and most of the lakes and canals in urban areas are fast becoming sewage sinks. Groundwater shows pockets of contamination and some salinity intrusion.

The government of Viet Nam has adopted the Law of Environmental Protection in 1993, and followed by setting up environmental regulations and standards to improve the environment. However, Viet Nam's water environment is facing many problems in terms of technology, facilities, and human resources to realize environmentally sustainable development.

Under these circumstances, Viet Nam Government requested a technical cooperation project aiming at capacity development in monitoring, treatment, and management of water environment of Vietnamese Academy of Science and Technology (hereinafter referred to as "VAST") to the Japanese Government.

Upon receiving this request, the Japanese government conducted two preparatory studies and one implementation study, through which series of discussions with authorities concerned of the government of Viet Nam were carried out. Both parties signed the Record of Discussion for this Project on September 10th, 2003. In 1st November 2003, the Project was commenced with 3 years cooperation period.

1-2 Project Overview

(1) Overall Goal

The capacity of Vietnamese authorities related to water environment protection will be improved.

(2) Project Purpose

The capacity of VAST related to water environment protection is improved..

(3) Outputs

- 1) VAST researchers' abilities to conduct water quality monitoring and to develop analysis methods are improved.
- 2) VAST researchers' abilities to develop and apply suitable technologies on domestic and industrial wastewater treatment are improved.
- 3) VAST staff members' abilities to conduct training courses on water quality monitoring and wastewater treatment for central and local organizations are improved.
- 4) VAST researchers are to contribute to MONRE's and related organizations' activities of water environment protection.

(4) Inputs (as of this final evaluation)

Japanese side:

Long term expert 6 persons Equipment supply 367,647 thousand yen
Short term expert 11 persons Local cost 53,807 thousand yen
No. of trainees received in Japan 26 persons Others 288,375 thousand yen

Japanese side:

Counterparts 144 persons
Equipment Water treatment facility, consumables, small equipment
Land and facilities Project space and office rooms
Local cost 6,222 million VND

II. Evaluation Team

Members of the Evaluation Team:

Japanese Members

Team Leader:

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Evaluation Analysis:

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Vietnamese Members

Team Leader:

Mr. Nguyen Gia Lap

Deputy Director, International Cooperation Department, VAST

Member:

Ms. Le Thi Hai Le, Officer, Department of EIA and Appraisal, MONRE

Member

Ms. Le Thi Hoai Nam, Institute of Chemistry, VAST

Period of Evaluation:

May 28, 2006-June 10, 2006

Type of Evaluation:

Final Evaluation

III. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

Overall, the Relevance of the Project is high. The details are as follows.

Relevance of the Project for Vietnamese government's policy

Due to the rapid economic growth and industrialization, the environmental situations are getting worse, which makes environmental prevention a major issue for the government. The Five Year Socio-Economic Development Plan (2006-2010), a national development plan, states that economy, society and environment are perceived as the three important factors that secure the sustainable development. Furthermore, it is clearly stated that the Vietnamese Government will make efforts to protect environment in the National Strategy for Environmental Protection (2001-2010) (MONRE, December 2003). In addition, MONRE's Five Year Plan for Natural Resources and Environment (2006-2010) (MONRE, December 2005) explains that MONRE will tackle for the improvement of water quality. Therefore, it can be said the importance of improvement of water quality is widely recognized. Hence, the relevance of the Project in this regard is satisfactorily secured.

Relevance of the Project for the target groups

It can be concluded that the project approach is in line with the Overall Goal because its target organization is VAST- the leading research institutes in the field of environmental technologies; and the advanced and reliable analytical ability acquired by VAST through this project will greatly contribute to improvement of water environment protection in Vietnam (the Overall Goal). According to the Government Decree No. 24/2004/ND-CP about the establishment of VAST, this academy is directly under the national government (i.e. the prime minister) with the same level of authorities as other ministries and thus could perform the technical consultancy to the state bodies. In fact, VAST(IET: Institute of Environmental Technology) is designated to perform tasks including research, consultancy to the state bodies on the policy related to the environmental protection, engineering services on environmental technology and provision of training opportunities for the high-qualified staff. Therefore, it is highly plausible that the transferred knowledge and technologies are spread through these channels and contribute achieving the Overall Goal.

In addition, according to the interview surveys to core researchers and engineers, it is confirmed that the Project meet the needs of VAST(IET). Eleven interviewees, including the project manager, acknowledged the importance of improving their skills as researchers in the national leading academy and indeed appreciated that the Project helped them improve their knowledge and skills. VAST(IET) has been perceived as one of most reliable institutions from other research institutes, universities, institutes under different ministries and private companies, and effects of VAST(IET) is rather large and reachable to the wider stakeholders. Thus it can be concluded that the selection of C/P agency is highly appropriate at this stage.

(2) Effectiveness

Based on the achievement of the Outputs and the Project Purpose, the Project is likely to fulfill its purpose by the end of the cooperation period. However, the quality of the documents which are produced by the Project were not specified in the PDM. When the quality aspect is taken into consideration, it can be assessed that the Project needs to make more efforts to maximize effectiveness. Before the completion of the Project, the overall effectiveness of the project is likely to be further enhanced by the Project's efforts.

The project is also effective for enhancing capacities of DONRE, who should actually implement the policies and plans aiming at improvement of the environment. In particular, the training courses targeting DONRE staff members were organized based on an assessment of DONRE's training needs. Support to the provinces is expected to be further important.

It is worth mentioning at this point that collaboration in concrete environmental activities between the Project and MONRE, institutes under MONRE and other relevant organizations will become more crucial.

Last but not least, it seems that the effectiveness of the Project was further enhanced by the enormous ability and diligence of C/Ps and the organizational strength of VAST(IET), high recognition of VAST as the national leading research institute which make VAST work easily with other organization, and ever increasing demands for the environment protection.

(3) Efficiency

It is true that it took unexpectedly long time to install equipment and some experts were dispatched later than the originally planned. In fact, due to the present status of economy in Vietnam, it was difficult and took time for smaller business entities to handle imported equipment as scheduled. However, it gave opportunities and time for C/Ps to learn specifications, and to choose equipment based on their needs.

C/Ps are satisfied with varieties and numbers of equipment, and indeed equipment is used regularly. Thanks to the equipment provided by JICA, varieties of analysis became possible to be carried out by VAST(IET).

The enormous ability and diligence of C/Ps and the organizational strength of VAST(IET) made the Project fulfill the satisfactory level of achievement in spite of delay in installing all necessary analytical equipment and the 7-month absence of long-term expert on water analysis. Thus, as a result, overall efficiency of the Project can be assessed as reasonably satisfactory.

(4) Impact

In fact, during the evaluation, the Team could find several positive impacts of the Project which have already emerged.

First of all, various studies and advices have been provided by VAST(IET) to MONRE and other local authorities based on requests from them. VAST(IET) also provided consulting and engineering services on wastewater treatment to hospitals and factories. In addition, officers from 25 DONREs out of 64 DONREs in the country participated in the training courses and received lectures from C/Ps. Furthermore, VAST(IET) submitted document No.285/VCNMT dated on September 14 2005 to the General Department of Standard and Quality/MOST and MONRE with the purpose of proposing to revise the Vietnamese Standards (TCVN) in water environment.

Another positive impact of the project is the trainings provided by the Project to DONRE officers. These training courses met their needs well because they contributed to enhancing basic abilities of water environmental management, updating their knowledge and sharing Japanese experiences. After the training courses, VAST(IET) received requests for trainings from Thanh Hoa province, Thai Nguyen province, Bac Ninh province and Hai Duong province where some of the participants belong to. Great demands towards trainings by VAST(IET) were also confirmed at the focus group discussions.

As another event, it is worth mentioning that the university students who were under laboratory trainings in VAST(IET) reported what they have learned in VAST(IET) laboratories, and in response, some universities who sent students to VAST(IET) laboratories invited some staff members as lecturers. This can be considered another positive impact of the Project.

As mentioned, several positive impacts have been already occurring, and thus the further positive impacts in the future can be expected.

(5) Sustainability

Institutional Aspects

The institutional sustainability is likely to be secured. According to the Government Decree No. 24/2004/ND-CP about the establishment of VAST, this academy is directly under the national government (i.e. the prime minister) with the same level of authorities as other ministries and thus could perform the technical consultancy to the state bodies. In fact, VAST(IET) is designated to perform tasks including research, consultancy to the state bodies on the policy related to the environmental protection, engineering services on environmental technology and provision of training opportunities for the high-qualified staff. Therefore, it is highly plausible that the transferred knowledge and technologies are spread through these channels.

During the project period, staff number of VAST(IET) has been increasing from 70 in April 2003 to 144 in December 2005. Due to the high recognition of VAST(IET) and its provision of high personal development prospects, staff members work long without frequent job hopping, and thus the sustainability in terms of the organizational aspect can be considered secured.

Financial Aspects

It is expected that sufficient budget will be allocated for the future activities. The annual budget of VAST(IET) is indeed in upward trend since the beginning of the Project. In addition to the budget from the government, VAST(IET) could secure own financial resources through providing consulting and engineering services to other organizations such as DONREs, hospitals and factories. This could secure the financial sustainability of VAST(IET). For the future, VAST(IET) should make more efforts to increase own financial resources through the commissioned studies and engineering services in order to not only maintain but also invest in additional equipment.

In general, looking at the financial status and trends, VAST(IET) is stable and thus can secure sustainability of the Project.

Technical Aspects

The C/P agency formed 18 working groups for main analytical and treatment equipments with its own initiative by using the balancing budget, and carried out researches on compositions and functions of equipment, measurement principles and operational method with supports from Japanese experts. The results of these researches were compiled as 18 research reports. Contents of some reports were announced at the project steering committee at VAST and were approved by VAST. Likewise, the level of participation and ownership of the C/P agency can be considered high.

In addition, VAST(IET) have hired external resources on Quality Assurance (QA)/ Quality Control (QC) for laboratory management with their own budget in order to increase the reliability of monitoring data. C/Ps have made great efforts to enhance their capacities and this can be said as a sign of sustainability.

As mentioned, Vietnamese side is actively acquiring knowledge and analytical methods by using equipment provided through the Project. It is true that the cost for operation and maintenance for the advanced equipments is rather high, but they recognized the importance to maintain the advanced equipment as the leading research institute in the field of natural science and technology, and to raise own funds and to keep on producing accurate data.

Looking at the sustainability of the Project from three different aspects, namely institutional aspect, financial aspect and technical aspect, it can be concluded that the sustainability is likely to be secured in the future.

3-2 Factors that promoted realization of effects

(1) Factors concerning to the Planning

According to the Government Decree No. 24/2004/ND-CP about the establishment of VAST, this academy is directly under the national government (i.e. the prime minister) with the same level of authorities as other ministries and thus could perform the technical consultancy to the state bodies. In fact, VAST(IET) is designated to perform tasks including research, consultancy to the state bodies on the policy related to the environmental protection, engineering services on environmental technology and provision of training opportunities for the high-qualified staff. This promotes C/P's efforts to spread the transferred knowledge and technologies through these channels and contributes realization of effects.

(2) Factors concerning to the Implementation Process

VAST(IET) staff members have remarkable capacities as researchers, and in fact, most of core staff members are PhD holders. In addition, VAST(IET) staff members are proud of being members of the leading research institute, and eager to learn new technologies. The enormous ability and diligence of C/P made the Project fulfill the satisfactory level of achievement.

3-3 Factors that impeded realization of effects

(1) Factors concerning to the Planning

In Vietnam, two organizations, MONRE, a regulator and policy maker relating to environmental issues and VAST(IET), research institute for environmental technology, exist in parallel, and the collaboration of those two institutes has been considered as a major issue since the project formulation stage. It is assumed that collaboration in concrete environmental activities between the Project and MONRE, institutes under MONRE and other relevant organizations will become more crucial.

(2) Factors concerning to the Implementation Process

Some long-term experts were dispatched later than the originally planned. In addition, as for procurement of major equipment, it took unexpectedly long time to install them because due to the present status of economy in Vietnam, it was difficult and took time for smaller business entities to handle imported equipment as scheduled. Under these circumstances, there were some factors impeded efficient project implementation in the beginning of the Project.

3-4 Conclusion

As summarized under the five evaluation criteria, in general the Project has been in good progress, and it is considered that the Project will achieve its objectives originally planned by the end of the Project in October 2006. Therefore, the Project should be able to terminate in October 2006 as described on Record of Discussions.

Overall, it can be concluded that VAST(IET) comprehended issues in water environment management precisely through the Project, and has acquired fundamental technological knowledge (monitoring, countermeasures, and policy supports), which can be applicable to water environment management. It is worth mentioning that, in addition to efforts by Japanese experts, the active participation and strong ownership from the C/P agency are one of major factors that contributes to the good progress of the Project. In the future, in order to achieve the overall goal and improve water environment, the further efforts of the Vietnamese side is highly expected.

3-5 Recommendations

The following points were identified as recommendations from the result of evaluation.

(1) Confirmation of fundamental technological capacity and improvement of quality

The Project primarily aims to enhance the fundamental capabilities, and by looking at indicators, it can be said that the Project is almost achieving the objectives. However, on the other, when the quality aspect of outputs is taken into consideration, the level of them were not necessarily satisfactory in order for the Vietnam to carry out environmental monitoring, analysis, researches

and policy recommendation, and therefore the further efforts to enhance capacities are essential. At least, during the remaining period of the Project, the Project should make more efforts to conclude the remaining issues such as development and recommendation of standardized monitoring methods, carry out experiments on wastewater treatment, utilize opportunities to learn from Japanese experts, and improve the qualitative aspect of the outputs.

(2) Appropriate operation and maintenance of the equipment and the future plan

It can be said that new equipments purchased by the Project is properly used currently. As for the operation and maintenance of equipment, it is important for the Vietnamese side to prepare a plan for operation and maintenance, secure the budget, and in addition draw another plan for renewal and additions of advanced equipment. Also, along with the expansion of VAST(IET), the VAST(IET) should pay attentions to recruit competent personnel, and should do so in a consistent manner.

Currently the construction of IET building is undergone. On the occasion of shifting to the new building, the Vietnamese side will be fully responsible to re-install all equipment to new laboratories.

(3) Enhancement of collaboration with other organization

In Vietnam, two organizations, MONRE, a regulator and policy maker relating to environmental issues and VAST(IET), research institute for environmental technology, exist in parallel, and the collaboration of those two institutes has been considered as a major issue since the project formulation stage.

The Project does not only support the research activities, but also aims to contribute to improving the water environment situation in practical for Vietnam. Therefore, VAST(IET) is highly expected to take actions towards not only MONRE and local authorities such as DONREs but also various actors such as private business entities and universities, to collaborate with them in practical manner, and to enhance the partnership that can contribute to improving capacities of all relevant organization. In addition, it is important to enhance the technical capacity of VAST(IET) through these activities in the fields, and to accumulate know-how in VAST(IET).

(4) Strengthening of the assistance to DONREs

Among all relevant organizations mentioned above, the actual implementing agent of water environment management is DONREs in 64 provinces all over Vietnam. Currently the organizational capacities of DONREs vary greatly, and as a whole, they have not obtained sufficient capacities yet. It is essential and urgent to strengthen DONREs' capacities in order to improve the water environment in Vietnam, and thus VAST(IET), as a leading institute in the field of environmental technology, could play a major role in this aspect. It can be considered that the strengthening of technical capacity of DONREs, in collaboration with MONRE and other organizations, is an important role of VAST(IET) in the future.

3-6 Lessons Learned

The following points were identified as lessons learned from the result of evaluation.

(1) Appropriate timing of project implementation

In response to the rapid economic growth and deterioration of environment, Ministry of Natural Resources and Environment was established as an agency for environmental administration independently from the new Ministry of Science and Technology in August 2002. At the same time, Institute of Environmental Technology was formed under National Center for Science and Technology (NCST) (VAST at present). Hence, it can be seen that the system to battle deteriorating environmental issues is emerging in Vietnam. The Project was started in 2003, and this appropriate timing for commencement could be considered as one of contributing factors to success of the Project.

(2) Selection of appropriate C/P agency and Human Resource Management

VAST is the leading national academy which directly belongs to the central government, and thus the technological level of the organization is believed to be the highest in Vietnam. Naturally, the level of knowledge and technological capacity, and also the awareness towards environmental issues of major C/P personnel in VAST(IET) are reasonably high. Sampling and operation and maintenance of major analytical equipment are also carried out by themselves; Thus, VAST has appropriate features as a C/P agency of technical cooperation. In addition, the VAST(IET) is organizationally strong, and the VAST(IET) as a organization supports the Project adequately. These capabilities and strong commitment of the C/P side can be considered contributing to the success of the Project.