Country Name
Socialist Republic of
Viet Nam

Project for Capacity Development on Integrated Management of Municipal Solid Waste

I. Project Outline

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Background inapprequir recycl waste facilit each treatm realize	In the Socialist Republic of Viet Nam, the amount of solid waste increased sharply, and it was becoming increasingly difficult to find new final disposal sites in large cities because of rapid urbanization and industrialization. About 70 to 80 % of the final disposal sites (at the time of ex-ante evaluation) were inappropriately operated with open dumping, which had become a serious issue. Therefore, it was urgently required to construct engineered landfills and to minimize the waste amount by means of source separation, recycling, and intermediate treatment. The Ministry of Construction (MOC), the authority responsible for solid waste management (SWM), had intended to establish sound ordinary SWM in which separate collection, recycling facilities, and sanitary landfills are harmonized for waste minimization considering the size and characteristics of each city while gaining public understanding and cooperation. Furthermore, MOC planned to build waste treatment complexes for hazardous industrial waste, healthcare waste, and others. However, MOC had yet to realize these plans because of an inadequate legal framework, insufficient institutional arrangements, and lack of technical knowledge and skills.						
Objectives of the Project Objective of the	Integrated solid waste (ISWM) system on municipal solid waste* is established in accordance with the national strategy on ISWM. 2. Project Purpose: Capacity of municipal solid waste management (MSWM) is developed comprehensively in central and local governments.						
Activities of the Project 1. P 2. M (i) C polic Strat (ii) C pron mass (iii) the l of IS 3. In Japan 1) I 3 2) 7 3) I	2. Main Activities: (i) Capacity Development of MOC on management, policymaking, and support system on SWM: to analyze policies and legislations, to collect data and information, to conduct trainings and to draft the revision of National Strategy on ISWM. (ii) Capacity development of Hanoi Department of Construction (DOC): to implement the study of the investment promotion for the construction of target SWM complex and to draw lessons for implementation of Hanoi SWM master plan (M/P). (iii) Capacity development of MOC on technical support to local government: to provide technical assistance for the local government on the implementation of SWM M/P and to formulate guiding reference for development of ISWM M/P. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 15 persons (excluding 6 experts as 1) Staff Allocated: 32 persons advisors) 2) Land and facilities: office space for JICA experts 2) Trainees Received: 103 persons 3) Local costs: office rent for JICA experts, costs for						
Project Period (ex-ar 2017 (actual	Project Cost (ex-ante) 595 million yen, (actual) 660 million yen (actua						
A 1 '	Administration of Technical Infrastructure (ATI) under Ministry of Construction (MOC) *Cooperating Agencies: Hanoi Department of Construction (Hanoi DOC), Thua Thien Hue Province (TTH), Urban Environment One Member Limited Company (URENCO)						
Agency *Coop Enviro	rating Agencies: Hanoi Department of Construction (Hanoi DOC), Thua Thien Hue Province (TTH), Urb						

II. Result of the Evaluation

<Constraints on Evaluation>

Due to the effects of COVID 19, data collection was made through questionnaires and online call meeting with related officials of MOC, Hanoi DOC, TTH Province. The direct meetings and site visits were not conducted.

<Special Perspectives Considered in the Ex-Post Evaluation>

[Evaluating the Project Purpose at the time of Project Completion and the Continuation Status of Project Effects at the time of Ex-Post Evaluation]

• There is no numerical target set for the following three indicators to examine the capacity development of implementing agencies: "Staff of MOC

enhances its management capacity comprehensively in terms of the capacity assessment items (indicator 2)," "Staff of Hanoi DOC enhances its capacity comprehensively in terms of the capacity assessment items (Indicator 3)," and "Staff of TTH Province enhances it capacity comprehensively in terms of the capacity assessment items (indicator 4)." In this ex-post evaluation study, it is decided that the achievement level of these indicators is examined by the capacity assessment score on a scale of 1 to 5, 5 being the best. If the score is more than 4, the achievement of indicator is judged as 'achieved.' If the score is more than 2.5 and less than 4, it is judged as 'partially achieved.' If the score is less than 2.5, it is judged as 'not achieved.' This judgmental standard is applied to examine the continuation status of project effects as well.

[Evaluating the Overall Goal]

• The ex-post evaluation is conducted before the target year, so that effects until the time of ex-post evaluation and assumed effects at the target year are analyzed and both of them are considered upon judgment.

1 Relevance

< Consistency with the Development Policy of Viet Nam at the Time of Ex-Ante Evaluation >

At the time of ex-ante evaluation, this project was consistent with the Decree No. 59/2007/ND-CP (issued in April 2007) on SWM which stipulated the source separation of wastes, promotion of the reuse and recycling of waste as well as the roles and responsibilities of related organizations, households, and individuals. In the "National Strategy on ISWM (Decision No. 2149/2009/QD-TTg)" approved in 2009, it was indicated that such goals to promote the SWM were discussed across the ministries and agencies and the roles and responsibilities of related governmental organizations were clarified.

<Consistency with the Development Needs of Viet Nam at the Time of Ex-Ante Evaluation>

At the time of ex-ante evaluation, this project was consistent with Viet Nam's development needs to develop the capacity of MSWM in central and local government as described in "Background" above.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

According to Japan's Country Assistance Policy for the Socialist Republic of Viet Nam (2012), the Project was consistent with the "Response to Fragility (Response to the negative impacts brought by economic development)," one of three priority areas for assistance. Especially, it was stated that Japan would support to address emerging environmental issues (urban environment natural environment) and the threats of disaster and climate change, etc., caused by rapid urbanization and industrialization. <Evaluation Result>In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the Time of Project Completion>

By the time of project completion, the project partially achieved its purpose, "Capacity of municipal solid waste management is developed comprehensively in central and local governments." In terms of legal framework, six legal documents on MSWM developed or revised through the Project were submitted to the competent agencies by the time of project completion (Indicator 1). As for capacity development lin central level, the staff of MOC improved their capacity of the utilization of Guiding References and the data management (Indicator 2). In term of local government, the staff of TTH Province improved their capacity to implement the Master Plan through SW Integral Committees, to develop the required treatment facilities and to properly utilize the data books (Indicator 4). On the other hand, the level of capacity development for staff of Hanoi DOC was lower than expected. Many efforts should have been made to improve the septic tank sludge management and to deal with regular scale incinerator construction (Indicator 3).

<Continuation Status of Project Effects at the Time of Ex-Post Evaluation>

After the project completion, the project effects have partially continued. It was confirmed by the study that one more legal document on MSWM has additionally come into effect. Capacity development of MOC, Hanoi DOC and TTH Province has continued to some degree. ATI-MOC has organized the seminars on solid waste management with incineration method. As for Hanoi DOC, the result of capacity assessment has been slightly improved, especially in terms of domestic solid waste management. As for TTH Province, SW Integral Committees has been renewed and continued the operation. Data books have not been used for people's awareness raising but for training courses of SWM.

<Status of Achievement of the Overall Goal at the Time of Ex-Post Evaluation>

It is observed that the Overall Goal, "Integrated solid waste (ISWM) system on municipal solid waste is established in accordance with the national strategy on ISWM" has been achieved. 4 out of 5 indicators set to examine the achievement level have been achieved. It was confirmed by the study that 4 provinces and one city have developed the "integrated" Master Plan of SWM (Indicator 1). The database on national domestic solid waste management (DSWM) is annually updated based on data sent from 58 provinces and 5 direct-controlled municipalities (Indicator 2). ATI- MOC has annually organized workshops and seminars for all departments of construction in provinces and direct-controlled municipalities (Indicator 3). Legal documents related to construction waste have been reviewed by the Hanoi People's Committee (HPC). As for domestic waste it is expected to be done (Indicator 4). Two treatment facilities for reducing domestic waste were constructed or in the preparation stage for construction in Hanoi City (Indicator 5). It should be noted that the achievement of Overall Goal might be affected by the partial shift of responsibilities on ISWM from MOC to MONRE since the demarcation on responsibilities of waste management is still under the transition phase and will take some time for the new administrative framework to be firmly established.²

<Other Impacts at the Time of Ex-Post Evaluation>

Some positive impacts have been observed. MOC expanded the ISWM to the area other than the pilot Cities/Provinces. Several provinces and cities have already issued Implementation plan to realize master plan on solid waste, such as in Quang Tri Province. <Evaluation Result>

Therefore, the effectiveness/impact of the project is fair.

¹The capacity development of staff was to be examined through the capacity assessment sheet prepared by the Project. However, it was pointed out by the Joint Terminal Evaluation Study Team that the assessment items were not appropriate. The Project revised the assessment items that are individually specific to MOC, Hanoi DOC and TTH Province by focusing the areas of improvement for each organization.

²According to the Resolution No. 09/NQ-CP by the Government dated February 3, 2019, MONRE has become the leading agency in charge of SWM. MONRE is subject to cooperate with other related ministries to revise, to supplement legal documents concerned to unify the SWM. Also, in line with the instruction by Prime Minister No. 41/ CT-TTg dated December 1, 2020 on urgent countermeasures of SWM, MOC needs to cooperate with MONRE to formulate technical standards on designing the overall system on waste collection, on selecting proper locations of solid waste treatment facilities.

Achievement of Project Purpose and Overall Goal									
Aim	Indicators	Results	Source						
(Project Purpose)	Indicator 1	Status of the Achievement (Status of the Continuation): achieved (continued)	Questionnaires						
Capacity of municipal	At least 80% of the drafts of	(Project Completion)	to MOC						
solid waste	legal documents on MSWM,	• Six out of eight legal documents on MSWM developed or revised through the							
management (MSWM) is developed	developed or revised through the Project, are submitted to	Project had been submitted to the competent agencies by MOC and had come into effect.							
comprehensively in	the competent agencies by	(Ex-Post Evaluation)							
central and local	MOC.	• In total, seven out of eight legal documents have come into effect.							
governments.	Indicator 2	Status of the Achievement (Status of the Continuation): achieved (partially	Questionnaires						
	Staff of MOC enhances its	continued)	to MOC						
	management capacity	(Project Completion)							
	comprehensively in terms of	• According to the capacity assessment conducted by the project, it was							
	the capacity assessment items.	confirmed that the capacity of the staff of MOC was enhanced on the utilization of the Guiding Reference and on the data management. The grade obtained							
		through the assessment was 4 in the scale of 5.							
		(Ex-Post Evaluation)							
		• Grade level is not available. It was confirmed by the questionnaires of MOC,							
		the capacities of MOC staff have been improved to some degree, so that the							
		ATI-MOC have organized seminars on solid waste management by incineration							
		method by utilizing the Guiding References. Data management has been progressed as well.							
	Indicator 3	Status of the Achievement (Status of the Continuation): not achieved (partially	Questionnaires						
	Staff of Hanoi DOC enhances	continued)	to Hanoi DOC						
	its capacity comprehensively	(Project Completion)							
	in terms of the capacity	· According to the capacity assessment conducted by the project, it was							
	assessment items.	confirmed that the improvement of capacity of the staff of Hanoi DOC was							
		limited. Some progresses were made to deal with construction waste and to deal with domestic solid waste. However, nothing was done to improve septic tank							
		sludge management. The grade obtained through the assessment was 2 in average							
		in the scale of 5.							
		(Ex-Post Evaluation)							
		• Some progresses have been observed and the assessment score has been							
	Indicator 4	slightly improved to the grade 3 in average. Status of the Achievement (Status of the Continuation): achieved (partially	Questionnaires						
	Staff of TTH Province	continued)	to TTH						
	enhances it capacity	(Project Completion)	Province						
	comprehensively in terms of	· According to the capacity assessment conducted by the project, it was							
	the capacity assessment	confirmed that the capacity of the staff of TTH Province was enhanced. Their							
	items.	capacity was improved to implement the Master Plan through discussions in SW Integral Committees, to manage the treatment facilities through finances and to							
		utilize data books for people's awareness raising. The grade obtained through the							
		assessment was 4 in the scale of 5.							
		(Ex-Post Evaluation)							
		Grade level is not available. SW Integral Committees has been renewed in							
		December 2020 and continued the operation. Data books have not been used							
(Overall Goal)	Indicator 1	for people's awareness raising but for training courses of SWM. (Ex-Post Evaluation) achieved	Questionnaires						
ISWM system on	By March 2022, at least 3	• More than 3 Cities/Provinces have developed the "integrated" M/P on SWM.	to MOC						
municipal solid waste is	Cities/Provinces	# City/Province Document							
established in	develop/update or are	1 Ho Chi Minh M/P SWM till 2025, vision to 2050, approved by							
accordance with the	developing/updating "Integrated" Master Plan on	City Decision 1485/ QD- TTg dated November 6, 2018,							
national strategy on	SWM.	2 Khanh Hoa M/P on SWM in Khanh Hoa till the year 2030, approved by Decision No. 2891/QD-UBND dated							
ISWM.		October 23, 2020,							
		3 Hai Duong M/P on SWM till 2020, vision to 2030, approved by							
		Province Decision 958/QD- UBND dated March 27, 2018,							
		4 Nam Dinh M/P on SWM till 2030, approved by Decision							
		Province 3053/QD-UBND dated December 23, 2016,							
		5 Da Nang direct M/P on SWM till 2030, vision 2050, approved by controlled Decision 9019/ QD- UBND dated December 28,							
		municipality 2016,							
	Indicator 2	(Ex-Post Evaluation) achieved	Questionnaires						
	The database on national	• It was confirmed by the study that the database on national DSWM is	to MOC						
	DSWM is updated annually.	updated annually based on data sent from all 58 provinces and 5 direct							
	<u> </u>	controlled municipalities.							

	Indicator 3	(Ex-Po	st Evaluation) achieved		Questionnaires	
	Cities/Provinces are guided to				to MOC	
	use Guiding References of	Departments of Constructions of all 58 provinces and 5 direct controlled			10 1.10 0	
	<u> </u>					
the functions and tasks of			City/Province	Activities by MOC		
MOC.		,	CSS ⁽¹⁾ /Workshop/Seminars			
			Hanoi, October 2020	Consultation workshop on National standards on solid waste treatment by incineration		
			Hanoi and Hochiminh	Workshop on waste- to- energy and		
			city, July 2020	greenhouse gas emission reduction for solid waste incineration in Vietnam		
			Hanoi, Danang,	Workshop on solid waste management and		
			Hochiminh city,	orientation on solid waste treatment		
			March 2019	technology for Vietnam		
		11	Hue, Hochiminh city,	Workshop on solid waste treatment by		
			November 2018	incineration	_	
			1) Co-learning Study Se			
		(Ex-Po	Questionnaires to Hanoi DOC			
	Legal documents related to		• New law on environment protection issued in 2020 contains new policies for domestic solid waste management. Hanoi DOC is expected to consult HPC			
	domestic waste and					
	construction waste are		when the instructions through Decree/Circulars are given to develop the new regulations to be applied in Hanoi City.			
	reviewed*.					
	*Pavious means that Hanoi	• As for construction waste, "the Scheme for Construction Waste Treatment in				
	*Review means that Hanoi Hanoi City" was developed and submitted it to HPC for their review. This DOC consults HPC annually scheme is under discussions among related agencies of Hanoi City in terms of					
			scheme is under discussions among related agencies of Hanoi City in terms of land arrangement.			
	newly issue the concerned	land ar	rangement.			
	legal documents.					
	Indicator 5	(Ex-Po	st Evaluation) achieved		Questionnaires	
	At least two treatment	• Two	to MOC			
	facilities for reducing	reduce				
	domestic waste are	comple				
	constructed in Hanoi City by			s of dry solid waste each day (this is the		
		informa	ation at the time of ex-p	ost evaluation on October 2021). The other is		
		Seraphine Plasma Plant, which was officially approved by HPC in February				
		2022. 0				
		finalize	ed, it is expected that the	construction will begin by 4 th quarter of 2022.		

3 Efficiency

The project period was as planned, while the project cost exceeded the plan (ratio against plan: 100% and 111%, respectively). The outputs of the project were produced as planned. Therefore, the efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

The project effects have been supported by law and decisions. Law on environment protection, issued in 2020, reflects the recommendations made by the Project in terms of responsibility of collection and treatment of solid waste. It also devotes one chapter for solid waste management and pollution control. Decision no. 491/ TTG in 2018 approved the master plan of integrated solid waste management to 2025 and vision to 2030.

<Institutional/Organizational Aspect>

As explained above, the partial shift of responsibilities on ISWM has been in progress. MOC is in charge of the construction and operation of waste and hazardous waste treatment facilities, while MONRE is in charge of waste management comprehensively, including domestic solid waste. However, the demarcation of responsibilities of waste management is still not clearly determined. In particular, the roles and the number of staff to be assigned at MONRE are not officially made available, causing some difficulties to proceed with the smooth operation of waste management. It is said that it will take some time for the new administrative framework of ISWM to be established. Currently, ATI-MOC has 6 officials specifically assigned for SWM.

In Hanoi City, under the Decision No. 37/2019/QD-UBND on July 2019 on demarcation and task assignment, Department of Natural Resources and Environment (DONRE) has become mainly in charge of domestic waste, construction waste, industrial waste (except hazardous waste). The responsibility of SWM has been gradually shifted from Hanoi DOC to Hanoi DONRE. The number of staff in charge of SWM is 5 in the Technical Infrastructure Division and 100 in Urban works maintenance unit. In TTH Province, the responsibility of SWM has also been shifted from Hue DOC to Hue DONRE. There is enough staff engaged in SWM.

<Technical Aspect>

Those staff of MOC has maintained their knowledge and skills on SWM through on-the-job training (OJT). The staff of Hanoi DOC, TTH Province have maintained their skills through the OJT, workshops, and seminars organized by MOC and MONRE by utilizing the Project's outputs, such as training materials and reference documents. Though those workshops and seminars are organized independently, rather than joint work by MONRE and MOC, both agencies have mutually invited each other's experts as guest speakers.

Materials, such as Guiding References, etc., developed by the Project have continuously been utilized on the worksites, however, the technical level of the newly assigned staff of MONRE, DONREs of Hanoi and TTH Province is unknown. CSS introduced by the Project, in which staff discusses the confronting issues to seek solutions, has not been systematically organized yet mainly because of COVID-19. <Financial Aspect>

The budget allocation of MOC and MONRE is not available. It was identified by the hearing from officials of MOC during the study that it will be difficult for MOC to generate the funds for the promotion of SWM activities. For Hanoi DOC, the budget for the activities on domestic SWM is secured by HPC. As for TTH Province, the budget for SWM is allocated through the state budget.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the institutional/organizational, technical, and financial aspects of the implementing agency. Therefore, the sustainability of the project effects is fair.

5 Summary of the Evaluation

By the project completion, the project partially achieved the Project Purpose, "Capacity of municipal solid waste management (MSWM) is developed comprehensively in central and local governments." The effects of the project have partially continued after the project completion, and the Overall Goal, "ISWM system on municipal solid waste is established in accordance with the national strategy on ISWM" has been achieved. The achievements were supported by the fact that several provinces and cities not targeted by the project have newly developed their own Integrated M/P on SWM and that two treatment facilities for reducing domestic waste have been newly constructed in Hanoi City.

As for the sustainability, some problems have been observed in terms of the institutional/organizational, technical, and financial aspects. As for the efficiency, the project cost exceeded the plan.

Considering all the above points, this project is evaluated to be partially satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

• In order to sustain the project effects produced by the project, it is recommended that the knowledge and skills developed by the project should be smoothly transferred from staff of MOC to those newly assigned staff at MONRE, as well as from DOCs of Hanoi city and TTH Province to DONREs of Hanoi City and TTH Province, respectively.

Lessons Learned for JICA:

The study has revealed that the administrative changes of waste management sector, in which the responsibilities of ISWM have been partially shifted from MOC and MONRE, may affect the technical sustainability of the project effects. In order to cope with such consequences, it is considered that the technical cooperation project should contain the component that makes the technical transfer easier by those at the implementing agency themselves to others, such as through training of trainers and the development of self-learning materials, etc.

Photo



View of leachate treatment pond in Soc Son (Nam Son) waste treatment complex