Republic of the Philippines

Ex-Post Evaluation of Japanese ODA Loan

"Rural Water Supply and Sanitation Project (V)"

External Evaluator: Akemi Serizawa, Sanshu Engineering Consultant

0. Summary

The objectives of this project were to provide safe, adequate and easily accessible water supply and sanitation services in the six provinces (Ilocos Sur, Nueva Vizcaya, Occidental Mindoro, Oriental Mindoro, Palawan and Zambales) by construction of water supply and sanitation facilities, capacity development of Local Governmental Units (LGUs)[1] in operation of water and sanitation services and by organizing and training communities in operation and maintenance of facilities, and thereby contributing to the improvement of living conditions.

The project has been highly relevant to the country's development plans and development needs, as well as Japan's ODA policy. However, the needs of the level I water supply facilities (common wells) were declined after the project started, and some municipalities with weak financial capability dropped out of the project because they could not secure funding for their share of the project cost even if they needed level I facilities. Some LGUs opted to use their own funds, not loan, to finance water supply projects to simplify the processes. As a consequence, the number of constructed facilities was far below the original plan. Also, the functioning rate of the facilities at the time of ex-post evaluation was only 70-80% despite that they included relatively new facilities constructed or repaired between 2012 and 2014 in Ilocos Sur. Some facilities are not functioning due to the problems of water quality or dried-up wells and due to other nearby facilities which reduced the needs of the facilities constructed by this project. Thus it could be concluded that the project had problems in its design and could not respond to the evolving needs during the project period. Therefore, the relevance is fair. Taking the reduction of outputs into account, both the project cost and project period significantly exceeded the plan. Therefore, the efficiency of the project is low. Regarding effectiveness, while the numbers of constructed and functioning facilities are far below the plan and the scale of project benefit is limited, the functioning facilities have sufficient number of beneficiaries and access to water supply and sanitation services was improved. Also, there were impacts such as the reduction of workload to fetch water, improvement of hygiene status, and enhancement of LGUs' capacity in management of water supply and sanitation services. Therefore, this project has to some extent achieved its objectives and its effectiveness and impact are fair. The functioning facilities have no problem in

[1] LGUs include regions, provinces, cities, municipalities and barangays. Barangay is the smallest administrative division under a city or municipality.

institutional and technical aspects in terms of operation and maintenance. As there are minor problems such as the functioning status of the facilities and the financial aspects, the sustainability of this project effects is fair.

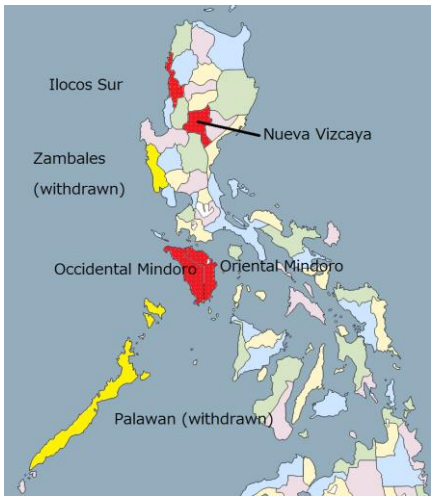
In the light of above, this project is evaluated to be unsatisfactory.

1. Project Description

1.1 Background

The proportion of population served by water supply systems (population who have access to water supply systems among the population of the administrative unit) in the rural areas of the Philippines was 87%, and that of the six project target provinces was only 53% in 1998. The quality of available water was not necessarily adequate for drinking. The rest of the population relied on the natural sources of water such as rivers, ponds and rain water. Sanitation facilities were not adequate especially in the community premises such as schools.

Water supply and sanitation services were decentralized to the LGUs by the Local Government Code of 1991. Their management capacity, as well as community participation, needed to be strengthened.



Project locations

Water supply facility of this project
Magsaysay, Occidental Mindoro

1.2 Project Outline

The objectives of this project were to provide safe, adequate and easily accessible water supply and sanitation services in the six provinces (Ilocos Sur, Nueva Vizcaya, Occidental Mindoro, Oriental Mindoro, Palawan and Zambales) by construction of water supply and sanitation facilities, capacity development of LGUs in operation of water and sanitation services and by organizing and training communities in operation and

maintenance of facilities, and thereby contributing to the improvement of living conditions.

Zambales withdrew from the project in 2000 after the Loan Agreement (L/A) and before starting the main project activities, and Palawan also withdrew in 2003 after procurement of equipment. Therefore, the final project target provinces were four[2].

Loan Approved Amount/ Disbursed Amount	951million yen /456million yen
Exchange of Notes Date/ Loan Agreement Signing Date	December 1999 / December 1999
Terms and Conditions	Construction and equipment: Interest rate: 1.3%, Repayment period: 30 years (Grace period: 10 years), General untied Consulting services and NGO assistance: Interest rate: 0.75%, Repayment period: 40 years (Grace period: 10 years), Bilateral tied
Borrower / Executing Agencies	The Government of the Republic of the Philippines / Department of the Interior and Local Government: DILG
Final Disbursement Date	March 2007
Main Contractor (Over 1 billion yen)	N/A
Main Consultant (Over 100 million yen)	Nippon Jogesuido Sekkei Co., Ltd. (Japan) / Cest, Incorporated (Philippines) / Test Consultants, Incorporated (Philippines) (JV)
Feasibility Studies, etc.	Master plan for Palawan Province (UNDP, January 1994) Master plan for other five provinces (JICA, February 1996)
Related Projects	JICA Technical Cooperation: Study on the Provincial Water Supply, Sewerage and Sanitation Sector Plan (1994-1996) Study on Provincial Water Supply, Sewerage and Sanitation Sector Plans for Visayas and Mindanao (1998-2000) Small Water Districts Improvement Project (2005-2012) JICA loan projects: Local Water Supply Development Project (1977) Local Water Supply Development Project (II) (1980) Local Water Supply Development Project (III) (1986) Special Assistance for Project Sustainability (SAPS) for Local Water Supply Development Project (III) (1997) Rural Water Supply and Sanitation Project (IV) (1989) JICA Grant Aid projects: Pilot rural environmental sanitation project (1984) Project for Emergency Rehabilitation for Typhoon-damaged Water Supply System in Leyte (1993, 1994) Project for Rural Water Supply and Improvement of Sanitary

[2] DILG confirmed that they officially agreed with JICA about the withdrawal of Zambales on December 8, 2000 and about Palawan on January 16, 2003.

	Facilities (1995, 1996) International organizations, etc.: World Bank: Water Supply, Sewerage and Sanitation Project (1999) ADB: Rural Water Supply and Sanitation Project (1996) UNDP: Master plan for Palawan Province (UNDP, January 1994)

2. Outline of the Evaluation Study

2.1 External Evaluator

Akemi Serizawa, Sanshu Engineering Consultant

2.2 Duration of Evaluation Study

Duration of the Study: October 2014 - October 2015

Duration of the Field Study: January 4-23 and April 5-23, 2015

3. Results of the Evaluation (Overall Rating: D[3])

3.1 Relevance (Rating: ②[4])

3.1.1 Relevance to the Development Plan of the Philippines

The Philippine Mid-Term Development Plan 1999-2004 at the time of appraisal aimed to improve the proportion of population with access to water supply systems in the rural areas in the whole country to 93% by 2004.

One of the goals of the Philippine Development Plan 2011-2016 at the time of ex-post evaluation is to improve access to quality and adequate infrastructure and services by accelerating installation of water supply and sanitation facilities. The Plan has common targets with the Millennium Development Goals (MDG) to be achieved by 2015 as follows:

- To increase the proportion of population with access to potable water (water supply level I and II[5]): 82.9% in 2007 → target value (same as MDG) 86.6%
- To increase the proportion of population with access to level III water supply facilities: 35% in 2005 → no target value
- To improve the proportion of population with access to basic sanitation facilities (households with sanitary toilets) : 76% in 2008 → target value (same as MDG) 83.8%

[3] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

[4] ③: High, ② Fair, ① Low

[5] Levels of water supply systems (definitions by NEDA Board Resolution No. 12, Series of 1995)

Level I (point source): a protected well or developed spring system without a distribution system. A facility is supposed to provide water to about 15 households within a 250m radius from the facility. Level I is mainly for rural areas with small population density.

Level II (communal faucet system or stand post): a system composed of a source, reservoir, distribution system and communal faucets. A facility is supposed to provide water to about 4-6 households within a 25m radius from the facility.

Level III (waterworks system or individual household connections): a system composed of a source, reservoir, piped distribution system and household taps.

The Philippine Water Supply Sector Roadmap 2010 by the National Economic Development Authority (NEDA), the national water supply sector policy, aims to "halve, by 2015, the proportion of the population without sustainable access to safe drinking water", which is the same target as MDG, and to attain universal (100%) access by 2025. The Philippine Sustainable Sanitation Roadmap by the Department of Health and NEDA, the national sanitation sector policy, also aims to "halve, by 2015, the proportion of the population without sustainable access to basic sanitation", which is also same as MDG, and to attain universal access to safe and adequate sanitary facilities by 2028.

The Department of the Interior and Local Government (DILG), the executing agency of this project, explains that, while the needs of level I facilities have always been high, the demands for level II and III facilities started increasing around 2002. The government has gradually been providing level II and III facilities since then as a response to the changing needs. According to DILG, the advantages of level II and III facilities compared to level I are that the former are more convenient for users and easier to ensure sustainability of operation and maintenance because they are managed by and under the responsibility of the municipalities, barangays or water service providers, while the latter are managed by the community. At the same time, DILG confirms the consistent needs of level I facilities because only level I is still feasible in some parts in rural areas due to geographical and other conditions.

The President's Priority Program on Water (2005-2010) provided grant assistance to install water supply facilities to 546 waterless municipalities[6] in total[7]. Continuing its effort, DILG and the Department of Health are implementing a water supply program for rural areas called SALINTUBIG (SAGANA AT LIGTAS NA TUBIG SA LAHAT = supply of potable water) since 2011. It aims to provide sustainable water supply in waterless 455 municipalities and 1,353 barangays by assisting construction of level II or III facilities basically and also level I where other levels are not feasible. SALINTUBIG assists LGUs and water supply service providers in finance and capacity development. The government is also implementing the Bottom-up Budgeting (BuB) program since 2013. It assists construction of water supply facilities of the levels the LGUs want (level I or II) while it also covers other sectors than water and sanitation[8].

From the above, this project conforms to the development policies of the Philippines both at appraisal and ex-post evaluation as it aims to provide quality water supply and

[6] Waterless municipalities are defined as municipalities with less than 50% service coverage.
[7] MDGF Achievement Fund (2011) "Review of Programming Policies of the Presidents Priority Program on Water (P3W)"
http://www.ombudsman.gov.ph/UNDP4/wp-content/uploads/2013/02/s-Priority-Program-on-Water.pdf
[8] Source: questionnaire responses from DILG and provinces.

sanitation services.

3.1.2 Relevance to the Development Needs of the Philippines

At appraisal of this project, the proportion of population with access to water supply systems in the rural areas in the six target provinces (Ilocos Sur (IS in the tables below), Nueva Vizcaya (NV), Occidental Mindoro (OCM), Oriental Mindoro (ORM), Palawan (P) and Zambales (Z)) was only 53% in average, and sanitation facilities were not sufficiently provided. Most water supply facilities were level I and water quality was not necessarily good. People without access to water supply systems relied on rivers, ponds or rainwater. Community premises such as schools did not have sufficient adequate toilets. Back in the time of appraisal, it was appropriate to construct level I water supply facilities and school toilets in the corner of schoolyard because it was physically difficult to install water pipes or electric cables for level II or III facilities or classroom toilets in remote rural areas.

As shown in Table 1 and 2, data of access to water supply and sanitation facilities in the rural areas of the project target provinces were not fully available[9]. Still, the needs of these facilities exist both at appraisal and ex-post evaluation. In 2013, the proportion of population with access to water supply facilities was 83.8% and that of sanitation was 92.2%[10] in the whole country. While both had improved, a gap remains to attain universal access in about ten years.

Table 1.Proportion of population with access to water supply facilities

	1999 (rural areas)			Most recent data (rural areas)			
	Level I	Level III	Total	Level I	Level II & III	Total	Year of data
IS	70.1%	4.8%	74.9%	49.05%	6.57%	55.62%	2014
NV	62.2%	5.0%	67.2%	No data	No data	91%	2014
OCM	41.1%	8.6%	49.7%	No data	No data	No data	
ORM	60.8%	11.5%	72.3%	56%	44%	100%	2013
P	27.5%	8.9%	36.4%	(N/A)	(N/A)	(N/A)	
Z	55.2%	9.9%	65.1%	(N/A)	(N/A)	(N/A)	
All target provinces	53.3%	8.3%	61.6%	No data	No data	No data	

(Source: JICA documents for the data of 1999. Questionnaire responses from the project target provinces for the most recent data)

Table 2. Proportion of households with access to sanitation facilities

Province	1999 (rural areas)	Most recent data (rural areas)	Year of data
IS	95.4%	78.30%	2010
NV	76.2%	No data	
OCM	57.1%	No data	
ORM	48.4%	No data	

(Source: JICA documents for the data of 1999. Questionnaire responses from the project target provinces for the most recent data)

[9] It is likely that the provinces do not collect data only for the rural areas.
[10] Philippine Statistics Authority, MDG watch (March 2015)

From the above, the needs of water supply and sanitation facilities exist in rural areas both at appraisal and ex-post evaluation. However, the number of constructed facilities by this project was far below the original plan as stated in the section "3.2 Efficiency". Also, as explained in the section "3.3.1 Quantitative Effects" in Effectiveness, while the functioning rate of the public toilets is high, that of water supply facilities and school toilets are only 70-80% despite that they include relatively new facilities in Ilocos Sur. Therefore, the needs of level I water supply facilities and toilets in the schoolyard at the time of ex-post evaluation are lower than estimated at appraisal.

Water supply facility of this project
Calintaan, Occidental Mindoro

School toilets of this project
Burgos, Ilocos Sur

School toilets, Ilocos Sur

School toilet, Ilocos Sur

3.1.3 Relevance to Japan's ODA Policy

Japan International Cooperation Agency (JICA) developed the Medium-Term Strategy for Overseas Economic Cooperation Operations in December 1999, based on the general policies of the Government of Japan. Reduction of poverty and regional disparity was one of its priority areas. This project was in line with this Strategy as it aimed at the

improvement of water supply and sanitation services in the rural areas.

3.1.4 Relevance of Project Planning and Approach

As explained in the section "3.2 Efficiency", the number of constructed facilities was far below the original plan: it was only 17.6% of the plan for the six provinces (15.7% for water supply and 42.9% for sanitation) and 24.5% of the plan for the four provinces (21.7% for water supply and 64.9% for sanitation). Also, as stated in the section "3.3.1 Quantitative Effects" of Effectiveness, the functioning rate was 70% for water supply and 81% for sanitation.

The reasons for having substantial decrease of the number of constructed facilities and many non-functioning facilities would be that: 1) the needs of level I water supply facilities were not thoroughly examined; 2) water quality of the water supply facilities was not thoroughly examined; 3) the feasibility of the cost-sharing plan was not thoroughly examined; and 4) the project did not sufficiently respond to the changing needs. All of them were issues after the commencement of the project.

The needs of the level I water supply facilities (above 1) were confirmed at appraisal in 1999 based on the Provincial Water Supply and Sanitation Plans of 1996. Taking the situation of the project target areas into account back in that time, it was appropriate for the project to provide level I facilities. However, during the long period between the project planning and its completion, more convenient level II/III water supply facilities became common as a response to the changing needs in many areas. DILG and the project target provinces explained in the interviews that, while the shift to level II and III started around 2002, this project did not consider these levels because the executing agency and JICA had agreed that the scope of this project was level I facilities. The project actually constructed only level I facilities after confirming that the LGUs and communities accepted level I. Another reason for not including level II was that it was not realistic for many sites because the project target municipalities of Class 5-6 (two lowest tiers among six according to the income level of LGUs) could not shoulder their share of the project cost (explained below) since level II would need higher construction cost and electricity. Also, it took time to check status of many project sites (around 2,500 in total) as their situation continued changing during this process. At the same time, considering the possibility of future upgrading of facilities from level I to II, DILG developed manuals for upgrading[11] and designed the wells so that they could be upgraded to level II later. Some facilities were actually upgraded to level II as explained in the section of Sustainability, and it has contributed to a certain extent to keep the functioning rate of the facilities not too low at the time of ex-post evaluation. Regarding

[11] "BWSA Community Organizing, O and M and the Upgrading of Water Supply Systems' Manual"

the water quality (above 2), while the consultants examined it during the detailed design, the final selection of the location of the facilities and the depth of the wells were made by the barangays or other relevant parties in some sites. Water quality of those wells was not fully examined and could have led to problems. DILG and the target provinces also reported about cases in which the water quality deteriorated due to intrusion of seawater to the groundwater or other reasons, which were not foreseen at the stage of project design. Cost-sharing (above 3) was based on the NEDA-Investment Coordination Committee Financing Policy. This project to construct level I water supply facilities targeted municipalities of Class 5-6, and DILG and the municipalities were to share 50% of the project cost each[12]. Some municipalities and sites dropped out of the project because these Class 5-6 municipalities had small budget and could not secure sufficient funding for their share. NEDA did not consider the reduction of municipalities' share because this project was a pilot project of the above mentioned policy that required LGUs to shoulder proper share of the cost of development projects. Some municipalities might have chosen other programs such as the President's Priority Program on Water (2005-2010) mentioned above as it did not require LGUs to share the project cost, and dropped out of the JICA project.

Regarding the response to the changing needs (above 4), it was not possible to foresee the shift to level II back in the time of appraisal. Also, it was very difficult to respond quickly to the change of the local situations since around 2002 because this project had many candidate sites. In addition, it was understandable that the scope of the project was limited to level I facilities and it strictly followed the cost-sharing policy. However, as a consequence, the sites that no longer needed level I facilities and municipalities with weak financial capability in very remote areas that actually needed level I backed out of this project. Taking the situations during the project into account, it was understandable that the project strictly followed the cost-sharing policy and limited the project scope to level I facilities. However, the project should have responded to the changing situations during the project period and should have considered options such as inclusion of level II facilities, reduction of municipalities' share of the project cost, or inclusion of municipalities of higher income classes than Class 5-6 as far as the physical conditions of the project sites and the cost had allowed.

【Summary of Relevance】

This project has been highly relevant with the Philippines' development plans and development needs, as well as with Japan's ODA policies. However, the needs of level I water supply facilities declined after the project started, and some target municipalities

[12] JICA documents

with real needs of level I facilities but without sufficient financial capability dropped out of the project because they could not shoulder their share of the project cost. The number of constructed water supply and sanitation facilities was much lower than the original plan because of these reasons. The functioning rate of the facilities was only 70-80% at the time of ex-post evaluation despite that they included relatively new ones that were constructed between 2012 and 2014. It is because some facilities were no longer utilized due to problems of water quality or dried-up sources of water, or due to declined needs of these facilities because of other available water supply or sanitation facilities. This could be attributed to the problems of the project design which could not respond flexibly to the cost-sharing issue of the municipalities and the levels of water supply facilities during the project period. In conclusion, the relevance of this project is fair.

<Column: Local water supply services >

Water supply services are basically under the responsibility of the municipalities. They select levels of water supply facilities, secure funding for the construction of facilities, coordinate with DILG, province and barangays, and coordinate and contract with water service suppliers.

At national level, the Water Supply and Sanitation Project Management Office (WSS-PMO) of DILG is responsible for the supervision of water supply services and capacity development. The Provincial DILGs provide technical support to the municipalities. The municipalities identify the needs, plan water supply programs and implement them. They receive technical and financial assistance from the Provincial DILG and donors as required. They also coordinate with the barangays and communities.

The water supply facilities are operated and maintained as follows, depending on the levels of facilities:

Level I: Barangay Water and Sanitation Association (BWSA) is primarily responsible for the operation and maintenance of level I facilities after the construction. BWSA collects user fees and use them for operation and maintenance. However, many facilities do not have BWSAs, and they are managed by the municipalities, barangays or individual users. User fees are not collected in many places, and when the facilities need repair, funding comes from the budget of municipalities, barangays, or from contributions from the users. The users know the condition of the facilities. When the facilities need repair, the users take initiatives to secure funding, and negotiate with the municipality, barangay or other users as necessary, regardless of the situation of BWSAs.

Level II: Municipalities or barangays operate and maintain the facilities.

Level III: Municipalities contract with water supply service providers, called Water Districts, and agree on the service areas and user fee scales (usually quantity-based using the meter).

LGUs grasp the situations of local water supply services and coordinate with relevant actors.

3.2 Efficiency (Rating: ①)

3.2.1 Project Outputs

The outputs of this project are civil works, procurement of equipment, consulting services and NGO assistance.

3.2.1.1 Civil works and procurement of equipment

Construction of water supply and sanitation facilities

The initial plan at appraisal and actual outputs for the four provinces (Ilocos Sur, Nueva Vizcaya, Occidental Mindoro and Oriental Mindoro) were compared in the ex-post evaluation, according to the method of JICA ex-post evaluation. The actual outputs were based on the situation as of April 2015 at the time of ex-post evaluation[13]. Zambales withdrew from the project in 2000 after L/A and before the commencement of the main project activities, and Palawan withdrew in 2003 after the procurement of equipment. They could not shoulder their share of the project cost. As water supply and sanitation were no longer the priority in Palawan after the project appraisal, it could not continue the project. DILG considered using the budget of the two provinces for other target provinces, and some were finally used in Occidental Mindoro[14]. The project outputs (plan and actual) are shown in Tables 3, 4 and 5.

The number of constructed facilities by April 2015 was 424 in total (352 water supply facilities and 72 sanitation facilities). It was 24.5% of the original plan of the four provinces (21.7% for water supply and 64.9% for sanitation).

Table 3. Number of water supply and sanitation facilities (initial plan at appraisal and actual)

	Water supply facilities	Sanitation facilities	Total
Plan at appraisal (6 provinces)	2,312	168	2,480
Plan at appraisal (4 provinces)	1,619	111	1,730
Facilities completed by April 2015 (*Note)	352 (21.7% of the plan for 4 provinces)	72 (64.9% of the plan for 4 provinces)	424 (24.5% of the plan for 4 provinces)
Final target number	364 (22.5% of the plan for 4 provinces)	72 (64.9% of the plan for 4 provinces)	436 (25.2% of the plan for 4 provinces)

(Source: JICA documents)

(*) Note: All facilities in IS, OCM and ORM are complete. The 12 remaining water supply facilities in NV will be constructed.

[13] Nueva Vizcaya has already secured budget from the province for the incomplete facilities (4 million pesos). They are to be constructed (source: questionnaire response from the province). They were excluded from the outputs as of April 2015, at the ex-post evaluation.

[14] Questionnaire response from DILG

Table4. Number of water supply facilities (initial plan at appraisal and actual)

	Initial plan at appraisal (1999)					Facilities completed before the loan expiry date (2007)			Facilities completed after the loan expiry and those to be constructed (as of April 2015)		Facilities completed by April 2015 and the final target number (* Note)		
	Deep well (DW)	Shallow well (SW)	Dug well	Spring (SP)	Total	DW	SW	Total	DW	SP	DW	SW and SP	Total
IS	589	0	0	0	589	64	6	70	33 (*1)	0	97	6	103 (17.5% of the plan)
NV	350	0	0	0	350	6	3	9	0	3 (*2)	6 + 9 (to be constructed) =15	SW 3 + SP 3 (to be constructed) =6	9 (2.6% of the plan) +12 (to be constructed) =21
OCM	146	116	0	0	262	79	95	174	0	0	79	95	174 (66.4% of the plan)
ORM	312	106	0	0	418	55	11	66	0	0	55	11	66 (15.8% of the plan)
Total (4 provinces)	1,397	222	0	0	1,619	204	115	319	42	3	237 +9 (to be constructed) =246	SW 115 +SP 3 (to be constructed)= 118	352 (22.5% of the plan) +12 (to be constructed) =364

(Source: JICA documents, responses to the questionnaire)

Note: The final target number of facilities was fixed by January 2008 for IS, OCM and ORM. NV was planning to construct 32 more facilities as of 2007, but 20 were cancelled after that and 12 are now to be constructed as of April 2015.

(*1) completed. (*2) under preparation

Table 5. Number of sanitation facilities (initial plan at appraisal and actual)

	Initial plan at appraisal (1999)			Facilities completed before the loan expiry date (2007)			Facilities completed after the loan expiry (as of April 2015)		Final target numbers		
	School	Public	Total	School	Public	Total	School	Public	School	Public	Total
IS	41	3	44	10	1	11	10	0	20	1	21 (47.7% of the plan)
NV	20	5	25	0	0	0	3	1	3	1	4 (16.0% of the plan)
OCM	8	4	12	35	7	42	0	0	35	7	42 (350% of the plan)
ORM	26	4	30	4	1	5	0	0	4	1	5 (16.7% of the plan)
Total (4 provinces)	95	16	111	49	9	58	13	1	62	10	72 (64.9% of the plan)

(Source: JICA documents, questionnaire responses)

The selection criteria of the project sites were as follows:

Water supply	Basic conditions: Groundwater is the only source of water. The community accepts level I facility. Sources of water with sufficient quantity and quality are available. Other conditions: Situation of water borne diseases. Sources of water accessible by balling machines. Coverage of water supply facilities in the community. Income levels of the households and community. Willingness of the community to take responsibility for operation and maintenance, participate in training in operation and maintenance, pay user fees, and nominate counterparts.
Sanitation	School toilets (target: 40 pupils per unit): Large number of pupils per unit. Active PTAs. School's willingness to shoulder cost and labor for operation and maintenance. Public toilets (one facility each for public locations such as markets and bus terminals): No public toilets. Municipality's willingness to shoulder cost and labor for operation and maintenance. Existing groups such as market venders' groups who are willing to operate and maintain the toilets.

(Source: JICA documents)

The final target number of the facilities was officially approved by NEDA and DILG and concurred by JICA. The reasons for the large discrepancy of the numbers of water supply and sanitation facilities between the initial plan and actual were as follows[15]:

・The demand was estimated at the project appraisal based on the Provincial Water Supply and Sanitation Plans of 1996. Some sites included in this plan no longer needed the JICA project when the construction started in 2003 because they already had facilities by other funding. The actual demand had considerably decreased by that time.

・This project targeted municipalities of Class 5-6. They had weak financial capability, and some could not shoulder their share (50%) of the project cost and dropped out of this project. Some LGUs opted to use their own funds, not loan, to finance water supply projects to simplify the processes.

・Due to the changes of the political situation (local elections took place in 2001, 2004 and 2007), water supply and sanitation were no longer priority sectors in some LGUs.

・The site selection criteria were strictly applied. Technical conditions (location of facility was not too far from the source of water, etc.) and financial capability (the municipality needed to share 50% of the project cost) were closely examined. Candidate sites that did not meet the requirement were excluded.

・The unit costs for construction was higher than those at project appraisal. As the bid prices for procurement exceeded the predetermined prices by 20-30%, the number of facilities to be constructed became smaller than the plan. The actual unit costs for construction escalated during years after the appraisal. The increase was also because

[15] JICA documents

the facility design was slightly changed from the original in order to make them women-friendly, to prolong their service life and to make the maintenance easier.

Procurement of equipment

There were discrepancies between the plan and actual procured equipment as shown Table 6, the reasons for which were as follows:

・Zambales withdrew from the project before the procurement of equipment[16].

・Bid announcements for the procurement of well rehabilitation machines and maintenance tools were made five times since 2000. However, they were in vain because of the reasons such as small predetermined prices, no bidders some time, and unsuccessful negotiations with the bidders in other times. In order to encourage bidding, the project took measures such as modification of the payment system, increase of predetermined prices and modification of specification of equipment, all of which did not lead to contracts.

Table 6. Procurement of equipment (plan and actual)

(Unit: Well rehabilitation equipment and vehicle=unit, maintenance tools and water quality testing kits=set)

	Plan				Actual			
	Well rehabilitation equipment	Vehicle	Maintenance tools	Water quality testing kits	Well rehabilitation equipment	Vehicle	Maintenance tools	Water quality testing kits
IS	1	1	28	28	0	1	0	28
NV	1	1	11	11	0	1	0	11
OCM	1	1	6	6	0	1	0	6
ORM	1	1	6	6	0	1	0	6
P	1	1	11	11	0	1	0	10
Total (5 provinces) (Note)	5	5	62	62	0 (0%)	5 (100%)	0 (0%)	61 (98%)
Z	1	1	6	6	0	0	0	0
Total (6 provinces) (Note)	6	6	68	68	0 (0%)	5 (83%)	0 (0%)	61 (90%)

(Source: JICA documents)

(Note): The numbers in the brackets are percentage of actual compared to the plan.

3.2.1.2 NGO assistance

The NGOs provided assistance in community organizing and skills training as planned. The details of their activities were as follows:

・To confirm the communities' willingness through discussions with them at the site selection stage to participate in the project in operation and maintenance and to pay user fees.

[16] Palawan procured the vehicle and water quality testing kits before its withdrawal from the project in 2003.

・To conduct gender training and develop measures to ensure that the project would benefit both men and women (participation of both sexes from the planning stage, involvement of both sexes in the design of the facilities to make them user-friendly for both, participation of women in BWSAs, etc.)

・To organize BWSAs, and to conduct training of existing groups such as PTAs and market vendors' groups in maintenance of sanitation facilities.

・To conduct health and hygiene education (promotion of hand washing etc.)

The NGOs in charge of each target province conducted community organizing and BWSA training. The umbrella NGO supervised their activities in all project target provinces. The provinces confirmed that the engagement of the NGOs in these activities was useful because the LGUs lacked expertise and experience in these topics. As the facilities were constructed long after the community training, however, some communities had lost willingness to participate by the start of civil works.

3.2.1.3 Consulting services

Consulting services included detailed design, review of tender documents, assistance in evaluation of tendering, supervision of construction works, training of DILG, LGUs and NGOs, assistance in organizing BWSAs, and environment-related activities (supervision and assistance in design of the facilities and development of tender documents so that they could comply with the environmental standard during the detailed design; assistance in tendering; monitoring during construction and installation works and advice of countermeasures: and transfer of skills to the executing agency to continue environmental monitoring after the project completion). These activities were implemented mostly as planned. According to DILG, skills were not sufficiently transferred in construction works because the consultants sometimes worked only by themselves without involvement of the executing agency. This problem, however, did not prolong the project period or increase the project cost.

3.2.2 Project Inputs

3.2.2.1 Project Cost

The original project cost for the six provinces was 2,088 million yen for 2,480 facilities. The number of constructed facilities was 424, which was 17.1% of the original target number. Therefore, the planned project cost calculated based on the number of constructed facilities would be 357 million yen as shown in Table 7. Ilocos Sur and Nueva Vizcaya constructed some facilities by their own funding after the loan expiry period. The total actual project cost including these additional facilities but

excluding the incomplete facilities in Nueva Vizcaya was 963 million yen[17]. It largely exceeded (270%) the planned project cost for the number of constructed facilities (357 million yen, as explained above).

Table 7. Project cost

(Unit: million yen. Figures in the brackets: million pesos)

	Plan (As of 1999. Estimated for the project completion in 2004)						Actual (As of ex-post evaluation in April 2015. The facilities completed by IS and NV by their own funding are included. Incomplete facilities of NV are excluded.) (Note 1)					
	Foreign currency		Local currency		Total		Foreign currency		Local currency		Total	
	Total	Loan portion	Total	Loan portion	Total	Loan portion	Total	Loan portion	Total	Loan portion	Total	Loan portion
Water supply and sanitation facilities	0	0	1,246	452	1,246	452						
∗(cost calculated by the percentage of completed facilities among original target numbers)	***0***	***0***	***213***	***77***	***213***	***77***	0	0	360 (134)	116 (43)	360 (134)	116 (43)
Equipment	0	0	19	19	19	19						
∗	***0***	***0***	***3***	***3***	***3***	***3***	0	0	11 (4)	11 (4)	11 (4)	11 (4)
Consulting Services	93	93	253	253	346	346						
∗	***16***	***16***	***43***	***43***	***59***	***59***	132 (49)	132 (49)	226 (84)	226 (84)	358 (133)	358 (133)
NGO assistance	0	0	86	86	86	86						
∗	***0***	***0***	***15***	***15***	***15***	***15***	0	0	35 (13)	35 (13)	35 (13)	35 (13)
Contingency	0	0	127	48	127	48						
∗	***0***	***0***	***22***	***8***	***22***	***8***	-	-	-	-	-	-
Administration cost	0	0	88	0	88	0						
∗	***0***	***0***	***15***	***0***	***15***	***0***	0	0	151 (56)	0	151 (56)	0
Land acquisition	0	0	37	0	37	0						
∗	***0***	***0***	***6***	***0***	***6***	***0***	0	0	0	0	0	0
Tax	0	0	139	0	139	0						
∗	***0***	***0***	***24***	***0***	***24***	***0***	0	0	48 (18)	0	48 (18)	0
Total	93	93	1,995	858	2,088	951						
∗	***16***	***16***	***341***	***147***	***357 (119)***	***163***	132 (49)	132 (49)	831 (309)	387 (144)	963 (358)	519 (193)

(Source: JICA documents)

At appraisal: Exchange rate: US$1=JPY121, Philippines Peso 1 = JPY3. Price escalation: 2% per year for foreign currency and 2% per year for local currency. Contingency: 5% per year. Cost calculation: January 1999.

Actual: Philippines peso 1 = JPY2.69 (average during the project period). The actual cost is based on pesos, and the equivalents in yen were calculated using this exchange rate.

[17] According to DILG, the actual cost for the construction of facilities as of January 2008 was 97 million pesos (approximately 261 million yen). Ilocos Sur constructed 33 water supply facilities and 10 school toilets by their own funding of 20 million pesos (approximately 54 million yen). Nueva Vizcaya constructed 4 school toilets also by their own funding of 17 million pesos (approximately 46 million yen). The total of above is 134 million pesos (approximately 360 million yen). Nueva Vizcaya has already budgeted 20 million pesos (54 million yen) for 12 incomplete water supply facilities.

The comparison between the plan and actual costs per item is as follows:

・The actual cost to construct water supply and sanitation facilities was 360 million yen. It largely exceeded (169%) the planned cost calculated based on the number of constructed facilities (213 million yen). The reasons for the increase were delay of the construction works as well as slight changes in facility design to make them women-friendly, to prolong the service life and to make maintenance works easier, which increased the unit costs[18].

・The actual cost for the procurement of equipment was 11 million yen. It was smaller than the original plan for the six provinces due to the reduction of procured equipment. The reduction of number of facilities did not affect it (as explained in the section "3.2.1.1 Civil Works and procurement of equipment"). Price escalation did not affect it as well because the equipment was procured in the early stage of the project. The above mentioned 11 million yen exceeded the planned cost for the equipment proportioned by the number of the constructed facilities (3 million yen out of 19 million yen in the original plan).

・The actual cost of consulting services was 358 million yen and exceeded the planned cost proportioned by the number of the constructed facilities (59 million yen). The reasons for the increase are likely that the large part of the cost of consulting services was fixed expenses, and that the total personnel cost (technical cost) increased along with the delay of the construction works.

・The actual cost of NGO assistance was 35 million yen and exceeded the planned cost proportioned by the number of the constructed facilities (15 million yen). The reasons for the increase are likely that the large part of this cost was fixed expenses, and that the total personnel cost (technical cost) increased due to the extension of the contracts with the NGOs along with the delay of the construction works.

・According to DILG, all acquired lands incurred no compensation. Therefore, cost of land acquisition was not included in the actual project cost.

[18] The unit construction costs at appraisal of the project (1999) were as follows: 0.156 million pesos for a deep well, 0.070 million pesos for a shallow well, 0.334 million pesos for a school toilet and 0.357 million pesos for a public toilet. The total of the unit costs for the constructed facilities is 69 million pesos (=208 million yen at the exchange rate at appraisal: 1 peso=3 yen). The figure in Table 7 (213 million yen) is slightly different from this (208 million yen) because 213 million yen was calculated based on the proportion of the number of constructed facilities among the original target number without taking the different types of facilities into account. The unit construction costs at the expiry of loan period (2008) were as follows: 0.401 million pesos for a deep well, 0.155 million pesos for a shallow well, 0.399 million pesos for a school toilet and 0.383 million pesos for a public toilet (source: JICA documents). The actual construction cost based on these unit costs is 141 million pesos (=380 million yen at the average exchange rate during the project period: 1 peso=2.69 yen). This 380 million yen is also slightly different from the figure in Table 7 (360 million yen) provided from DILG. This is because of the difference of unit costs and exchange rates depending on the timing of construction of each unit.

3.2.2.2 Project Period

The planned project period was 60 months from December 1999 (L/A) to November 2004 (completion of civil works)[19]. The actual project period is not fixed yet because Nueva Vizcaya has incomplete facilities as of the ex-post evaluation. If the ex-post evaluation (April 2015) is considered as the project completion for the descriptive purpose of the evaluation, the project period (185 months) largely exceeded the plan (308%)[20].

Table 8. Comparison of project period (plan and actual)

	Plan	Actual
Preliminary activities (project briefing and orientation to the relevant organizations, execution of Memorandum of Agreement, Hiring of consultants)	August – November 1999	October 1999 – April 2001
Consulting services	January 2000 – November 2004	January 2001 – March 2007
LGU training	January – December 2000	March 2001 – January 2007
Feasibility study and Detailed Design	January – December 2000	March 2001 – May 2005
Submission of disbursement request JICA	March 2000	September 2003
Procurement of vehicles and water quality testing kits	May 2000 – June 2001	October 2000 – August 2001
Procurement of water supply and sanitation facilities	January – September 2000	December 2001 – November 2006
Selection and procurement of NGOs	April 2000 – December 2003	January – July 2000 May – September 2006
Community development activities	April 2001 – November 2004	August 2001 – March 2007
Construction of water supply and sanitation facilities	February 2001 – November 2004	February 2003 – May 2007
BWSA training	February 2001 – November 2004	August 2001 – March 2007
Monitoring and evaluation	July 2001 – December 2004	March 2001 – September 2007
Winding up period	(Not planned)	April – September 2007

(Source: JICA documents)

The main reasons for the extension of the project period were as follows[21]:

・The operation plan of the project was revised as some LGUs could not shoulder their share of the project cost and dropped out of the project. As a consequence, the main part of the project (procurement and construction of facilities) started in 2003, later than the original plan.

・JICA procurement guidelines had different rules from those of the LGUs of the Philippines regarding the procurement style and the bidding advertisement. The project provided assistance in procurement, but the procurement of construction equipment for the water supply and sanitation facilities was delayed because the staff of LGUs was

[19] The completion of this project was defined as "the completion of civil works and BWSA training."
[20] Occidental Mindoro and Oriental Mindoro had completed construction by the loan expiry period.
[21] JICA documents

not accustomed to procurement of JICA projects. Some members of the Bid and Award Committee, responsible for the procurement process, changed after the local elections in 2004, which led to the delay in the process.

・Each project target province was supposed to contract with one contractor for the construction of all facilities. However, the provinces needed to separate the contract to several batches because it was unrealistic to make only one contractor to cover all project sites as it took long period to choose the sites and LGUs had problems in securing funding. There were more workloads for the selection of the contractors than anticipated, and the selection process delayed.

・The LGUs nominated staff in charge of this project, but they were usually busy for other works and lacked expertise. It led to the delay of tendering administration.

・The contractors were small or medium local enterprises and often had shortage of funding or staff. It led to the delay of the construction works.

Two provinces could not complete the construction by the end of the loan expiry period for the following reasons:

・In Ilocos Sur, the original work period of the procurement batch 1 was ten months from February to December 2003. However, many constructed facilities had faults and needed doing-over, and the construction also delayed. The province ended the contract in April 2005. The remaining parts were advertised as batch 2, but it remained less than one year when the province contracted with a different enterprise. Even after this, the province was not able to prepare full budget for the construction of remaining facilities as planned.

・Nueva Vizcaya could not secure sufficient funding during the project period. The number of engineers was not sufficient and it was difficult for them to implement the project as planned.

3.2.3 Results of Calculations of Internal Rates of Return

At appraisal, neither Financial Internal Rate of Return (FIRR) nor Economic Internal Rate of Return (EIRR) was calculated for this project because it was difficult to grasp its economic effects quantitatively. It was also difficult at the ex-post evaluation to calculate Internal Rates of Return of this project because no data to calculate benefits were provided.

【Summary of Efficiency】

The actual project cost largely exceeded the plan (270%) calculated in proportion of the number of constructed facilities. The increase of the cost was due to price escalation

during the project period as well as the large portion of the fixed charges among items such as consulting services. The actual project period was 185 months if the ex-post evaluation (April 2015) was considered as the project completion and significantly exceeded the plan (308%). From the above, both the project cost and project period significantly exceeded the plan. Therefore, efficiency of the project is low.

3.3 Effectiveness[22] (Rating ②)

No operation or effect indicators were set at project appraisal to measure the achievement of project objectives: "to provide safe, adequate and easily accessible water supply and sanitation services and thereby to contribute to the improvement of living conditions."

3.3.1 Quantitative Effects (Operation and Effect Indicators)

3.3.1.1 Operation Indicators

No indicators were fixed at the project appraisal. In order to measure its effects in the ex-post evaluation, "functioning status of the facilities" and "number of beneficiaries" were examined comparing the original assumptions and the accrual data[23].

(1) Functioning status of the facilities

Table 9 below shows that about 70% of the water supply facilities and about 80% of the sanitation facilities constructed by this project were functioning as of the ex-post evaluation. The rest of them were not functioning and not utilized due to the problems in water quality (existence of iron, intrusion of seawater, smells), dried-up wells, or existence of other sources of water that made the repair of the project facilities unnecessary even if repair is feasible. Where the project facilities are not utilized, the community is most likely to have access to other sources of water because people cannot live without drinking water.

As explained in the section of Sustainability, the functioning status of facilities depends on whether the community needs them or not. Therefore it is not basically related to the financial or technical problems or whether BWSAs are active or not. Ilocos Sur has higher functioning rate of the water supply facilities than other provinces, which is probably because this province has more waterless remote areas

[22] Sub-rating for Effectiveness is to be put with consideration of Impact.

[23] Water supply programs usually use "population served" as one of the operation indicators. It can be grasped from the number of households (number of contracts) connected to the water supply systems. Since this project constructed common wells without physical connections to the houses and there are no contracts, the number of beneficiaries was obtained from the project target provinces.

with strong needs of the level I water supply facilities, and because many facilities are relatively new as they were constructed or repaired recently between 2012 and 2014.

Regarding the sanitation facilities, the public toilets such as those in the markets have high functioning rate and this confirms the needs of this type of facility. In schools, the demand for the classroom toilets has increased since around 2012 instead of the toilets in the schoolyard like those constructed by this project[24]. Many of the school toilets constructed by this project are not usually utilized and are open only for events even if they have no problem in terms of function. In some schools, only classes without classroom toilets use the toilets in the schoolyard.

Table 9. Number and percentage of functioning water supply and sanitation facilities (as of March 2015)

	Water supply facilities		Sanitation facilities	
	Number of constructed facilities	Functioning facilities	Number of constructed facilities	Functioning facilities
IS	103	85 (Percentage of functioning facilities (same in below): 83%)	21 (School 20, Public 1)	21 (School 20, Public 1) (Percentage of functioning facilities (same in below): 100%)
NV	9	3 (33%)	4 (School 3, Public 1)	4 (School 3, Public 1) (100%)
OCM	174	118 (68%)	42 (School 36, Public 6)	31 (School 26, Public 5) (74%)
ORM	66	40 (60%)	5 (School 4, Public 1)	2 (School 1, Public 1) (40%)
Total	352	247 (70%)	72 (School 62, Public 10)	58 (School 50, Public 8) (81%. School 81%, Public 80%)

(Source: JICA documents, response to the questionnaire, interviews)

(2) Number of beneficiaries

The above indicator (1) examined whether the facilities were functioning or not. The "number of beneficiaries" shows whether each functioning facility is utilized by sufficient number of people as anticipated, that is to say, whether the facilities are underutilized or not. At appraisal, the total estimated number of beneficiaries was 34,680 households for the water supply facilities, 10,640 persons for the school toilets and 4,000 persons for the public toilets. According to the target provinces, the total actual number of beneficiaries was 7,800 households for the water supply facilities, which is significantly below the plan. There were about 17,000 beneficiaries for the

[24] The classroom toilets are inside the classroom. They are handy for the younger pupils as they are accessible anytime needed. Some schools also have toilets in the corridors like in Japan.

school toilets and about 6,000 for the public toilets, both of which exceeded the plan.

Table 10. Number of beneficiaries

		Plan (1999)			Actual (2015) (constructed facilities only)		
		Water supply facilities	School toilets	Public toilets	Water supply facilities	School toilets	Public toilets
Number of facilities		2,312	133	35	352 (15% of the plan)	62 (47% of the plan)	10 (26% of the plan)
Number of functioning facilities					247 (11% of the plan. 70% of the constructed facilities)	50 (38% of the plan. 81% of the constructed facilities)	8 (23% of the plan. 80% of the constructed facilities)
Number of beneficiaries	IS	No data of details			Approx. 2,000 households (HH) and pupils at school etc.	4,390 persons	300 persons
	NV				3429 persons (Approx. 400HH)	1,477 persons	100 persons
	OCM				Approx. 4,000HH and pupils at school etc.	12,099 persons	5,757 persons
	ORM				Approx. 1,400HH and pupils at school etc.	3,045 persons	100 persons
	Total	34,680 HH	10,640 persons	4,000 persons	Approx.7,800HH and pupils at school etc. (22% of the plan)	Approx. 21,000 persons (197% of the plan)	Approx. 6,000 persons (per day) (150% of the plan)
Number of estimate number of beneficiaries of the functioning facilities ("number of beneficiaries above" x "percentage of functioning facilities among the planned or constructed facilities")		Approx. 3,800HH (34,680 HH x 247 / 2,312 facilities)	Approx. 4,000 persons (10,640 persons x 50 / 133 facilities)	Approx. 900 persons (4,000 persons x 8 / 35 facilities)	Approx. 5,500HH and pupils at school etc. (7,800HH x 247 / 352 facilities) (145% of the figure in the left column) (=22HH per facility)	Approx. 17,000 persons (21,000 persons x 50 / 62 facilities) (425% of the figure in the left column)	Approx. 4,800 persons (6,000 persons x 8 /10 facilities) (533% of the figure in the left column)

(Source: JICA documents, questionnaire response)
Number of beneficiaries was calculated at appraisal as follows:
Water supply facilities: 15 households per facility. School toilets: estimated based on the actual number of pupils and teachers of the target schools. Public toilets: estimated based on the number of clients and workers of the markets, etc.

Table 10 shows the estimate number of total beneficiaries proportioned by the number of functioning facilities. These figures (actual as of ex-post evaluation) for both water supply and sanitation facilities exceed the plan. For the water supply facilities, the plan was 3,800 households and the actual (estimate) was 5,500 households. For the sanitation facilities, the plan for the school toilets was 4,000 persons and the actual (estimate) was 17,000 persons, and the plan for the public toilets was 900 persons and the actual (estimate) was 4,800 persons. The increase of the beneficiaries of the water supply facilities for the number of functioning ones was

because the calculation at appraisal assumed that a facility would cater to 15 households, but many facilities actually are utilized by about 20 to 30 households each. There are also likely to be more pupils at schools and people in the markets than estimated at appraisal. From the above, while the total number of beneficiaries is much smaller than the estimate at appraisal, each facility has sufficient number of beneficiaries. Therefore, it can be concluded that this indicator has achieved the target.

3.3.1.2 Effect Indicators

No effect indicators were set at appraisal. The ex-post evaluation examined the proportion of population with access to water supply and sanitation facilities in the four project target provinces in order to know the status of service provision by this project.

In the rural areas of the target provinces, the proportion of population with access to water supply facilities is sufficiently high. It was 91% in Nueva Vizcaya and 100% in Oriental Mindoro according to the most recent data in 2013 and 2014 as shown in Table 1 in the section of Relevance. While there are no data about Occidental Mindoro, it is assumed that the situation is close to Oriental Mindoro and is likely to have almost achieved universal access. The proportion of population with access to water supply facilities of all levels in the rural areas of Ilocos Sur was 56% and lower than the total of the proportion of population with access to level I and level III facilities in 1999 (75%), the reason for which is not known. Table 2 shows that the proportion of population with access to sanitation facilities in the rural areas. It was 78% in Ilocos Sur and also lower than the data in 1999 (95%), the reason of which is also unknown. While there were no data about the proportion of population with access to sanitation facilities only in rural areas in other target provinces, it can be assumed that the situation would be similar to that in Ilocos Sur according to the observation during the field study of the ex-post evaluation, and therefore the coverage in other provinces would also be similar.

The data above do not sufficiently show that the access to the water supply and sanitation services have been improved in the project target provinces. However, as the project beneficiaries using the functioning facilities are 100% covered by the water supply and sanitation services, this objective at the project appraisal was achieved.

3.3.1.3 Other effects (qualitative effects, etc.)

The reported cases of water borne diseases were zero in Ilocos Sur, Occidental Mindoro and Oriental Mindoro according to their reports in 2013[25]. Nueva Vizcaya had

[25] Reliability of data is questioned since there are no previous data and the data for the three provinces (0 reported cases) are very different from those of Nueva Vizcaya. Therefore, these data are not analyzed for

552 cases in 2007 but only 396 in 2012. According to the province, Nueva Vizcaya is mountainous and water contamination in the upstream could cause water borne diseases in the downstream. Thanks to the water supply facilities, access to safe drinking water has improved to a certain extent.

From the above, access to water supply services in the rural areas has sufficiently improved in Nueva Vizcaya and Occidental Mindoro, but there were no data to show the improvement in Oriental Mindoro and Ilocos Sur. There were no data to show the improvement of access of sanitation services in rural areas in the four provinces. Therefore, the available data cannot sufficiently show the improvement of access to water supply and sanitation services. Still, each facility constructed by this project offers sufficient access to the water supply and sanitation services, which is proved by the number of beneficiaries.

3.4 Impacts

3.4.1 Intended Impacts

This project aimed at the "improvement of living conditions" as its impact. The ex-post evaluation conducted beneficiary surveys to examine it.

(1) Improvement of living conditions

Beneficiary surveys were conducted in Occidental Mindoro and Ilocos Sur[26]. The participants in the surveys are shown in Table 11.

Table 11. Details of Beneficiary survey respondents

Water supply facilities (unit: person)

		OCM	IS	Total
Sex	Male	29	38	67
	Female	42	41	83
	No answer	9	1	10
Whether using the facility or not	Using	59	73	132
	Not using	13	7	20
	No answer	8	0	8
BWSA	Member	13	65	78
	Non member	22	2	24
	No answer	45	13	58

Sanitation facilities (unit: person)

		OCM	IS	Total
Sex	Male	4	4	8
	Female	16	16	32
	No answer	0	0	0
Whether using the facility or not	Using	9	18	27
	Not using	11	2	13
	No answer	0	0	0
Operation and maintenance	Involved	9	6	15
	Not involved	11	4	15
	No answer	0	10	10

the ex-post evaluation.

[26] The respondents were 200 persons in total (100 from each). Each province had 80 respondents for water supply and 20 for sanitation, which made 160 for water supply and 40 for sanitation in total. The surveys were conducted in Calintaan and Magsaysay in Occidental Mindoro, as well as in Bantay, Banayoyo and Santa in Ilocos Sur. The municipalities were selected through the discussion with the provinces according to the criteria such as functioning status of the facilities, whether the BWSAs are active or not, and the access to the municipalities.

Regarding the water supply facilities, about 70% of the respondents in the two provinces are satisfied with the quantity and quality of water, convenience, and the status of operation and maintenance. In Ilocos Sur, about 80% are satisfied probably because its remote areas still have high demand for level I water supply facilities. In Occidental Mindoro, only about 50% are satisfied probably because people expect level II and level III facilities according to the province[27]. Figure 3 shows that the majority of the respondents think that there are some positive impacts from the water supply facilities such as the reduction of workload to fetch water and the improvement of hygiene status.

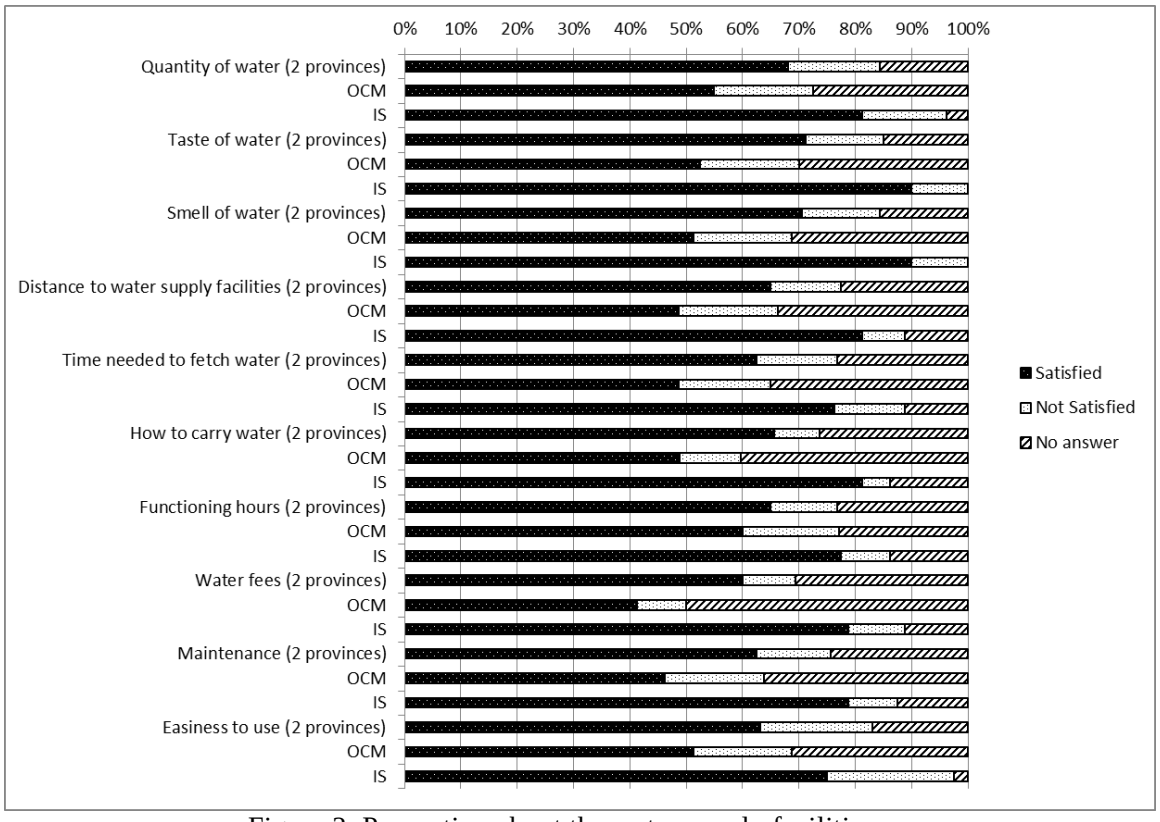


Figure 2. Perception about the water supply facilities
(percentage among the total (160) respondents)

[27] In Occidental Mindoro, 33 out of 80 respondents use other sources of water (individual connection (level III): 12 persons, other wells (level I or II): 7, other communal sources (level I or II): 8, others (buying water in bottles or containers): 6. In Ilocos Sur, 41 out of 80 respondents use other sources of water (individual connection (level III): 14, other wells (level I or II): 10, other communal sources (level I or II): 11, others buying water in bottles or containers): 6.

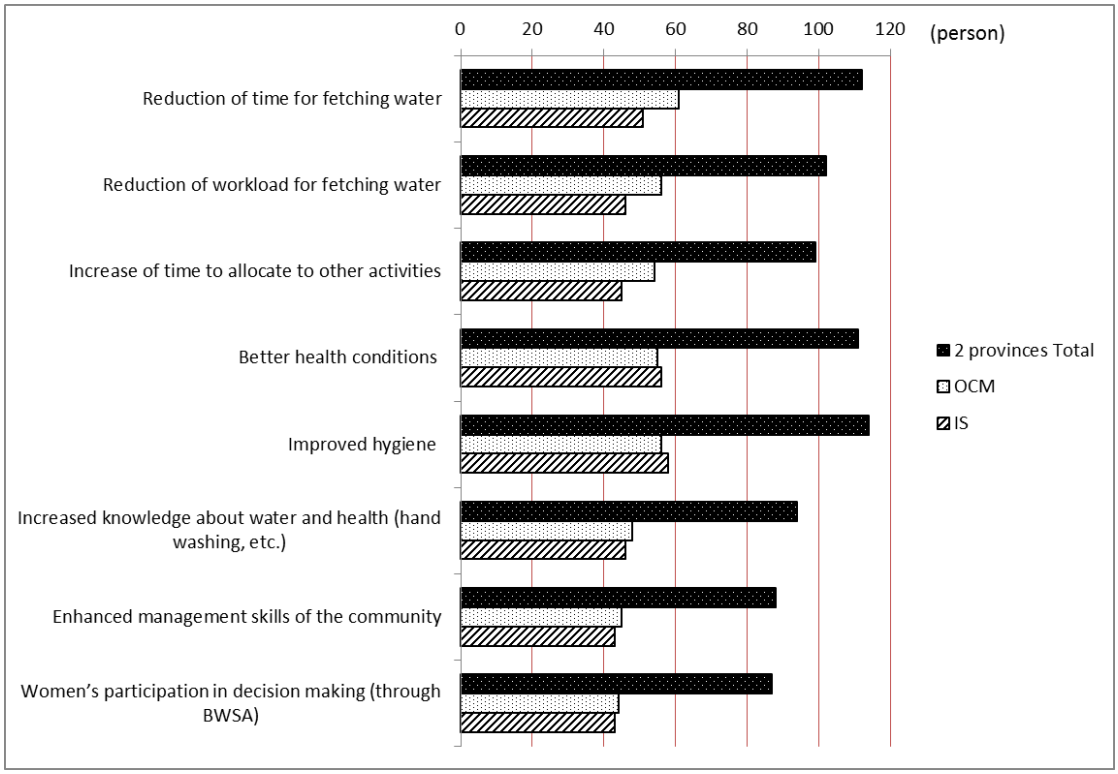


Figure 3. Impacts of the water supply facilities

Regarding the sanitation facilities, Figure 4 shows that about 60% of the respondents in the two provinces are satisfied with the convenience, cleanliness and status of operation and maintenance. While about 90% of the respondents are satisfied in Ilocos Sur, only about 40% are satisfied in Occidental Mindoro. According to the executing agency, this is because Occidental Mindoro has more convenient facilities than Ilocos Sur with many remote areas. Figure 5 shows that the majority of the respondents are positive about the improvement of hygiene status thanks to the sanitation facilities.

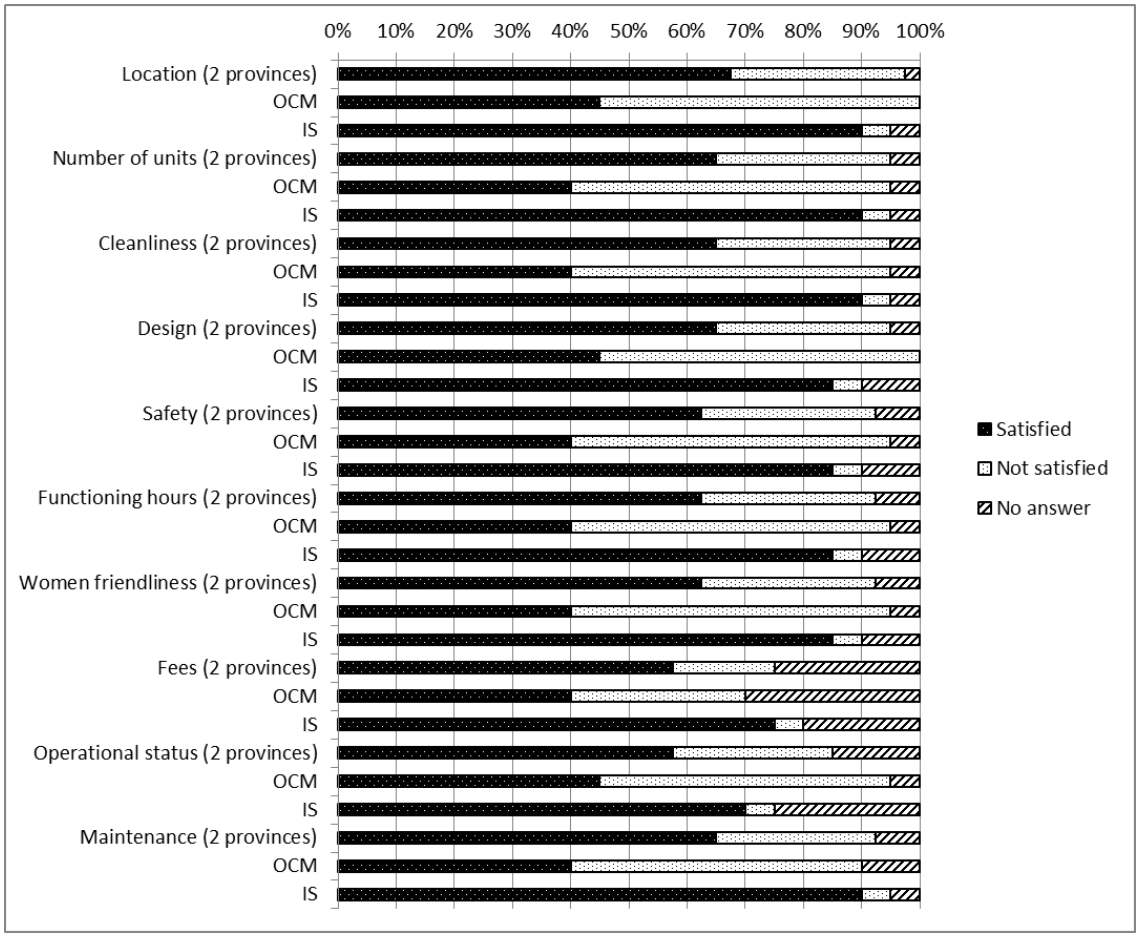


Figure 4. Perception about the sanitation facilities
(percentage among the total (40) respondents)

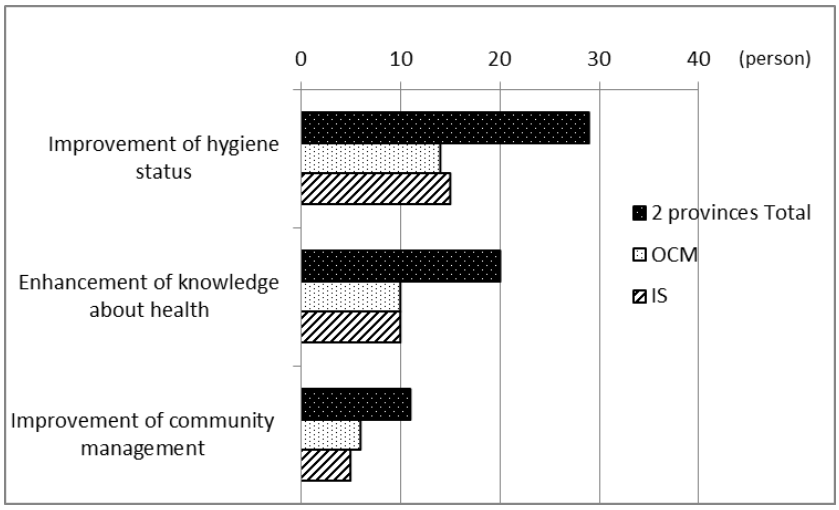


Figure 5. Impacts of the sanitation facilities

3.4.2 Other Impacts

(1) Impacts on the natural environment

According to the questionnaire responses and interviews of DILG and the project target provinces, Occidental Mindoro experienced reduction of groundwater in some sites and remedied the problem by moving the facilities to other places. No other specific negative impacts on natural environment were observed such as excessive use of groundwater or its contamination caused by the wastewater from the toilets. The toilets have less risks of environmental pollution than before because excrement are flushed with adequate amount of water. Some communities have set up rules not to cause environmental pollution such as prohibition of washing clothes or bodies around the water supply facilities.

(2) Land Acquisition and Resettlement

According to the questionnaire responses and interviews of DILG and the project target provinces, the lands were acquired without compensation and there was no resettlement[28]. No information was available about the total surface of the acquired lands.

(3) Other positive and negative impacts

Enhancement of management capacity of water supply and sanitation services

・Community: About a half of the respondents of the beneficiary surveys consider that the communities' capacity to manage water supply facilities was enhanced. Even where BWSA is not active, some users are involved in operation and maintenance of the facility to a certain extent as long as it is functioning. Less respondents consider that the communities' capacity to manage sanitation facilities was strengthened than water supply. It could be because the sanitation facilities in general are operated and maintained by the schools or LGUs, and the community is less involved.

・LGU: The capacity of municipalities and barangays in operation and maintenance of water supply and sanitation facilities were enhanced as long as the facilities are functioning. At the provincial level, the management capacity of Ilocos Sur, including monitoring, was enhanced as the remaining facilities were recently completed. It was not possible to confirm the enhancement of management capacity in other three provinces at the provincial level because they are not much involved in the operation and maintenance of the facilities.

Women's empowerment

Figure 3 shows that many respondents of the beneficiary surveys think that women

[28] Some residents offered a corner of their premises for the water supply facilities (wells). There were no needs to relocate people.

were empowered through this project. Many women are active as BWSA leaders and most users of the water supply facilities are women. This project promoted their participation from the formulation stage of BWSAs, and women are active BWSA members. At the same time, women in the Philippines have always been visible in the public sphere and the majority of staff in charge of water and sanitation programs in DILG and provinces, including engineers, are women. Women are active and visible in the project target areas as well as in the related agencies as they have always been in the Philippines, therefore it is not considered as an impact of this project.

【Summary of Effectiveness and Impact】

Each of the facilities constructed by this project has sufficient number of beneficiaries and improved the access to water supply and sanitation services as long as the facilities are functioning. Since the number of constructed facilities was much lower than the original plan, however, the total number of beneficiaries as of the ex-post evaluation was also much lower than the original estimate. Since the scale of the benefit has been limited, the effect of the project was moderate. There were impacts of this project such as the reduction of workload to fetch water, improvement of hygiene status, and enhancement of operation and management capacity of the communities and LGUs to a certain extent where the facilities are functioning.

From the above, the project has to some extent achieved its objectives. Therefore effectiveness and impact of the project are fair.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

(1) Central level

The Republic Act No. 6716 in March 1989 stipulated that the Department of Public Works and Highways (DPWH) was responsible for the construction of wells in barangays and that BWSAs were responsible for the operation and maintenance of the facilities. The Local Government Code in 1991, which promoted decentralization, transferred water supply and sanitation services to the LGUs, and assigned DILG the supervising role of these services replacing DPWH. DILG's Water Supply and Sanitation Project Management Office (WSS-PMO), which executed this project, is responsible for the supervision of water supply and sanitation services and LGUs' capacity development in management of these services.

(2) Provincial level

At the appraisal of this project, the Provincial Water Supply Units (PWSUs),

composed of the Provincial Planning Development Offices and other sections, were supposed to be responsible for the planning, monitoring and evaluation, and training of municipalities in water supply services.

At the ex-post evaluation, Ilocos Sur's structure centered on PWSU is close to the original plan at appraisal as shown in Table 12. PWSU of Ilocos Sur actively monitors the facilities and supervises BWSAs as they completed the construction of facilities relatively recently. Other three provinces basically have similar structure as shown in Table 13 about Nueva Vizcaya, but their PWSUs are not active and have no designated staff practically. However, once the facilities were constructed and as long as they are functioning, PWSUs do not have to provide financial and technical assistance in most cases because the facilities can be repaired by the municipalities, barangays or users by funding secured by them. Therefore, inactive PWSUs do not pose serious problems.

Table 12. Operation and maintenance structure of water supply and sanitation, Ilocos Sur

Regional DILG (Water and Sanitation Section)	Supervision and monitoring of construction of facilities. Checking the conformity to the design standard. Checking the function, quality and number of facilities.
Provincial DILG (Water and Sanitation Section)	Same activities as the Regional DILG. Community organizing, capacity development, technical assistance, building partnerships, preparation of reports, and helping the provincial government.
Provincial Planning and Development Section	Management of water supply and sanitation services in the province.
Provincial Water Supply Unit (PWSU)	Implementation of water supply and sanitation services, provision of assistance to municipalities and barangays. Monitoring of facilities.
Municipal Planning and Development Section	Planning of water supply and sanitation services in the municipality.
Municipal Sector Liaison Office	Provision of assistance to barangays (BWSAs) in operation and maintenance of facilities. Monitoring of situations. Provision of assistance to the communities in the quarterly water testing in quality and quantity.

(Source: Questionnaire response of Province)

Table 13. Operation and maintenance structure of water supply and sanitation, Nueva Vizcaya

Provincial Planning and Development Section	Coordination of infrastructure programs in the province. No staff are in charge of operation and maintenance of water supply facilities.
PWSU	Supervision and management of programs. Technical assistance, training, monitoring and reporting. It seldom provides technical training to the beneficiaries because the facilities are simple and can be maintained by the municipalities, barangays and users. No staff are in charge of the operation and maintenance of water supply facilities.
Municipal Planning and Development Section	Participation in the community organizing activities
Municipal Sector Liaison Office	Participation in the community organizing activities
Health office	Prevention of water-borne diseases.

(Source: Questionnaire response of Province)
Note: This represents other three provinces except for Ilocos Sur.

(3) Municipality, barangay and facility levels

In the facility design and construction stage, the municipalities were supposed to establish the Municipal Sector Liaison Teams (MSLTs), main member of which was the Municipal Planning and Development Section. The MSLTs were to be responsible for the selection of project sites, community organizing and supervision of construction works. In the operation and maintenance stage, the parties responsible for the operation and maintenance of facilities were supposed to be BWSAs for the water supply facilities, the municipalities for the public toilets and schools with PTAs for the school toilets.

At the ex-post evaluation, some water supply facilities are operated and maintained by the BWSAs, and others are operated and maintained by either of municipalities, barangays or individual users where BWSAs are not active. If BWSAs are active, they collect user fees (many facilities are free of charge, however), manage the facilities and arrange repairs. If BWSAs are not active, user fees are not collected. If users notice any problems with the facilities, they ask for contributions from other users or request budget to the municipalities or barangays for repair. The school toilets are managed by the schools or PTAs. Most public toilets are managed by the municipalities. Table 14 shows the standard operation and management structure in the project target provinces.

Table 14. Operation and management structure of water supply and sanitation facilities

Water supply	BWSA: There are eight to ten members. President, Vice-President, secretary, treasurer, fee collector and repairer, etc. are selected. If BWSA is not active, facilities are operated and maintained by the municipality, barangay or users.
School toilets	School heads, principal teachers, representatives of PTAs and pupils. Pupils do daily cleaning. Toilets are repaired by the school budget or contribution from the PTA.
Public toilets	Municipalities manage public toilets. Municipalities nominate the persons in charge of cleaning and operation and maintenance. The user fees are used for cleaning and minor repairs. Major repairs and utility (electricity and water) are usually paid from the budget of municipalities.

(Source: Questionnaire responses from DILG and the provinces)

Other water supply service providers outside of the public structure are Water Districts, which provides level III water supply (individual connections) mainly in the urban areas. They contract with the municipalities and agree on the service areas and tariffs. Tariffs are usually based on the meter. There are also many water stands selling drinking water. Some municipalities and barangays provide level I or II water supply services by their own initiative.

From the above, the water supply and sanitation facilities constructed by this project, as long as they are functioning, have no serious problems at the ex-post evaluation in the

institutional aspects of operation and maintenance because the municipalities, barangays and individual users manage the facilities, repair them by sufficient funding and skills so that people can continue using them even if PWSUs or BWSAs are not active as assumed at appraisal.

3.5.2 Technical Aspects of Operation and Maintenance

(1) Provincial level

Under this project, the target provinces and municipalities were trained in several technical topics such as planning of water supply services, operation and maintenance, construction of water supply facilities, supervision and organizational development. However, some trained staff already left the positions due to personnel changes[29]。

As the operation and maintenance of the project facilities do not need high technical levels, however, the municipalities and barangays have no problem to manage them. Therefore, the low retention rate of the staff and the technical level of the provinces do not pose problems on the operation and maintenance of the facilities. Basically, BWSAs need to be appropriately managed to ensure the sustainability of the facilities[30], and the provinces are supposed to supervise them in account management and to ensure transparency[31]. The three provinces excluding Ilocos Sur have limited skills and experiences in this topic.

(2) Municipality, barangay and facility levels

Since many active BWSAs are in the remote areas, the ex-post evaluation mission could only meet the limited BWSA members during its field study. Some BWSAs in Ilocos Sur, which have always been active since the completion of construction in 2007, have collected user fees and keep records appropriately. Even if BWSAs are not active, the municipalities, barangays or users can repair the facilities. Therefore, there would be few cases that facilities are left without repair due to technical problems.

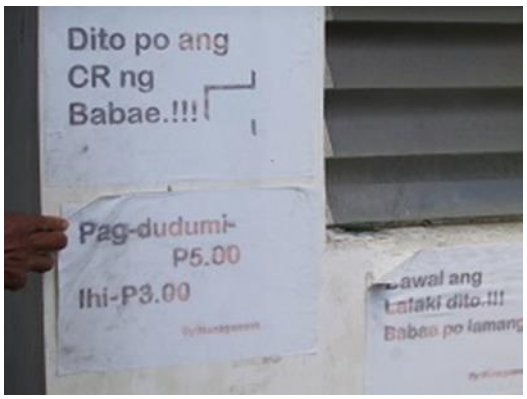
From the above, there are no serious problems in technical aspects of operation and maintenance of the functioning facilities. However, there are small challenges in the capacity of the provinces in assistance to BWSAs in its “soft” aspects.

[29] In Ilocos Sur, two out of 10 PWSU staff members were trained under this project and have work experiences for 14 years. They monitor constructed facilities and supervise BWSAs. It is different from other three provinces.

[30] During the field visit of the ex-post evaluation, there were no cases that the facilities were not repaired and therefore not functioning due to BWSAs’ problems in its organizational management. However, such negative cases might also exist.

[31] DILG developed these manuals for the staff in the provincial level to supervise BWSAs: “BWSA Community Organizing, O and M and the Upgrading of Water Supply Systems’ Manual”, “O & M Guide for Water and Sanitation Facilities”, and “Manual on simplified accounting systems and procedures for BWSA”

Public toilet in the market in Baco, Oriental Mindoro



User fees of public toilets in the market of Baco, Oriental Mindoro

3.5.3 Financial Aspects of Operation and Maintenance

The central government does not contribute funding to the operation and maintenance of the facilities. The financial and accounting arrangement of the operation and maintenance of facilities is complete at the provincial level and below. Therefore, the financial aspects of these levels were examined at the ex-post evaluation.

Except for Ilocos Sur, the provinces do not contribute funding to operation and maintenance of the facilities. Municipalities, barangays or individual users make financial contributions and repair the facilities when needed. The cost for operation and maintenance of facilities is funded as follows:

Water supply facilities	BWSAs, if they are active, collect user fees (about 20 pesos per month per household) and use them for repairs. The user fees are small and not a burden for most users. At the same time, even if some users missed payment, it does not affect operation and maintenance because the fees are small. If BWSAs are not active, facilities are usually free of charge. When the facilities need repair, the users request budget to the municipalities or barangays, or ask for contribution from the fellow users.
School toilets	Schools budget and PTAs contribute funding to repair and cleaning materials.
Public toilets	User fees are collected (3 to 5 pesos). The collected fees are used to purchase cleaning materials or to pay salary of the cleaners. Utility (electricity and water) and cost of major repairs are paid by the municipalities.

LGUs staff consider that the current operation and maintenance budget is sufficient in general. Ilocos Sur, different from other three provinces, repaired 23 water supply facilities among 70 constructed by 2007 using the provincial budget of about 1.8 million pesos at the same timing as the construction of the remaining facilities between 2012 and 2014. Ilocos Sur confirmed the willingness of the communities to utilize the facilities before the repair.

Table 15 and 16 are examples of the financial records of water supply and sanitation facilities obtained during the ex-post evaluation. Table 15 shows that this water supply facility was repaired every three years using funding from the barangay, and that the balance of the account has a surplus. Table 16 shows that this public toilet was repaired every year and the repair cost was covered only by the user fees.

Table 15. Financial record of BWSA of water supply facility in Namalangan, Santa, Ilocos Sur

(The facility was constructed by 2007 and is functioning. The BWSA is active)

(Unit: peso)

	2010	2011	2012	2013
Income				
- from municipality	0	0	0	0
- user fees	2,520	2,520	3,060	3,060
- from barangay	1,200	0	0	4,500
Income Total	3,720	2,520	3,060	7,560
Expenditure				
- repair	350	0	0	1,200
- spare parts	900	0	0	3,700
Expenditure Total	1,250	0	0	4,900
Balance	2,470	2,520	3,060	2,660

(Source: Questionnaire response from the province)

(Note): The BWSA collected 15 pesos per month per household as of February 2015. Uncollected user fees were 180 pesos. They deposit collected fees to the bank account and keep record of every transaction. They do not employ staff.

Table 16. Financial record of a public toilet in Santo Domingo, Ilocos Sur

(Unit: peso)

	2010	2011	2012	2013
Income				
- from municipality	0	0	0	0
- user fees	45,625 (125/day)	73,000 (200/day)	91,250 (250/day)	91,250 (250/day)
Income Total	45,625	73,000	91,250	91,250
Expenditure				
- repair	1,200	2,500	4,600	5,200
- spare parts	2,850	3,050	10,700 (toilet bowl)	13,621 (urinal)
- cleaning	9,855	11,350	12,000	12,000
- salary of cleaners	27,375 (75/day)	54,750 (150/day)	62,050 (170/day)	62,050 (170/day)
Expenditure Total	41,280	71,650	89,350	92,871
Balance	4,345	1,350	1,900	-1,621

(Source: questionnaire response from the province)

(Note): The user fees are two pesos for urinal and 5 pesos for closet. The cleaners collect user fees and keep them. The salary of the cleaners and expenses for the cleaning and repair are paid from the collected user fees.

Some examples of actual repair cost are that about 60 pesos for the replacement of gaskets of a hand pump and about 7,000 pesos for the replacement of parts of a hand pump. An example of contributions from the users is that about 20 households paid 300 pesos each for the replacement of parts of a hand pump, which made about 6,000 to 7,000 pesos in total. All project target provinces reported similar examples with the

same price ranges. As shown in the Footnote 32, some water supply facilities in the compound of barangay offices or in private premises were upgraded to level II by the contribution from the barangays or the users[32].

From the above, there were no serious problems in the financial aspects of operation and maintenance of the functioning facilities. However, since sufficient information were not available to examine the financial status of the target provinces other than Ilocos Sur, it is concluded that there are minor problems regarding the sustainability of the project effects.

3.5.4 Current Status of Operation and Maintenance

The operation and maintenance status of the functioning water supply facilities have no problems as they are utilized and repaired appropriately. Table 17 shows the current status of the water supply facilities of this project and BWSAs. The percentage of functioning facilities of the four provinces is 70%, and that of active BWSAs is 32%. Ilocos Sur has higher percentage for both and raised the average. The high functioning and active rate of Ilocos Sur is probably because they have more waterless areas, they recently completed the remaining facilities as of 2007, and the provincial structure responsible for operation and maintenance of water supply and sanitation facilities is more active than other provinces as explained in the section of institutional aspects. There are two types of hand pumps: one is Jetmatic type and another is more simple Malawi type[33], and most sites of this project use Jetmatic type. Ilocos Sur has installed Malawi type for the easy operation and maintenance, which is one of the reasons for their better functioning rate than other provinces.

[32] ・The water contains iron and is not appropriate for drinking. One of the users who has the facility in his premise installed iron removal equipment, pipes and a tap at around 5,000 pesos by his own funding and upgraded it to level II. He allows the neighbors to use it for free of charge. He pays 500 pesos for occasional exchange of filters. The water is not good for drinking even with the iron removal equipment, and the water is used for other purposes. He fetches drinking water from a nearby level I facility.
・A barangay upgraded a water supply facility to level II in the compound of the barangay office by its funding of 37,000 pesos, installing an electric pump and pipes. Its annual operation and maintenance cost is about 20,000 pesos.

[33] Both are names commonly known in the Philippines. The Malawi type hand pump is called Afridev type in general.

Table 17. Functioning status of the water supply facilities and status of BWSAs (2013)

	Water supply facilities		BWSA	
	Total number	Functioning	Total number	Active
IS	103	85 (83%)	103	56 (54%)
NV	9	3 (33%)	9	2 (22%)
OCM	174	118 (68%)	67	11 (16%)
ORM	66	40 (60%)	66	10 (15%)
Total	352	247 (70%)	245	79 (32%)

(Source: JICA documents)

The status of a facility and that of its BWSA do not necessarily correspond each other. Some facilities are functioning even if the BWSA is not active[34]. As explained above, functioning water supply facilities are repaired by the funding of the LGUs or the contributions from the users if BWSAs are not active. If the community needs the facility, it is technically and financially possible for them to repair it. Therefore, non-functioning facilities mean that the community does not need them. The ex-post evaluation examined only the current status of the functioning facilities for this reason.

Hand pump (Jetmatic type)

Hand pump (Malawi type)

Regarding the sanitation facilities, the public toilets are well and properly utilized. Many school toilets have no problem in function, but are usually closed and open only for the events. Similarly to the water supply facilities, non-functioning sanitation facilities mean that the community does not need them. Therefore, the ex-post evaluation examined only the current status of the functioning facilities.

Among the procured equipment of this project, the vehicle of Nueva Vizcaya is fully

[34] Occidental Mindoro, Oriental Mindoro and Ilocos Sur recently took measures to reactivate inactive BWSAs. Thirty-eight BWSAs were reactivated. BWSA Sustainability Plan was developed for LGUs.

utilized. That in Ilocos Sur was utilized until 2014, but out of order as of the ex-post evaluation. The vehicles in other two provinces are no longer used but are not decommissioned. The water quality testing kits are no longer used.

From the above, there are no serious problems in the current status of operation and maintenance of the functioning facilities.

【Summary of Sustainability】

Some minor problems have been observed in terms of functioning status of the facilities and financial aspects, but the functioning facilities have no problems in the institutional and technical aspects. Therefore the sustainability of the project effects is fair.

4. Conclusions, Recommendations and Lessons Learned

4.1 Conclusions

The objectives of this project were to provide safe, adequate and easily accessible water supply and sanitation services in the six provinces by construction of water supply and sanitation facilities, capacity development of LGUs in operation of water and sanitation services and by organizing and training communities in operation and maintenance of facilities, and thereby contributing to the improvement of living conditions.

The project has been highly relevant to the country's development plans and development needs, as well as Japan's ODA policy. However, the needs of the level I water supply facilities (common wells) were declined after the project started, and some municipalities with weak financial capability dropped out of the project because they could not secure funding for their share of the project cost even if they needed level I facilities. Some LGUs opted to use their own funds, not loan, to finance water supply projects to simplify the processes. As a consequence, the number of constructed facilities was far below the original plan. Also, the functioning rate of the facilities at the time of ex-post evaluation was only 70-80% despite that they included relatively new facilities constructed or repaired between 2012 and 2014 in Ilocos Sur. Some facilities are not functioning due to the problems of water quality or dried-up wells and due to other nearby facilities which reduced the needs of the facilities constructed by this project. Thus it could be concluded that the project had problems in its design and could not respond to the evolving needs during the project period. Therefore, the relevance is fair. Taking the reduction of outputs into account, both the project cost and project period significantly exceeded the plan. Therefore, the efficiency of the project is low. Regarding effectiveness, while the numbers of constructed and functioning facilities are far below the plan and the

scale of project benefit is limited, the functioning facilities have sufficient number of beneficiaries and access to water supply and sanitation services was improved. Also, there were impacts such as the reduction of workload to fetch water, improvement of hygiene status, and enhancement of LGUs' capacity in management of water supply and sanitation services. Therefore, this project has to some extent achieved its objectives and its effectiveness and impact are fair. The functioning facilities have no problem in institutional and technical aspects in terms of operation and maintenance. As there are minor problems such as the functioning status of the facilities and the financial aspects, the sustainability of this project effects is fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agencies

None.

4.2.2 Recommendations to JICA

None.

4.3 Lessons learned

1. Necessity to modify the project design appropriately to respond to the change of needs during the project period

During 10 to 20 years since the planning of this project, the choices of the water supply facilities have been widened in the rural areas in the Philippines, including individual wells and level III facilities operated by the water districts. This project provided only level I facilities and did not consider other levels. Because it respected the cost sharing policy to require LGUs to shoulder 50% of the project cost, some municipalities which wanted level I facilities but could not secure funding dropped out of the project. As a consequence, the number of constructed facilities was far below the original plan, and the functioning rate of the facilities at the time of ex-post evaluation was not high.

In the similar project in the future, it would be desirable to be able to modify the project design flexibly to respond to the evolving needs during the project period, such as the change of the levels of water supply facilities and the reduction of share of the project cost shouldered by the target local administrative units. This project experienced withdrawal of some target provinces and candidate sites as a result of changing needs. It means that the project was partially cancelled or its scope was modified. If similar projects confirms that needs are no longer there during the project period, it would be advisable to cancel or scale down the project.

2. To coincide the timing of community training in operation and maintenance with the construction of facilities

The facilities were constructed much later than the community training to establish BWSAs, and some people had lost willingness to participate when the construction started. It is desirable to coincide the timing of community training with the construction of facilities.

Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1. Project Outputs Construction of water supply and sanitation facilities	(6 provinces) Water supply 2,312, Sanitation 168, Total 2,480 (4 provinces) Water supply 1,619, Sanitation 111, Total 1,730	(4 provinces) Water supply 352, Sanitation 72, Total 424 The 12 remaining water supply facilities in Nueva Vizcaya will be constructed later.
NGO assistance	Assistance in community development and skills training To confirm communities' interest and commitment to the project through discussion at the stage of site selection. To conduct gender training and to develop strategies to make sure that both men and women benefit. To organize BWSAs and groups to manage sanitation facilities such as school PTAs and market vender groups. To conduct health and hygiene education.	As planned.
Consulting services	Detailed design, review of tender documents, assistance in evaluation of tender documents, supervision of construction, training of DILG, LGUs and NGOs, assistance in community development, environment-related work	As planned.
2. Project Period	December 1999 – November 2004 (60 months)	December 1999 – April 2015 (ex-post evaluation) (185 months)
3. Project Cost Amount paid in Foreign currency	93 million yen	132 million yen
Amount paid in Local currency	1,995 million yen (665 million Philippine pesos)	831 million yen (309 million Philippine pesos)
Total	2,088 million yen	963 million yen
Japanese ODA loan portion	951 million yen	519 million yen
Exchange rate	1 Philippine peso = 3 yen (As of January 1999)	1 Philippine peso = 2.69 yen (Average between December 1999 and April 2015)