

Summary of the Evaluation Study Results

1. Outline of the Project		
Country: The Republic of the Philippines		Project Title: Establishment of Ecological Solid Waste management in Three Cities
Sector: Solid Waste Management		Cooperation Scheme: Technical Assistance Project
Office in Charge: JICA Philippine Office		Total Cost: 366 million JPY
Project Period	October 24, 2007 to October 23, 2010	Implementing Agencies of the Partner Country: Department of Environment and Natural Resources (DENR), National Solid Waste Management Commission (NSWMC), Sagay City, Calbayog City and Davao City
		Supporting Organization in Japan: NJS Consultants, Co., Ltd.
Related Cooperation:		
1) Development Study “The study on solid waste management for Metro Manila in the Republic of the Philippines”, 1997 to 1999		
2) Expert “Solid Waste Management Administration (NSWMC)”, 2003 to 2006		
3) Basic Survey “Selection Survey of Priority Local Government Units for Appropriate Solid Waste Management Facility”, April to November 2004		
4) Development Study “The Master Pan on Solid Waste Management for Boracay Island and Municipality of Malay”, March 2007 – February 2008, with follow-up assistance, August 2009 – March 2010		
5) Yen Loan, “Local Government Units Support Credit Program”, 1998 to 2006, “Environmental Infrastructure Support Credit Program”, 1999 to 2002,”Environmental Development Program”, from 2008		
1.1 Background of the Project		
<p>In the Philippines, inadequate solid waste management is a social concern that threatens public health and sanitation not only in the Manila Metropolitan area but also in the local cities. In order to address the issue, the Government of the Philippines enacted Ecological Solid Waste Management Act (RA 9003) in 2001, which sets forth the implementing responsibility of local government units (LGUs), provisions of ecologically sustainable Solid Waste Management (SWM) and establishment of the National Solid Waste Management Commission (NSWMC) under the Office of the President to promote the Act.</p>		
<p>However, the total number of Local Government Units (LGUs) that had completed the shift to sanitary final disposal and implementing the suitable operation and maintenance were actually less than 10% among approximately 1,600 LGUs existing in the country. The reasons were considered to include financial and technical constraints of the LGUs to establish necessary facilities, insufficient understanding of the LGUs about SWM required by RA9003, and shortages of human resources or institutional arrangement for proper SWM.</p>		
<p>Under the above mentioned circumstances of SWM in the Philippines, implementation of a</p>		

Technical Cooperation Project was agreed between the Philippine and Japanese governments to establish a practical SWM system based on the principle of RA9003, which aimed at the utilization and proper management of waste, and to strengthen the capacity of LGU's human resources in charge of SWM. The project started in October 2007, with the project period of three years.

Six Japanese experts including a chief advisor specialized in SWM and five experts of waste diversion planning, final disposal planning, financial analysis, environmental education and environmental and social consideration have been dispatched and worked to establish a SWM system following RA9003 in selected target cities, namely Sagay, Calbayog and Davao. Further, they aimed at capacity development of NSWMC for the enforcement of RA9003 by applying the experience in the three cities.

1.2 Background of the Project

To establish a SWM system following RA9003, technical transfer activities for 3R (Reuse, Reduce, Recycle) such as operation and maintenance of SLF and IEC activities at MRF were conducted in selected target cities, namely Sagay, Calbayog and Davao, and capacity development support for NSWMC such as establishment of guideline by applying the experience in the three cities.

(1) Overall goal

Knowledge and experience of ecological solid waste management (SWM) in the three cities are replicated in other LGUs.

(2) Project purpose

Ecological SWM system is established in the three cities.

(3) Outputs

1. Capacity of LGUs on SWM planning is strengthened.
2. Solid waste diversion system is improved.
3. Final disposal system is improved.
4. Guidebooks and manuals are developed as a tool for planning and implementation of SWM based on the experience of the three cities.

(4) Inputs (at the time of terminal evaluation)

Japanese Side: Total Cost 366 million JPY

Short-term experts: 65.5 man-month

Trainees received in Japan: 12 persons

Provision of equipment: Approx. 36 million JPY

<p>Others</p> <p>Project operation: Approx. 16.6 million JPY</p> <p>Sub-contracting: 12 sub-projects</p> <p>Philippine Side</p> <p>Counterpart personnel: 3 persons of NSWMC, 5 persons from Sagay, 6 persons from Calbayog and 9 persons from Davao</p> <p>Others: Project office in Manila and three cities, operation cost of the MRFs, ECC application and construction cost of the final disposal sites, and others.</p>			
2. Evaluation Team			
Team Members	<p>(1) Japanese Site</p> <p>Mr. Shiro Amano (Leader): Senior Advisor, JICA Research Institute</p> <p>Ms. Noriko Otsuki (Evaluation Analysis): Consultant, International Cooperation Department, Kokusai Kogyo Co., Ltd.</p> <p>Mr. Komei Kawauchi (Solid Waste Management): Consultant, Overseas Environmental Consulting Division, EX Corporation</p> <p>Ms. Naoko Yago (Evaluation Management): JICA Philippine Office</p> <p>Ms. Sealdi Calo (Evaluation Coordinator): JICA Philippine Office</p> <p>(2) Philippine Side</p> <p>Engr. Eligio Ildefonso Executive Assistant IV, DENR-EMB</p> <p>Ms. Cristina M. Regunay Office-in-Charge-Chief, Multilateral Investments Program Division, FASPO, DENR</p> <p>Ms. Erlinda Mamaradlo Project Development Officer, Bilateral Investments Program division, FASPO, DENR</p> <p>Ms. Maridel Villalon Project Development Officer, Bilateral Investments Program division, FASPO, DENR</p>		
Study Period	July 11 2010 – July 31 2010	Type of Evaluation	Terminal Evaluation
3. Results of Evaluation			

3.1 Achievements

(1) Project Purpose

The Team concluded that the project purpose is moderately achieved with the achievement of Indicator 1 and 2, but the prospect of its full achievement within the project period is low due to the insufficient achievement of Indicator 3 because of Important Assumption.

Indicator 1: ESWM Plan is reviewed annually. (for Sagay and Calbayog)

The ESWM Plan was reviewed once so far when the annual report 2009 was prepared in February 2010 in Sagay and Calbayog.

Indicator 2: Waste Diversion Rate is improved as compared with the baseline. (for all Cities)

There is no concrete evidence of the increase of WDR, but it seems the increasing trend of waste amount diverted from final disposal.

Indicator 3: New sanitary landfills are operated in compliance with RA9003. (for Sagay and Calbayog)

At the time of terminal evaluation, landfill operation is not started. Further, from a viewpoint of a final disposal system as a whole, the existing dump sites should be safely closed and properly maintained in accordance with RA9003, but it is almost impossible to complete safe closure of the existing dump sites in Sagay and Calbayog within the project period.

(2) Outputs

Output 1. “Capacity of LGUs on SWM planning is strengthened.”

The level of achievement of Output 1 is satisfactory as all the five indicators are verified as below, although sufficient information is not available for the Team for some of the indicators.

Indicator 1.1: The developed ESWM Plan is approved by the city council. (Sagay & Calbayog)

The ESWM Plans were approved by city councils in June 2009 in Sagay and in March 2009 in Calbayog.

Indicator 1.2: Workshops and seminars are held at least 7 times. (All cities)

In each city, the workshops were held four times internally to exchange information of the project progress and opinions for smooth implementation, while the technical seminars were held twice to widely present the project achievements not only within the cities, but also the third parties including neighboring LGUs, and share project experiences. In all, six seminars and two workshops were held so far in each city. The third technical seminars are to be held in September 2010 in the three cities.

Indicator 1.3: Cost on SWM is grasped in detail. (All cities)

The details of the cost on SWM in Sagay and Calbayog is analyzed and reported in the SWM Plans and that in Davao is shown in the recommendation report by the Japanese experts.

Indicator 1.4: Fee collection options are proposed to the city SWM Board. (Sagay & Calbayog)

The proposal for fee collection was worked out for Sagay and Calbayog. It is not yet proposed to the City SWM Board in either city. It will be proposed after the new city administration is fully established.

Indicator 1.5: Basic managerial indicators such as collection efficiency, unit figures per various operations are collected and analyzed annually. (All cities)

In Sagay and Calbayog, basic managerial indicators such as collection service population, estimated waste collection amount and composted waste amount are collected and analyzed in the ESWM Plans and Annual Reports 2009. Annual Report 2009 of Calbayog also shows waste diversion rate.

Basic managerial indicators of SWM in Davao were collected and analyzed during the early part of the project. The Team, however, does not have information regarding whether such managerial indicators are collected and analyzed annually in Davao and cannot verify Indicator 1.5.

Output 2. “Solid Waste Diversion System is improved.”

The Team concluded that Output 2 is achieved sufficiently, although not all data are available for the Team.

Indicator 2.1: WDR is monitored periodically. (All cities)

In Sagay and Calbayog, WDR was monitored when the ESWM Plans and the Annual Reports 2009 were prepared. The critical parameter to calculate WDR is the recycled waste amount. As junkshop surveys to acquire data of recycled waste amount are planned to be done twice a year in Sagay and monthly in Calbayog, WDR is considered to be monitored at the same frequency.

In Davao, WDR was monitored when the Integrated SWM Plan was formulated, but Indicator 2.1 cannot be evaluated since no information is available about periodical monitoring of WDR.

Indicator 2.2: The amount and type of materials collected at the pilot MRF are recorded and reported monthly. (All cities)

In all the cities, the amount and type of materials collected at the pilot MRF are recorded at the time of their reception. In Sagay, however, monthly reports will be produced by a newly hired person with educational background. In Calbayog and Davao, monthly reports are prepared.

Indicator 2.3: The number of barangays where IEC campaign on 3Rs activities is carried out

according to the IEC campaign plan. (All cities)

The IEC campaign in 2009 was almost carried out according to the IEC campaign plan. Most of IEC campaign in 2010 has started very recently as planned.

Output 3. “Final Disposal System is improved.” for Sagay and Calbayog Cities

The new sanitary landfill in Calbayog is almost completed. Meanwhile, the new sanitary landfill in Sagay is nearly completed with the landfill area of Cell No.1. Accordingly, the achievement level of Output 3 is still low but will be higher at the end of the Project since the indicators for evaluation of Output 3 are verifiable mainly for the activities to be carried out after commencement of the sanitary landfill operation.

Indicator 3.1: The current dump site is closed in accordance with the safe closure guidebook. (Sagay & Calbayog)

Since the activities can be carried out after commencement of the sanitary landfill operation, the current dump sites in Sagay and Calbayog are still in use and not closed yet, but safe closure of the existing dump site in Sagay has started by applying soil covering to more than a half of the area without disturbing the current waste dump operation.

Indicator 3.2: On-site training for sanitary landfill management is conducted using the operation and maintenance manual. (Sagay & Calbayog)

In both Sagay and Calbayog, the operation and maintenance manual of the sanitary landfill was drafted during the 3rd year of the project. Its contents were presented at the 2nd technical seminar. At the time of the terminal evaluation study, however, the on-site training for sanitary landfill management has not yet started as the new sanitary landfill is under construction.

Output 4. “Guidebooks and manuals are developed as a tool for planning and implementation of SWM based on the experience of the three cities.”

Output 4 was sufficiently achieved.

Indicator 4.1: The number of technical working group meetings held.

NSWMC organized a technical working group for each guidebook. Each technical working group was composed of three officers of NSWMC. The group meetings were held 5 times from October to December 2009.

Indicator 4.2: The number of LGUs who participated in the consulting seminar.

In total, 22 LGUs participated in the consulting seminar in December 2009 and the 2nd technical

seminar in the three cities.

Indicator 4.3: The necessary procedure for the Department Administrative Order is initiated by the NSWMC to reflect the contents of the manuals/guidebooks produced.

The guidebooks were submitted to Technical Working Group (TWG), and as of the terminal evaluation, review result from the TWG is expected. The approval of NSWMC Resolution may still take time depending on the timing of TWG and NSWMC and other priority issues to be discussed at TWG.

(3) Overall Goal

“Knowledge and experience of ecological solid waste management (SWM) in the three cities are replicated in other LGUs.”

There is found a promising factor for the achievement of the overall goal.

Indicator 1: The number of seminars and workshops held at regional or national level by the NSWMC for other LGUs.

Indicator 2: The number of participating LGUs in the abovementioned seminars and workshops.

The seminars aiming at the dissemination of the knowledge and experience of the project were already held four times and 93 LGUs attended. NSWMC developed a plan by itself to have a comprehensive capacity development program for the guidebooks to be widely used. The program consists of 7 sessions, each of which targets the LGUs in two to three regions all over the country except for ARMM, from July to December 2010. In total, 500 LGUs will participate.

Indicator 3: The number of approved ESWM plans.

Also, NSWMC has approved 20 ESWM Plans so far including those of Sagay and Calbayog. There are another 13 Plans which were reviewed by the technical working group and are to be approved by NSWMC.

3.2 Evaluation Results

(1) Relevance

It is concluded that the project remains highly relevant in terms of the policy of the Philippines, the needs of the C/Ps and Japanese ODA policy.

In respect of the consistency with the Philippine policy, the Medium-Term Philippine Development Plan (MTPDP 2004-2010) highlights solid waste management as one of target issues of the environment sector. And the MTPDP also stated the importance to support the LGUs for the full

implementation of RA9003.

Under RA9003, all the LGUs need to establish an ESWM System but most of them have difficulties to do so with their capacity. The target three cities were not exceptional, but they had started their attempts towards RA9003 by issuing city ordinances and, in Calbayog and Davao, even drafting their SWM Plans. Also, as they were located in different regions in the Philippines, they were considered to be influential for many other LGUs nearby.

In respect of the consistency with the Japanese policy, environmental issues are one of the priority areas according to the “Assistance Plan for the Philippines” (by the Ministry of Foreign Affairs in Japan). Furthermore, the Country Assistance Strategy (CAS) for the Philippines (Working Paper of ODA Taskforce of Philippines) also mentioned that solid waste management is one of the target areas for assistance.

(2) Effectiveness

It is considered that effectiveness is not fully ensured at the time of the terminal evaluation.

The project is intended to be effective for the Project Purpose “establishment of ecological SWM system” by producing three outputs, i.e. enhanced capacity for SWM Plan implementation, increased WDR and improved final disposal system.

The ESWM Plans are implemented in Sagay and Calbayog, and review of the plans is shown in their Annual Reports. There are evidences of increased waste diversion at the pilot MRFs in three cities and the Team found other several factors that can increase WDR during the remaining period of the plans. The improvement of the final disposal system, however, cannot be adequately observed because of the several given by external inhibiting factors such as the delay of necessary financial arrangement for SLF and weather conditions. As the construction of the new final disposal sites are not completed yet, it is unlikely that sufficient on-site training for operation and maintenance is provided and the existing dump sites are safely closed within the project period.

Further, the project effectiveness was negatively influenced by Important Assumptions. In regard to Important Assumption 2, “Proposed fee collection system is implemented”, the waste collection fee options have not been even proposed yet because it is the matter of the new city administration of Sagay and Calbayog, which assumed the offices in July 2010. As for Important Assumption 3, “Any political change of the national as well as local government as a result of the election does not adversely affect the Project”, the understanding and support of the city mayors should be built in a similar manner as before the change of the mayors. Also, it should be noted that there is a concern that can be another influencing factor for the operation and maintenance of the sanitary landfills in Sagay and Calbayog. The two cities need to establish management teams and mobilize resources including personnel, machinery and budget necessary for adequate operation and maintenance.

Nevertheless, the fact that landfill construction is about to complete with the financial input from the two cities, in spite of delay, demonstrates the significant progress from open dumping.

Furthermore, the Team recognized the project effectiveness in capacity development through the activities already carried out for the three cities and NSWMC. Most of the C/P members are

considered to have had a certain level of technical expertise at the beginning of the project, and further capacity development was attained by additional knowledge and technical skills.

(3) Efficiency

Efficiency of the Project is evaluated as moderately satisfactory level.

According to the interview survey, the amount and timing of inputs from both Japanese and Philippine sides are moderately satisfactory and efficiently used to produce the project outputs. In detail, as for Japanese side, appropriate input and timing of Japanese experts, contribution to project by 11 C/Ps out of 12 under training course in Japan, procurement of equipment almost as planned. As for Philippine side, enough personnel as C/Ps in 3 cities and input of local cost was almost appropriate. The project efficiency, however, was restricted to a certain extent as the assignment of the Japanese experts had to be allocated to four cities (Sagay, Calbayog, Davao and Manila) and careful technical transfer was difficult in some occasions. Also, the delay of inputs from Sagay and Calbayog for landfill construction affected project efficiency.

(4) Impact

The Team recognized that there are several impacts towards the overall goal and other unexpected impacts.

There are evidences showing that the LGUs other than the target three cities have increased their interest in proper implementation of SWM as a result of being influenced by the project. Further dissemination of knowledge and experience of the project is planned by NSWMC, which has developed a capacity development program for the LGUs utilizing the guidebooks prepared in the project.

Influential external factors shown in PDM are, however, not met yet. Practical utilization of the guidebooks by the LGUs requires technical assistance to them given by the National Ecology Center and Regional Ecology Centers, both of which needs enhancement by augmenting the number of technical personnel. Such technical assistance for the LGUs should go along with operational and financial assistance, budget for which is still on request. The potential of the issuance of DAO where the guidebooks are reflected is high, although it will need some time.

Other unexpected impacts are as below.

- In Sagay, all the 12 barangays in the waste collection service area have MRFs even though some are operating at a basic level using indigenous materials.
- Both Sagay and Calbayog intend to continue advocacy activities to implement a “no segregation, no collection” policy.
- Neighboring LGU of Calbayog and Sagay considers to use the new sanitary landfills to be developed in the project.
- The sanitary landfills and pilot MRFs serve as a showcase for study tours of other

LGUs and students.

- If proper operation and maintenance is not provided, there is a possibility that sanitary landfill will have negative impact to the environment.
- If proper consideration and livelihood assistance is not given to waste pickers working on the existing dump sites, then social negative impact is anticipated when the dump sites are closed.
- The knowledge and concerns about SWM at the EMB Regional Offices in the three regions was stimulated.
- Sufficient information about the project has been provided to mass media, students and researchers from both Japan and the Philippines.

(5) Sustainability

The Team considers that overall sustainability of the Project is moderate for the reasons described below.

In the Light of NSWMC

Sustainability of the project effect given to NSWMC is considered to be high. What the project attempted is consistent with the mandate of NSWMC, and NSWMC has institutional, technical and financial capacity to continue to disseminate the guidebooks.

In the Light of the Target Cities

Sagay: The sustainability of the project effect given to Sagay has been improving, but institutional and financial sustainability needs further efforts.

The technical capacity of the C/Ps in Sagay required for proper SWM has reached to such level towards their capability to revise the plan every five years as required by RA9003, except for technology for operation and maintenance of sanitary final disposal and safe closure of the dump site.

There is, however, a concern in the institutional aspect. In the absence of an office or personnel exclusively in charge of SWM, it is required to promote knowledge sharing among the C/P members and others involved in the project and to establish an SWM office in the future. In fact, the city started to consider the establishment of the SWM office.

Financial sustainability largely depends on the establishment of the waste collection fee system. The primary consensus on the fee charging system was reached during the previous city administration and the new mayor has a basic policy to support a beneficiary-pay-principle. Therefore, the approval of the fee charging system can be expected, but there are still remaining issues with regards to the level of fee amount and ensuring fair implementation.

Calbayog: The sustainability of the project effect given to Calbayog has reached to an adequate level. The city, however, needs to pay attention to the institutional and financial sustainability.

The C/Ps have been making an intense effort to implement the project and to put their ESWM Plan into action. CSWMO, dedicated to providing SWM services, has acquired technical expertise and

experience adequately enough to revise the ESWM Plan every five years.

DepED also expressed their strong support to continue the IEC campaigns and the recognition of their responsibility for awareness raising and waste education. However, encouraging the public to practice waste segregation can be fully sustainable only when it is accompanied by the introduction of segregated collection and/or involvement of junkshop operators.

However, the problem of technical staff shortage in CSWMO is significant. It urgently needs more technically skilled personnel for continuous implementation of sanitary final disposal and establishment of segregated waste collection. Also, it is recommended that anticipated outsourcing of final disposal operation as well as current outsourcing of waste collection should keep ensuring consistency with the city's ESWM Plan.

Further, there is a concern about financial sustainability: introduction of the new fee charging system is inevitable. It will be a favorable indication that the city has already implemented the fee charging system for business establishments. The city plans to have public consultation to determine appropriate fee level and to make the system implemented in a fair manner.

Davao: The sustainability of the project effect given to Davao has reached to a certain level, but to ensure sustainability, it is strongly required to build a collaborative relationship among city offices, barangays and the general public.

It is a potential factor for sustainability that the CPDO, a focal office in policy implementation of the city, has cooperatively shown its commitment and implemented the IEC campaign. CSSDO and DepED also expressed their strong motivation to continue the IEC campaigns and the recognition of their responsibility for awareness raising and waste education. However, encouraging the public to practice waste segregation can be fully sustainable only when it is accompanied by the introduction of segregated collection and/or involvement of junkshop operators.

3.3 Facilitating Factors

(1) Planning Stage

- It is obvious that NSWMC and the target three cities have maintained their high motivation to fulfill their responsibility of SWM although the project period. It should be paid particular attention to the fact that Sagay and Calbayog bore the cost for landfill construction and construction is almost finished. This is a clear indication of their outstanding ownership considering other technical assistance projects in the SWM sector. It is very important to select highly-motivated C/P at the planning stage of the project.

(2) Implementation Process

- Although the assignments of the Japanese experts were allocated to four cities and their stay was intermittent, the communication between the Japanese experts and the C/Ps were well kept, maximizing the technical transfer opportunities.
- Technical transfer by the training in Japan was especially effective as the content of

the training was consistent with the project. The participants of the training improved their expertise, and facilitated the project activities as an feedback effect.

3.4 Impeding Factors

(1) Planning Stage

- As stated above, the landfill construction cost was borne by Sagay and Calbayog, but this brought about external factors to the project such as the delay of loan disbursement and slow administration during the election.
- The delay of landfill construction acted as the most influential factor, impeding the achievement of Output 3. In other words, there was a critical factor, which depended on the input of the partner country and which was vulnerable to external conditions.
- Targeting three cities in different regions could be effective to the overall goal “country-wide dissemination of knowledge”, but also made the project implementation difficult from the viewpoint of project purpose, and efficiency in particular.

(2) Implementation Process

- In the monitoring of project progress and SWM performance, the usage of PDM as a monitoring tool was not effective, resulting in a lack of information to verify some of the project indicators.

3.5 Conclusions

As described above, the project has been implemented efficiently with high relevance to the related policies in the Philippines and Japan and shown several positive impacts. There are, however, some issues to be taken into account with project effectiveness and sustainability. In all, the Team concludes that the Project Purpose has been moderately achieved at the time of the Terminal Evaluation.

The primary reason is that the construction of the new sanitary landfills is not completed at the time of terminal evaluation due to several external impeding factors and it is unlikely that the safe closure of the existing dump sites are completed by the end of the project. It is necessary to follow-up the progress of the Project through frequent communication with C/Ps and Japanese Experts. The sufficient operation of the new landfills is subject to effective and intense technology transfer. The improvement of waste disposal system aimed by the Project includes both structural and operational aspects.

There are several impeding factors described below that are considered as outside the control of the Project and prevented the Project from carrying out such improvement:

Even though the new landfills become fully operational, the Project Purpose will not still be

successfully achieved within the project period since it is uncertain when budget for the dump site closure is allocated by the Philippine side. Unless such required resources are secured, the Japanese experts will not be able to assist the C/Ps in dump site closure. Under these circumstances, the Team suggests to terminate the Project according to the original schedule.

3.6 Recommendations

Promotion of Project Activities (3 cities)

- In order to smoothly start the on-site operation and maintenance training for the new sanitary landfills, an operational body should be urgently established and other necessary resources identified in Sagay and Calbayog.
- The on-site operation and maintenance training of the new sanitary landfills should be carried out effectively and intensely. Appropriate staff of Sagay should be invited to the on-site training for operation and maintenance to be conducted at the new sanitary landfill in Calbayog since the new landfill in Sagay will be operational later than that in Calbayog. Also, the lessons from the on-site training should be reflected into the contents of the landfill operation manuals in order to ensure proper and concrete operational procedures.
- In order to achieve the Project Purpose once the new administration both in Sagay and Calbayog secure the required budget and other resources for the remaining work of the Project, it is critical that further assistance or follow-up activities should be considered by JICA to help ensure proper operation and maintenance of the new landfills as well as safe closure of the existing dump sites.
- By the end of the project, a plan to consider the welfare of the waste pickers working at the existing dump sites in Sagay and Calbayog should be properly formulated.
- Cost analysis is inevitable for effective and efficient SWM service provision. Although the SWM account report, which is listed in the PDM as a means of verification for Indicator 1-3, is not produced, cost structure should be still shown in other materials such as Annual Reports. Sagay and Calbayog should be definitely required to develop a cost accounting system when the fee collection system started to ensure accountability and transparency.
- In order to resolve the above mentioned concerns, strong support and the decision making of the new city administration is essential. It is therefore strongly recommended to attain further understanding about the project from the new decision makers in all the three target cities. It will then ensure the continuous implementation of the ESWM Plans and sustainability of the project.

Enforcement of RA9003 (NSWMC)

- Ten years have passed since RA9003 was enacted. NSWMC has been making every effort to fulfill its mandates, but has been encountering a number of challenges. The Team considers it is the time for NSWMC together with other relevant organizations to carefully review in detail the progress and degree of enforcement of RA9003 so that, critical constraints and ineffective aspects of the enforcement structure are identified. NSWMC then needs to develop a new strategy to further promote and accelerate implementation of RA9003. In such a new strategy, adequate resources mobilization mechanism shall be addressed to have more functional enforcement structure.

3.7 Lessons Learnt

Those who will be involved in project planning and/or plan modification should consider the following lessons.

- Appropriate measures should be implemented to mitigate effects of major risks, such as important assumptions not fully satisfied. In case a project requires a substantial amount of investment to be shouldered by the counterpart organization such as cost of construction of a new landfill, it is quite possible that such investment is not fulfilled according to the schedule. While the counterpart organization should be strongly encouraged to meet its obligation under the project, the project activities also need to be adjusted to minimize the magnitude of negative impact.
- Combination of formal training/workshops and informal on-the-job training on a day-to-day basis is desirable to develop and increase the capacity of counterparts. It may be, however, sometimes difficult to fully transfer technical expertise within a limited project period, especially if completion of particular activities is an essential prerequisite of a successful transfer of expertise. Dispatch of experts, therefore, needs to be carefully planned to make the most of their relatively short stays.

3.8 Situation of the Follow-up

It is considered from the aforementioned recommendation that the project needs follow-up assistance by short-term expert(s) with the following tasks.

- To provide technology transfer for the operation and maintenance of the new sanitary landfills and for the safe closure of the existing dumpsites in Sagay and Calbayog.
- To examine with NSWMC and other relevant organizations a new strategy to enforce RA9003 and a direction of JICA's assistance, based on the understanding about issues and challenges found in the 10-year activities for RA9003 since its enactment.