

Porciuncula, Alma D.; Erfe, Doreen C.; Navarro, Adoracion M.

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Results of the process and impact evaluation for selected government water supply and sanitation programs

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Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

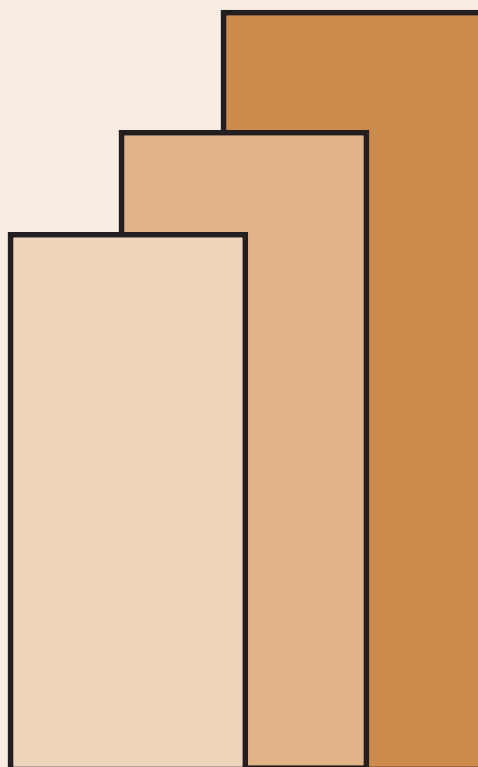
*Alma D. Porciuncula, Doreen Carla E. Erfe,
and Adoracion M. Navarro*

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For comments, suggestions or further inquiries please contact:

The Research Information Staff, Philippine Institute for Development Studies

18th Floor, Three Cyberpod Centris - North Tower, EDSA corner Quezon Avenue, 1100 Quezon City, Philippines

Telephone Numbers: (63-2) 3721291 and 3721292; E-mail: publications@mail.pids.gov.ph

Or visit our website at <http://www.pids.gov.ph>

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Alma D. Porciuncula, Doreen Carla E. Erfe, and Adoracion M. Navarro¹

Abstract

Past and present administrations have implemented water supply and sanitation (WSS) programs to increase the number of households with access to safe drinking water and sanitary toilet facilities. This study examines the President's Priority Program for Water (P3W) and the Sagana at Ligtas na Tubig Para sa Lahat Program (Salintubig). It finds underachievement of targets, which were a result of institutional framework weaknesses, capacity and governance constraints, and fundamental gaps in program implementation. Given the remaining unmet needs in water supply and sanitation, the study recommends that an improved successor program that also has a nationwide scope be designed. It also provides recommendations on how to improve the overall implementation of the successor program, the grant allocation and prioritization, the stakeholder participation, and the funds management and disbursement. In addition, it presents a possible framework for a monitoring and evaluation plan of future WSS programs and a database which can be used in the future for ranking and prioritization, monitoring, and estimation of investment requirements.

Key words:

water supply, sanitation, process evaluation, impact evaluation, WSS, Salintubig, P3W

¹ Alma D. Porciuncula and Doreen Carla E. Erfe are contractor principal investigators. Adoracion M. Navarro is a Senior Research Fellow of the PIDS. The authors gratefully acknowledge the excellent research assistance of Keith C. Detros and Jocelyn P. Almeda. The views expressed are those of the authors and do not necessarily reflect those of PIDS.

Table of Contents

1	Introduction	1
1.1	Background	1
1.2	Objectives of the Study	3
1.3	Limitations of the Study	4
2	Evaluation Framework	4
2.1	Logic Model	4
2.2	Case Studies on P3W and Salintubig Projects	7
3	Evaluation of P3W and Salintubig Programs	7
3.1	Presidential Priority Program for Water Supply and Sanitation (P3W)	7
3.1.1	Description of the Program	7
3.1.2	Institutional Set up, Resource Prioritization and Implementation Process	8
3.1.3	Program Accomplishments	14
3.1.4	Case Studies on P3W Projects	17
3.1.5	Findings on the P3W Program	20
3.2	Salintubig Program	21
3.1.1	Description of the Program	22
3.1.2	Institutional Set up, Resource Prioritization and Implementation Process	23
3.1.3	Program Accomplishments	29
3.1.4	Salintubig Case Studies	32
3.1.5	Findings on the Salintubig Program Implementation	42
4.	Conclusions and Recommendations for the Next WSS Program	44
4.1	Program Targets	44
4.2	Sustainability Measures	47
4.3	Deliberate Focus on Sanitation	47
4.4	Institutional Framework	49
4.4.1	Program Design and Guidelines	49
4.4.2	Roles of Implementing Agencies	54
5	Monitoring and Evaluation Going Forward	58
5.1	Monitoring Methodology	59
5.3	Recommendations for the M&E Plan of the Next Program	66
6.	Development of WSS Database	75
	References	77

Annex A – A Comparison of P3W and Salintubig Program Guidelines	80
Annex B - Survey Questionnaires	86

List of Figures

Figure 1. Logic Model	6
Figure 2. P3W Organizational Structure	9
Figure 3. Institutional Set-Up of the Salintubig Program	23
Figure 4. The Sanitation Value Chain	48
Figure 5. Results Chain	60
Figure 6. Results Framework	67

List of Tables

Table 1. Access to safe or improved drinking water and sanitary toilet facilities	1
Table 2. Implementation Strategy, Type of Projects and Targets of P3W	10
Table 3. P3W Project Development Cycle	12
Table 4. P3W Beneficiaries under DPWH execution	14
Table 5. P3W Budget Releases, 2005-2010	15
Table 6. Estimated LWUA Allocation of P3W Funds, 2008-2010	15
Table 7. Service Coverage of the 432 Municipalities after P3W Assistance	16
Table 8. Number of households and household population served by P3W	16
Table 9. Comparison of Benchmark and Actual Costs	17
Table 10. Profiles of P3W LGU Recipients Visited	18
Table 11. Categories of Access	25
Table 12. Salintubig Implementation Process	26
Table 13. Status of the Salintubig Program, 2011-2015	30
Table 14. Budget Allocation and Expenditures for the Salintubig Program, 2011-2015	31
Table 15. Profiles of Salintubig LGU Recipients Visited	32
Table 16. Evidence of Impacts from Salintubig WS Projects	41
Table 17. Elements of a Monitoring and Evaluation Plan	61
Table 18. The Difference-in-differences Method	64
Table 19. Elements of the M&E Plan	67

Acronyms and abbreviations

APIS	Annual Poverty Indicators Survey
CAF	Certificate of Availability of Funds
CHD	Center for Health Development
CPH	Census of Population and Housing
DBM	Department of Budget and Management
DEO	District Engineer's Office
DILG	Department of Interior and Local Government
DOF	Department of Finance
DOH	Department of Health
DPWH	Department of Public Works and Highways
DSWD	Department of Social Welfare and Development
EO	Executive Order
LGU	Local Government Unit
LWUA	Local Water Utilities Administration
M & E	Monitoring and Evaluation
MDG	Millennium Development Goal
MDG-F	MDG Fund 1919 Programme
MEO	Municipal Engineering Office
MHO	Municipal Health Office
MPDO	Municipal Planning and Development Office/r
MTPDP	Medium Term Philippine Development Plan
MTO	Municipal Treasurer's Office
NAPC	National Anti-Poverty Commission
NDHS	National Demographic and Health Survey
NEDA	National Economic and Development Authority
NHTS-PR	National Household Targeting System for Poverty Reduction
NSCB	National Statistical Coordination Board
NSO	National Statistics Office
NWRB	National Water Resources Board
O&M	Operation and Maintenance
P3W	President's Priority Program for Water Supply
PDAF	Priority Development Assistance Fund
PDP	Philippine Development Plan
PhP	Philippine Peso
PSSR	Philippine Sustainable Sanitation Roadmap
PWSSR	Philippine Water Supply Sector Roadmap
PWRFSP	Philippine Water Revolving Fund Support Program
Salintubig	Sagana at Ligtas na Tubig para sa Lahat Program
SDA	Service Delivery Assessment
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

USAID	United States Agency for International Development
WB	World Bank
WD	Water District
WHO	World Health Organization
WSP	Water and Sanitation Program of the World Bank
WS	Water Supply System
WSS	Water Supply and Sanitation
WU	Water Utility

Exchange rate used

In the text, some 2012 peso amounts were converted to US dollars using the 2012 average exchange rate of 42.2 pesos/dollar. The average exchange rate was from the Bangko Sentral ng Pilipinas (BSP).

1 Introduction

1.1 Background

For the past decade, the government has made it a policy to address the water supply and sanitation (WSS) requirements of all Filipinos. The Medium Term Philippine Development Plan (MTPDP) 2004-2010 and the Philippine Development Plan (PDP) 2011-2016 had set strategies and targets to provide better access to WSS and meet by 2015 its Millennium Development Goals (MDG) commitments, and providing universal coverage by 2025. The 2014 National Economic and Development Authority – United Nations Development Programme (NEDA-UNDP) Philippines Fifth Progress Report - Millennium Development Goals indicated that access levels to safe drinking water and sanitary toilet facilities have been increasing and on track in achieving the targets (see **Table 1**).² Survey results show that 84.4 percent of the Filipino households had access to safe drinking water from community water systems and protected wells in 2011 from 73 percent in 1990.³ The NEDA-UNDP report also showed that 92 percent of the population had access to improved sanitary toilets in 2011 from 68 percent in 1990. The figures considered own toilets, shared toilets and closed pits as sanitary toilets (either owned or shared). The government adopts definitions used by the Census of Population and Housing (CPH) and Annual Poverty Indicator Survey (APIS) in reporting the country's progress in achieving its MDG targets.

Table 1. Access to safe or improved drinking water and sanitary toilet facilities

	% of Families with Access to Safe Water	% of Families with Access to Sanitary Toilet Facilities
MDG 2015	86.5	83.8
1990	73.0	67.6
1998	78.1	80.4
1999	79.1	82.3
2002	79.7	86.0
2004	77.9	85.4
2007	81.5	87.9
2008	81.4	88.6
2010	82.5	91.9
2011	84.4	91.6

Sources: CPH and APIS, Philippine Statistical Agency/ National Statistics Office

Past and present administrations have implemented grant programs for priority “waterless” areas⁴ as targets to contribute to the attainment of the MDG and PDP goals. The President’s Priority Program for

² National Economic and Development Authority and United Nations Development Programme. 2014. The Philippines Fifth Progress Report - Millennium Development Goals. NEDA

³ APIS 2011 Statistical Tables, p 17-18; <http://www.nscb.gov.ph/stats/mdg/assessment.asp>

⁴ The National Anti-Poverty Commission (NAPC) used the term “waterless” to refer to areas where less than 50% of the household population has access to safe or potable water or with less than 50% water supply coverage. The P3W and Salintubig Program Guidelines define the term water supply coverage as the proportion of the population

Water (P3W) was the Arroyo administration's flagship water supply program from 2005-2010. P3W aimed to provide water to the entire country with priority given to 212 barangays in Metro Manila and 432 municipalities outside Metro Manila whose population have less than 50 percent water service coverage based on the 2000 CPH.⁵ The program's primary objective was to provide water supply services to the identified waterless municipalities.

Under the Aquino administration, the WSS program has been allocated annual funding through the budget of the Department of Health (DOH) in 2011 and through the budget of the Department of Interior and Local Government (DILG) from 2012 to present. Known as the *Sagana at Ligtas na Tubig Para sa Lahat* (Salintubig) Program, a total of 455 waterless poor municipalities have been targeted to be covered from 2010 to 2015 based on the 2010 National Household Targeting System for Poverty Reduction (NHTS-PR)⁶ conducted by the Department of Social Work and Development (DSWD).

Five years after the inception of P3W, only 39 municipalities have reportedly graduated and 410 of the 449 target municipalities remained waterless⁷. Under the Salintubig, only a total of 62 of the 455 municipalities have reportedly graduated as of June 2015. The National Anti-Poverty Commission (NAPC) has indicated that for a meaningful assessment of the program, a second round of the NHTS-PR which established the baseline data for Salintubig Program will be needed. The government is currently conducting the 2015 NHTS-PR survey.

Documentation on the implementation of both grant programs did not clearly articulate how the outcomes were to be measured and verified. The P3W had no defined Monitoring and Evaluation (M&E) system which resulted in inconsistencies in reported accomplishments. There was also no formal turnover of records on the program when DPWH dissolved the ad hoc project management office. The Salintubig Program M&E system, on the other hand, is guided by a logical framework focusing on the three outcomes envisioned under the Program. The M&E system describes both physical accomplishments and fund utilization, and estimates access level based on the capacity of the system put in place. There is no impact assessment framework and data collection system. An effective M&E system, therefore, is required to provide the bases for planning, resource allocation and addressing implementation concerns to ensure that the program targets and outcomes are achieved.

of a geographical area with access to safe drinking or potable water from piped systems, public tap /standpipe; and protected tube wells, borehole, spring and dug well.

⁶ The NHTS-PR or *Listahanan* is spearheaded by the Department of Social Work and Development (DSWD). It is an information management system that makes available a database of poor families as reference in identifying potential beneficiaries of social protection programs and services. The system uses a Proxy Means Test (PMT) is run to estimate family income using the proxy variables gathered from the survey including family composition, education of family members, family conditions, and access to basic services. The estimated income of a family is compared to the poverty threshold per province to determine if it is poor or non-poor. Two separate models are used to estimate income for urban and rural households. EO 867 requires that the Listahanan database be updated every four years. The first survey was done in 2009 and released in 2010. The next one was supposed to be in 2013 but the funds were downloaded only in 2014. In 2015, NHTS-PR will cover 15.3 million households in 1,490 municipalities and 144 cities nationwide. The survey is done on a house to house in about 11 months. The results are targeted to be released by September 2015. Maintenance and updating of the Listahanan database is done by the National Household Targeting Office of the DSWD, which has 116 core staff at the field office and 44 at the central office.

⁷ Four hundred thirty-two (432) municipalities were originally identified for P3W assistance from the 2000 CPH. This number grew to 449 when the municipalities in ARMM were split, resulting to formation of 17 new municipalities.

Initiatives have been undertaken to assess the implementation and outcomes of P3W and the Salintubig Programs by the funding and implementing agencies. However, a third party verification of the results needs to be undertaken. Hence this study was undertaken to evaluate and substantiate the impacts of these past water supply and sanitation programs through an impact evaluation program initiated by the Department of Budget and Management (DBM) and the Philippine Institute of Development Studies (PIDS). This initiative intended to strengthen the capacity of government in conducting impact evaluation for government programs. Specifically for the WSS study, the PIDS also tasked the evaluators to include a practical institutional set up for regularly updating databases on WSS that can inform the budgeting process and help improve existing and future WSS programs.

1.2 Objectives of the Study

The study primarily aimed to evaluate the effectiveness and efficiency of the program implementation process of the P3W and Salintubig Program vis-à-vis program outcomes and recommend an impact evaluation methodology for the WSS grant program. The following specific objectives were pursued:

Process Evaluation

- a. To evaluate how the P3W and Salintubig Program processes from project identification, planning, budgeting, implementation to monitoring were conducted at national and local levels;
- b. To determine conditions and safeguards to ensure that the grant funds generate their intended outcomes;
- c. To determine how transparency and accountability can be enhanced in the use of the grant funds for WSS programs; and
- d. To determine adequacy of sustainability measures, if any, to ensure continuity and expansion of the service

Impact Evaluation

- a. To update the socio-economic impact analysis of access to safe water supply;
- b. To gather qualitative evidence on the P3W and Salintubig Program impacts; and
- c. To recommend M&E improvements for the Salintubig Program and future WSS programs;

The process and impact evaluation covered the P3W and Salintubig Programs. The periods of study were from 2005-2010 for the P3W Program and 2011-2014 for the Salintubig Program.

1.3 Limitations of the Study

The conduct of an impact evaluation was constrained by the lack of a good database system for both programs. Available baseline data had no location and household identifiers that would allow tracking of treatment group. The conduct of a household survey for the impact evaluation, therefore, was not practical. Moreover, available WSS access data, including the PIDS database on WSS access (1985-2009), were disaggregated at regional level only and would not provide a good basis for targeting and designing WSS intervention. The poor quality of data would be more pronounced for sanitation. The study, therefore, used case studies supplemented by field visits, key informant interviews and focus group discussions among selected stakeholders.

Gathering data on results also posed a challenge. There was no clear responsible agency for monitoring access and outcome data for P3W. Basic program information including the number of operational facilities and number of households that actually benefitted from the program was not monitored. The investigators went to DPWH to get data, but were informed that institutionally the Program data was not retained. Fortunately, the investigators were able to talk to one DPWH staff involved in the Program, who gave information on the status of the P3W Program as of December 2009. However, the status report covers physical accomplishment of the program of works and the targeted number of households to be served only.

For the on-going Salintubig Program, NAPC has overall responsibility for program monitoring and evaluation but has limited resources to fully undertake this function. Its monitoring role has focused on consolidating progress reports from DILG, DOH and LWUA and conduct of case studies on selected on-going and completed WS projects. DILG conducts regular progress and process monitoring. Data gathered include project profiles, physical and financial status and compliance to requirements. However, information on project outcomes remains lean. Report on completed projects currently includes the number of WS facilities established and actual number of beneficiaries but there is still lack of information on the outcomes related to health and sanitation and sustainable operation and management of the WS systems.

2 Evaluation Framework

2.1 Logic Model

The study adopted the Logic Model, illustrated in Figure 1, for the evaluation of both P3W and Salintubig Program. In its simplest form, the Logic Model shows the resources that are invested to achieve desired outcome, the activities and outputs that reach targeted participants and the outcomes or benefits that result from these activities and outputs. The model also focused on participation or who are targeted, to look at the effectiveness and efficiency of use of resources.

The investigators assessed the strengths and weaknesses of program design and implementation guided by the following questions:

- Was the problem clearly defined? Was the capital grant adequate to address the problem?
- Can the program resources, both capital and institutional capacity, realistically achieve the desired outcomes?
- Were the roles of the institutions involved in the program clearly defined and did they have the capability to implement the assigned tasks?
- Was the process for prioritization, transfer and use of funds transparent? Were there safeguards to ensure accountability?
- Beyond the investments for facilities, did the program have effective measures to ensure sustainability of the service, i.e., adequate O&M, sound pricing?

Put another way, the study reviewed the following:

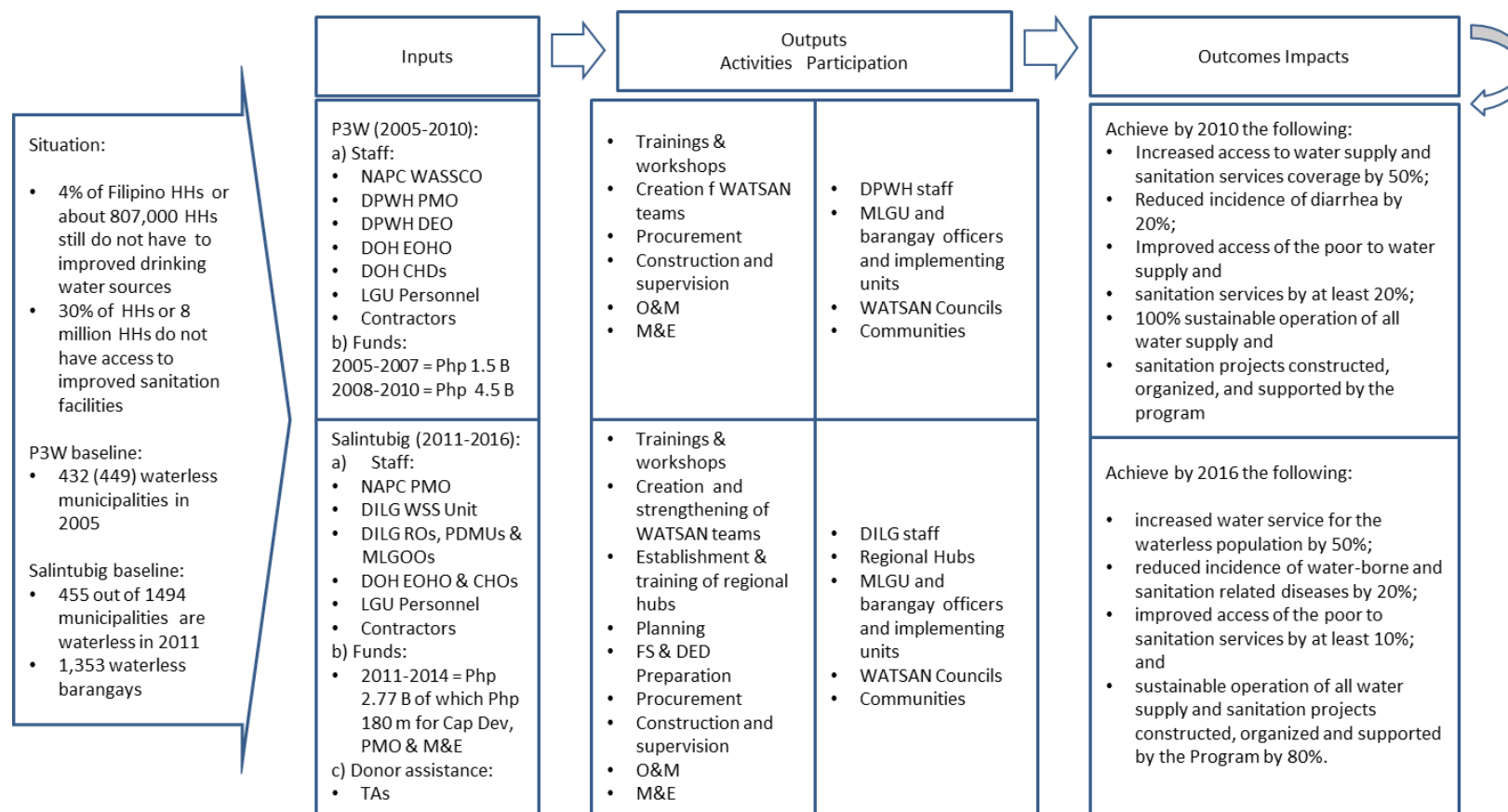
- Soundness of design considerations, institutional set up and implementation guidelines
- Deviations from, or gaps in the guidelines based on on-the-ground limitations and issues
- Effectiveness of spreading the resources thinly and at the same time requiring full system development (i.e., maximum allocation per beneficiary is PhP10 million, which should be utilized for source development, transmission and distribution) in terms of meeting program objectives
- Practical concerns related to fund utilization targets vis-à-vis compliance with procurement guidelines and uncertainty of water source development
- Difficulties in attracting reliable contractors given the small amount for sub-projects

The use of the logic model can also elicit the weaknesses in the design and implementation of the sanitation component of the programs. Perhaps it is not just a question of inadequate capital resources allocated for the component but also the lack of technical capability to plan for and execute sanitation interventions, or weak stakeholder participation. It might also warrant deliberately designing sanitation program components so that the sanitation investments are not overshadowed by greater demand for water supply investments.

In this regard, the Logic Model was supplemented by an empowerment evaluation method for selected LGU program implementors and community representatives in a case study of both the water and sanitation components of Salintubig Program. Through interviews and focus group discussions, stakeholders were probed if there had been adequate consultation and fostering an understanding of the Mission, Taking Stock of the Problems and how to address them, and Planning for the Future. The evaluation was done by asking them how well they defined the mission of the government's WSS program; asking them to take stock of key WSS-related activities and finally, asking them "Where they want to go from here?" and how they would like to improve on what they do well and not so well.

If the stakeholder empowerment was not a deliberate method in the Salintubig Program, it would be recommended going forward. The objective of the empowerment evaluation method is to have an improvement-oriented culture, which seems urgent in especially sanitation.

Figure 1. Logic Model



Reference: Enhancing Program Performance with Logic Models on-line course. <http://www.uwex.edu/ces/pdande/evaluation/pdf/lmcourseall.pdf>

Source of data: DILG, P3W and Salintubig program documents

2.2 Case Studies on P3W and Salintubig Projects

The analysis was supported by case studies of communities that benefited from the grant programs. The case studies employed key informant interviews (KIIs) and focus group discussions (FGDs) with direct beneficiaries guided by a set of questionnaires (see **Annex B**). The respondents for the KIIs included: DILG Regional Office, DILG Provincial Office, Municipal Local Government Operations Officer (MLGOO), Water District (WD) general manager and management teams, local chief executives and technical staff in charge of the program, and barangay officials of the recipient local government units (LGUs). The respondents for the FGDs were community members who have benefitted directly from the projects funded by the grant program.

The sites for the cases studies were selected based on the following criteria:

- Identified P3W and Salintubig Sites with completed projects
- With LGU and WD operators
- Sites with sustainable institutional arrangements for service operation

Ten LGUs, 2 WDs, 18 barangays (out of 25 recipients) and 1 resettlement area were surveyed.

3 Evaluation of P3W and Salintubig Programs

3.1 Presidential Priority Program for Water Supply and Sanitation (P3W)

3.1.1 Description of the Program

The P3W Program was conceptualized in support of the Millennium Development Goals (MDG) targets of the government. The MTPDP 2004 to 2010 stated categorically the target of achieving safe water supply coverage for 92 percent and sanitation coverage of 86 percent of the country's population.

The Program focused on the "waterless" municipalities or those with more than 50 percent of the population without access to safe water supply. These municipalities, numbering 432 were identified using the 2000 CPH data. The final number grew to 449 when the municipalities in the Autonomous Region of Muslim Mindanao (ARMM) were split, resulting to the formation of 17 new municipalities. These municipalities had an estimated 1,623,623 households, or 8.25 million people without access to safe water supply.⁸

Communities are considered waterless if⁹:

- They are supplied by unprotected or poor quality sources such as dug wells

⁸Las Marias, N, Pollisco, W and Arcenas. A. 2011. Review of Programming Policies of the President's Priority Program on Water (P3W), September 2011, a study under the MDG-F 1919 Enhancing Access to and Provision of Water Services with Active Participation of the Poor. NEDA

⁹ Ibid

- They have unreliable local water sources, such as in areas where shallow hand pump wells dry up during the dry season
- They are unable to access sufficient potable water due to governance issues such as those in conflict areas, or areas with right of way issues, poverty and inequitable supply distribution (for example, there are cases where households closer to the water source use the water indiscriminately so that supply for households in the farther end is either very little or nil.
- They are too scattered or remote from each other for communal water systems, and are currently using unimproved household systems
- They have basic point source, but aspire for household connections, therefore declare themselves waterless.

The P3W Program was implemented over a five-year period, 2005 to 2010, and had an allocation of PhP500 million annually from 2005 to 2007, about a billion in 2008, and PhP1.5 billion annually from 2010 and 2011, to provide mostly Level 1 and Level 2 systems.

3.1.2 Institutional Set up, Resource Prioritization and Implementation Process

Institutional Set up. The agencies involved in the program and their respective roles are:

- National Anti-Poverty Commission- overall coordinating function, program monitor and evaluator through its Water and Sanitation Coordinating Office (WASCO). NAPC identified the waterless municipalities and prioritized resource allocation among these municipalities. It was also tasked with project appraisal and in particular with the evaluation of the capability of the program partners to sustain the project.
- Department of Public Works and Highways- programmed the grant funding under its budget and implemented the projects, either through contracts or by administration through its District Engineering Offices. It is also tasked with the preparation and administration of various contracts and Memoranda of Agreement (MOAs) entered into among DPWH, WASCO, LWUA, LGUS and other program partners; the provision of technical assistance and advise in the design and construction of water supply and sanitation services projects; and monitoring of progress of work.
- Municipal governments- beneficiary LGUs are supposed to serve as the custodian of the grant money from DPWH. They are also supposed to assigned counterpart staff to the project and provide technical and institutional assistance to participating

Box 1

Levels of Water Supply Service

Level 1- a protected well or a developed spring with an outlet but without a distribution system. A Level 1 facility should ideally serve an average of 15 households, with the farthest user not more than 250 meters away from the point source. It should provide at least 20 liters per capita per day (lcpd).

Level 2- is a system composed of a source, a reservoir, a piped distribution network, with two or more communal faucet serving 25 for each tap. The farthest house should not be more than 25 meters from the communal faucet system and the system should provide at least 60 lcpd

Level 3- is a system with a source, reservoir, piped distribution network and household taps. The system should be able to provide at least 100 lcpd.

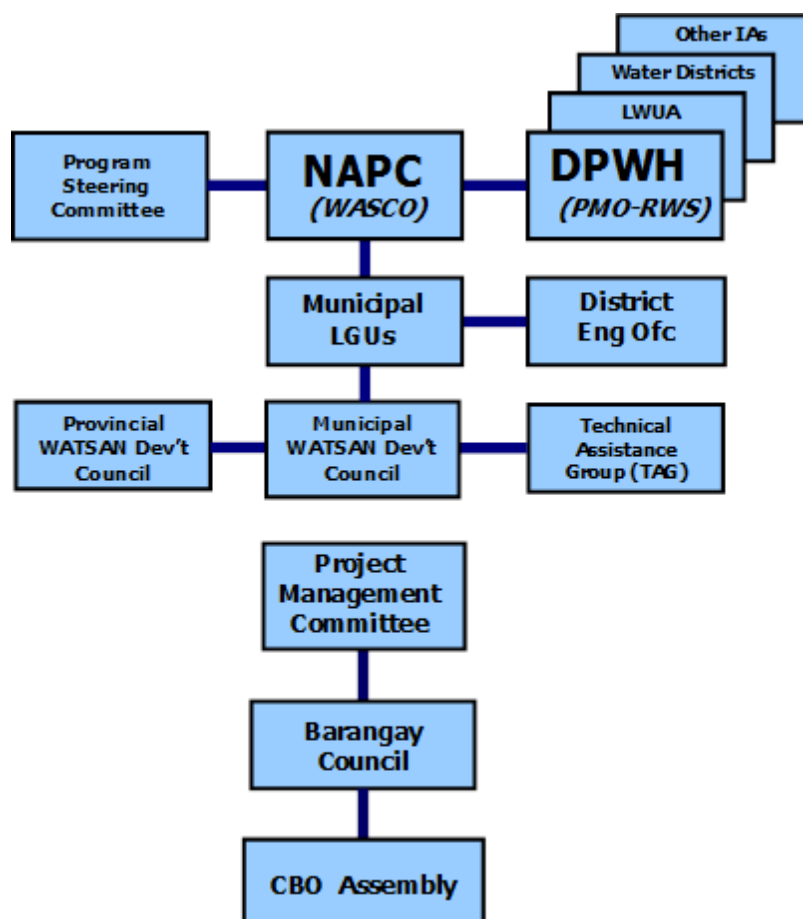
Source: NEDA

barangays. LGUs were required to establish Municipal Water Supply and Sanitation (WATSAN) Councils that will serve as the implementing arm as well as the policy and planning body for long-term water supply and sanitation development of the municipality aimed at providing 100% of its population sustainable access to safe water and adequate sanitation by 2010. The WATSAN Councils were expected to organize Technical Assistance Groups and Project Management Units.

- Private stakeholders- including non-government organizations, community water and sanitation organizations and academe were intended to be invited to be part of the WATSAN Council to lend resources or expertise to the projects.
- Barangay residents and beneficiaries- were supposed to help implement the projects to ensure that the objectives are attained, and to help enforce accountability of the parties concerned.

The organizational set up is shown in **Figure 2**.

Figure 2. P3W Organizational Structure



Source: P3W Implementation Guidelines

The P3W Implementing Guidelines approved in 2005 were used for executing the Program as well as other related programs, such as the existing and on-going water-supply and

sanitation services projects selected and assisted by KALAH-CIDSS program and some foreign donor agencies. It also covered areas under various peace agreements between the government and former rebel groups. Hence all grant programs of the government for water supply would have in theory been under the same policy and implementation framework. This is certainly a step in the right direction, but whether it was or not enforced remain an unanswered question.

These Guidelines covered:

- implementation strategy to attain the objectives of the program;
- desired outcomes of the program;
- type of projects to be supported by the program;
- organizational structure to implement the strategy of the program;
- guidelines on the various stages and phases of project development;
- process on how funds flow in a project cycle; and
- guidelines on the procurement of goods and works needed for the projects.

Note that the guidelines do not explicitly include a prioritization system among the identified waterless municipalities. Nor does it have a monitoring and evaluation system for the program or for the individual projects. While, the guidelines mention in relevant sections monitoring of fund utilization and physical accomplishments and outcomes, including the use of beneficiary communities as monitors, there is no concrete M&E system in place; rather, M&E is given token attention.

That said, the Guidelines were in most parts robust; they have clearly enunciated strategies for leveraging resources, institutional strengthening, and process for project development. **Table 2** highlights the vision of the program.

Table 2. Implementation Strategy, Type of Projects and Targets of P3W

Implementation strategy	Projects to be supported	Desired outcomes
<ul style="list-style-type: none"> • Leverage national government grant funds with contributions from the LGUs, NGOs, private sector and donors • Build partnerships with LGUs and local stakeholders to bring in more resources. DPWH will delegate project implementation to LGUs with capability. • Projects that will be supported by the program shall be based on clear and actual consumer demand. • Projects will be designed to be sustainable, i.e., financially paying off for the operation and maintenance costs to 	<p>The Program offers an “open menu” of water supply and sanitation projects including the following:</p> <ul style="list-style-type: none"> • Construction and/or rehabilitation of Level 1 or Level 2 water supply system • Upgrading of existing Level 1 water supply system to Level 2 system • Expansion of Level 2 or 3 systems • Technical and non-technical training of existing and newly organized water user associations/community-based organizations 	<p>Program Outcomes. At the end of the six-year program, the intended outcomes are the following:</p> <ul style="list-style-type: none"> • Increased access to water supply and sanitation services coverage to at least 50 percent, or approximately more than 4 million more people with access; • Reduced incidence of diarrhea by 20 percent; • Improved access of the poor to water supply and sanitation services by at least 20 percent;

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Implementation strategy	Projects to be supported	Desired outcomes
<p>keep it a going concern; technically and environmentally sound. It should also be institutionally sustainable. Project beneficiaries, owners, and operators of this program are required to develop their technical, planning, and management skills before a project will be turned over to them.</p> <ul style="list-style-type: none"> • Adoption of gender and poor sensitive policies, marked by in depth consultations • Institutionalization of Water and Sanitation Council, a local Committee that will coordinate and oversee the project, as well as plan future expansion and service improvement • Promotion of hygiene and sanitation, and ecological sanitation. Sanitation refers to the access to, and use of, excreta and wastewater facilities and services that provide privacy and dignity while at the same time ensuring a clean and healthful living environment. 	<ul style="list-style-type: none"> • Support for new and innovative technologies for water supply delivery and sanitation system • Training on planning, implementation and management of water supply and sanitation projects • Construction of Ecological Sanitation Projects Items D to G are currently not fundable under the DPWH program funds but can be funded from LGU or other program partner's equity. 	<ul style="list-style-type: none"> • 100% sustainable operation of all water supply and sanitation projects constructed, organized, and supported by the program; • Qualitative reduction of social tension and inequity brought about by inadequate access to water supply and sanitation in areas with peace agreements with the GRP.

Other salient points of the guidelines are:

- *Special arrangement with water districts*- Water districts in waterless municipalities could implement projects within their franchise areas. This agreement was covered by a tripartite MOA among DPWH, the LGU and the District. The District were required to provide the project equity, set tariffs according to the regulations of LWUA and remit back to the LGU according to an agreed schedule the grant funds used for the project. Water districts were allowed to implement Level 3 systems provided they defray the cost of source development and house connections.
- *Project Development Cycle*- The project development cycle, outputs and responsibilities are summarized in **Table 3**.

Table 3. P3W Project Development Cycle

Stages/Steps	Activity	Responsibility	Expected Outputs
Stage 1: Orientation of Project Implementing Agencies and Partners			
Step 1: Identify Project Implementing Agencies and Partners	Identify Municipal LGUs with less than 50 percent water supply coverage Write letters to beneficiary LGUs regarding conditions of the grant and to local stakeholders requesting participation as project partners	WASCO	List of 432 waterless municipalities Confirmation of willingness of LGU to implement water supply and sanitation project; and partnership from local stakeholders
Step 2: Endorsement to LGUs of Possible Partners	Based on the response letters of other potential project partners (NGOs, POs, Academe, or WDs/ WSPs), endorse to LGU concerned	WASCO	Endorsement of partners to the LGU
Step 3: Organization/Activation of Provincial/Municipal Water & Sanitation Development Council (WATSAN Council)	Organize the WATSAN Councils at the provincial and municipal level	WASCO to initiate and assist the LGUs in the set up	WATSAN Councils
Step 4: Orientation Workshop for Implementing Agencies and Partners	Conduct orientation workshop for selected LGUs and their WATSAN Councils & other short-listed project partners re objectives, strategies, and stages/phases of the program and accountabilities of each party.	WASCO and DPWH	MOA among LGU, program partners and DPWH
Stage 2: Pre-investment activities			
Step 5: Proposal Preparation	Municipal WATSAN Councils to inform concerned barangay Councils and other partners to prepare project proposals or	WATSAN Council	Proposals from barangays

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Stages/Steps	Activity	Responsibility	Expected Outputs
	FS, and start social preparation for the consultation process.		
Step 6: Proposal Endorsement	Evaluation of proposals and approval for implementation	District Engineer Local appraisal committee WASCO DPWH	Endorsements from the DE to the appraisal committee; if favourable endorsement to NAPC, which finally endorses project implementation to DPWH
Stage 3: Project implementation			
Step 7: Pre-implementation activities	Pre-construction workshop; Training on O&M and financial management	District Engineer and Project Management Committee WATSAN Council	Capacity building for project implementation and O&M
Step 8: Project implementation	System construction	District Engineer and Project Management Committee	Actual physical accomplishments; reports on financial disbursement and physical accomplishments
Stage 4: Operation and Maintenance			
Step 9: Operation and Maintenance	System turnover and operation and	District Engineer Community-based organizations	Operating system
Stage 5: Monitoring and Evaluation			
Step 10: Monitoring and Evaluation	Preparation of monitoring reports	Community-based organizations; WATSAN Council	Monitoring reports

- *Project Appraisal*- The criteria that NAPC is supposed to use in project appraisal are:
 - Preference is given to projects with high percentage local counterpart cost (LCC); LCC can be in cash or in-kind contributions (local materials) from members of the community, the barangay LGU, the municipal LGU, the provincial LGU if any, development funds of congress, persons, NGO donors, loans granted to LGU from public or private sources, and all other sources mobilized by the community. Very high priority shall be given to LGUs with very high percentage of their LCC coming from internally generated funds and Internal Revenue Allocations.
 - Cost effectiveness pertaining to the ratio of total cost to the number of households directly benefiting from the project
 - Number of poor households benefited
 - Adequacy of the proposal- in terms of addressing the cause of the water supply and sanitation-related problem of the community and demonstrating project sustainability from the technical, financial and environment viewpoints

- Sustainability- the project should show evidences of financial, technical, social and institutional capacity to operate the service, and environmental sustainability.
- *Fund Management*- The funds will come from the DPWH appropriations and the disbursement will be based on the MOA with the LGU. To ensure transparency in the fund utilization the implementation plan, budget and procurement plan were supposed to be presented to the concerned barangays. Issues or questions raised by the community at this stage are still supposed to be addressed by the WATSAN Committees. The funds are also subject to COA audit. In terms of progress reporting the WATSAN Council was required to submit statements of disbursement and expenditures and physical progress report to the District Engineering Office, which in turn, will submit the same to the DPWH with copy furnished to WASCO.
- *Procurement*- LGUs are responsible for procuring the projects using the public procurement law or RA 9184. However if DPWH finds an LGU incapable of implementing the project by themselves, the DPWH shall implement the project by contract or by administration.
- *Capacity assessment*- DPWH is supposed to also ensure that adequate organizational development, participation and empowerment of the beneficiaries are developed. This social preparation and organization components of the project are critical to the sustainability of the project.

3.1.3 Program Accomplishments

1. *Budget Allocation and Execution* – Between 2005 and 2007, the budget allocation of the P3W program under the DPWH budget was constant at around Php500 million, and increased to almost a billion in 2008 (see **Table 4**). DPWH served as the executing agency; implementing most of the projects through its District Engineer's Offices. The entire fund was used for water supply. However, the funds were not used solely for waterless municipalities. The funds were used for 308 of the 449 municipalities and for about 215 municipalities outside of the list. There is no account of how the 215 municipalities were prioritized over the waterless municipalities.

Table 4. P3W Beneficiaries under DPWH execution¹⁰

Item	Luzon	Visayas	Mindanao	Total
Number of municipalities targeted by P3W	133	114	202	449
Number of waterless municipalities served	102	92	137	331
% of total municipalities targeted by P3W	76.7%	80.7%	74.1%	76.6%
% of total municipalities, including insertions, served by P3W	46.8%	72.4%	68.2%	60.6%
Number of inserted non-waterless municipalities served	116	35	64	215
Number of unserved waterless municipalities	31	22	48	101

¹⁰ Las Marias, Agustin and Pollisco, Review of Programming Policies of the President's Priority Program on Water (P3W) under the MDG-F 1919: Enhancing Access to the Provision of Water Services with Active Participation of the Poor. September 2011

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Item	Luzon	Visayas	Mindanao	Total
TOTAL SERVED	218	127	201	546

Sources: NAPC and DPWH

Note: Projects under LWUA from 2009-2010 are not included

In 2008, the Local Water Utilities Administration came in as an executing agency too, supposedly to cover the waterless areas where water districts operate. In that year, the budget allocation was divided almost half and half between DPWH and LWUA. Beginning in 2009, the President transferred the leadership of the Program to the Department of Health but assigned LWUA as the executing agency. In 2009 and 2010, DOH was given an annual budget of PhP1.5 billion (**Table 5**). The 2009 budget was transferred entirely to LWUA; while the 2010 budget was split to 8 percent DOH and 92 percent LWUA. The 8% share of DOH was used for its sanitation advocacy program.

Table 5. P3W Budget Releases, 2005-2010

Year	Budget Allocation (PhPM)	Budget Releases		
		DPWH (PhPM)	DOH (PhPM)	LWUA (PhPM)
2005	500	500		
2006	500	500		
2007	500	500		
2008	923.5	423		500.5
2009	1,500		0	1,492
2010	1,500		120	1,361.4

Source: Data from DPWH, DOH and LWUA

The move to transfer the execution role to LWUA happened during the time of then LWUA Board of Trustees Chairperson Prospero Pichay, a known close ally of former President Arroyo. With the transfer of the Program execution to LWUA, the P3W guidelines were totally disregarded. The fundamental deviation is the use of funds for unintended beneficiaries, as summarized in **Table 6**. Of the total funds given to LWUA, only 10% were allocated to municipalities in the list of 449 waterless municipalities.

Table 6. Estimated LWUA Allocation of P3W Funds, 2008-2010

Year	Number			Value (PhPM)		
	NWL	WL	Total	NWL	WL	Total
2008	72	18	90	484	16.5	500.50
2009	101	4	105	1,460	40	1,500.00
2010	64	16	80	1,098	263	1,361.40
Total	237	38 (14%)	275	3,042	320 (9.5%)	3,362.00

Legend: NWL- non waterless; WL- waterless

Source: Data from LWUA

These funds were given on a 50 percent grant-50 percent loan basis, with the latter on a 0 percent interest rate and 25 year tenor. Not all of the municipalities assisted had existing water districts. For those without water districts, the creation of such became a condition for lending. Thus, more than 300 new water districts were organized. Almost all sub-projects are Level 3 systems.

The creation of water districts would have been a welcome move if the systems were viable and self-sustaining. A water district has a better governance structure and is compelled to operate using commercial principles because it has no recourse to operating subsidies. Once the water district is established the utility is spun off from the LGU and is considered an autonomous corporation. As such if the water district is not generating sufficient revenues, as was the case for the 300 new ones, the tendency is to become non-operational.

2. *Investments and People Served*- The investments provided 68.5 percent of the waterless municipalities with Level 1 and/or 2 systems. These resulted to improvements in coverage as seen in **Table 7**, but only 39 municipalities or 8.7 percent had improved coverage of 50 percent or more of its population. About 31.5 percent or 140 municipalities were not served. At the end of the 2010, 410 municipalities remained waterless.

Table 7. Service Coverage of the 432 Municipalities after P3W Assistance

% of HH with access to water	Number of LGUs		Distribution	
	2000 Baseline	2010	2000 Baseline	2010
0≤X<10	15	11	4.9%	3.6%
10≤X<20	45	40	14.6%	13.0%
20≤X<30	53	73	17.2%	23.7%
30≤X<40	101	78	32.8%	25.3%
40≤X<50	94	67	30.5%	21.8%
50≤X<60	0	18	0.0%	5.8%
60≤X<70	0	10	0.0%	3.2%
70≤X<80	0	4	0.0%	1.3%
80≤X<90	0	1	0.0%	0.3%
90≤X	0	6	0.0%	1.9%
X<50 served	308	269	100.0%	87.3%
X≥50 served	0	39	0.0%	12.7%
X<50 unserved	141	141	31.4%	31.4%

Note: Number of municipalities is corrected based on the 17 new municipalities in ARMM formed out of the original 432. The 432 waterless municipalities went up to 449 by 2010.

Source: Table 2 of the Report, Review of the Programming Policies of the President's Priority Program on Water
11

Nonetheless, the investments were able to provide 1.3 million people with access to improved water services, of which 865,213 are from the 449 waterless municipalities (**Table 8**).

Table 8. Number of households and household population served by P3W

	2000	Served by P3W
Waterless Municipalities		

¹¹ Las Marias, Agustin and Pollisco, Review of Programming Policies of the President's Priority Program on Water (P3W) under the MDG-F 1919: Enhancing Access to the Provision of Water Services with Active Participation of the Poor. September 2011

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

HH w/ access to safe water	896,943	
HH w/o access to safe water	1,705,779	
<i>Total</i>	<i>2,602,722</i>	<i>163,770</i>
Popn w/ access to safe water	4,683,807	
Popn w/o access to safe water	9,066,629	
<i>Total</i>	<i>13,750,436</i>	<i>865,213</i>
All Municipalities		
HH w/ access to safe water	8,084,411	
HH w/o access to safe water	3,996,291	
<i>Total</i>	<i>12,080,702</i>	<i>251,611</i>
Popn w/ access to safe water	40,692,343	
Popn w/o access to safe water	20,643,787	
<i>Total</i>	<i>61,336,130</i>	<i>1,277,479</i>

Source: Table 2 of the Report, Review of the Programming Policies of the President's Priority Program on Water ¹²

Based on estimates more than 85% of the program beneficiaries are served by Level 2 systems, about 12% by Level 1 systems, and very few with Level 3 systems.

3. *Service standards of capital investments*- The benchmark service standards and the estimated actual service levels of the facilities constructed by DPWH are shown in **Table 9**. Communities with less than 100 households were provided with Level 1 systems and those with at least 100 households with Level 2 systems. The service levels are lower than the standards, implying underserved communities. On the other hand, the cost per household is expectedly lower than the benchmark costs.

Table 9. Comparison of Benchmark and Actual Costs

Cost per system/ Service Standard	Benchmark	Actual (Average)
Level 1	PhP 250,000	
Service standard	15 HH	18 HH
Average cost per HH	PhP16,667	PhP8,010
Level 2	PhP1,750,000	
Service standard	100 HH (4-6 HH per tap)	131 HH
Average cost per HH	PhP 17,500	PhP10,047

Note: Consultant estimates based on the DPWH data

4. *Investment Gaps*- Although allowed, no funding went to technical assistance, innovative technologies or sanitation facilities.

3.1.4 Case Studies on P3W Projects

Table 10 shows the recipient municipalities of P3W that were visited.

¹² Ibid

Table 10. Profiles of P3W LGU Recipients Visited

Municipality/ Water District	Amount of Grant (PhP)/ Year Allocated	Type of Project	Barangays Covered	Implementation Period (from funds downloading to system start-up)	Target HH	Actual HH	Operator
Kibawe	834,198 (2006)	Upgrading of Level3	Romagooc	2006-2008	170	200	BWSA
Dangcagan	842,695 (2006); 842,695 (2005)	Rehabilitation of Level 3	Poblacion; Barungkot;	2005-2007	70	>70	Poblacion- LGU; Barungkot-BWSA
Quezon WD** (created in 2009)	7 M (2009)	Rehabilitation of Level 3 reservoir	Poblacion	2009-2010	4 bgys	4 bgys	WD

Project Site Identification and Planning. According to DPWH, the agency got its marching orders from NAPC in terms of which municipalities will be prioritized and the level of resources. However, at the level of the municipality, it appears that DPWH decided on which barangays will be prioritized. When asked how sub-projects were identified under the P3W program, the common feedback from the chief executives of the above LGUs is a resounding “we do not know”. From their account, DPWH did not consult the local officials or the residents in the barangays where the water systems were put up. In one case, Barangay San Vicente in Dangcagan, the Barangay Captain claimed that DPWH did not even formally turn over the system to them.

Planning Process and Implementation. The planning process and implementation guidelines were not followed. There was no stakeholder consultation in planning for the level of service and design of the system or social preparation and training undertaken for the operation of the same. WATSAN Councils were established as token compliance to the requirements of the grant program, but these did not perform the intended tasks.

All of the systems put up are decentralized, and designed to serve the barangay or a small cluster of barangays. The most common sources are spring or groundwater, most with limited yields thereby constraining any possibility of expanding the service. It seems the budget for sub-projects were not adequate to tap other long term sources. It is also apparent that there was no initiative to do a municipality-wide system planning. So in one municipality, there can be several systems in place, ran separately and without any coordination.

Construction was undertaken by the District Engineer Office (DEO) of DPWH either by contract using RA 9184 or by force account. The LGUs were not involved in the procurement of the contracts. No design or as built plans were turned over to the LGUs.

LGU Counterpart and Funds Flow. The LGUs put up a 10% counterpart in cash and kind. However, there is no monitoring of the disbursement of the counterpart fund. There is no deliberate sanitation program, co-designed with the P3W water supply sub-projects. The potability tests are the closest they would have for a sanitation related initiative. Nonetheless, most of the LGUs have on-going programs of toilet bowl grants to households without proper toilets.

At least in the three LGUs, the P3W funds for the construction of the projects were not downloaded; rather the infrastructure facilities were constructed by the DEO on a turnkey basis. Expansion of the system to additional *puroks* was funded from small grants from Congressmen, coursed through DPWH too. These funds are small, episodic and thus difficult to program. Moreover the implementation mode is not always through the DEO. In one instance, materials were given to the barangay, who put in the labor and did the design and construction themselves.

Soundness of Design. The soundness of design is benchmarked on the construction methods and standards, and materials prescribed by LWUA¹³.

Water source yields are either just a bit above the required capacity or in one case below capacity, so water has to be rationed especially during the dry months. In the case of Barangay Romagooc in Kibawe, the problem is compounded by the lack of protection of the spring source (some households tap the spring directly) and the under-powered submersible pump, which cannot bring the water to higher ground, leaving some households unserved during the day.

Given that no as built plans were turned over, it was difficult to assess the standard of the network. However there were signs of poor construction and substandard materials. For example some of the transmission lines were exposed (they were supposed to be two feet underground) and some low grade (black hoses) pipes were seen (instead of the PVC pipes).

In Quezon Bukidnon, the substandard construction was validated by the Interim General Manager of Quezon Water District. When asked why the WD should not just take over the barangays with P3W funded facilities, he replied that the systems in place were not up to par with the LWUA standards for water districts. They may end up with serious operating problems or worse they may need to re-do the system.

Capacity Building. In the implementation, the Program did not undertake any training on financial management, tariff setting, and operation and maintenance of the system.

Project O & M and Sustainability. The sustainability of the systems hung in a balance given the following situation:

- The barangay officials essentially serve as the managers and operators of the system. The barangay chairperson is the de-facto manager. They have no appropriate management system in place. Each barangay devises its own operation and maintenance and fund management schemes. There are no qualified technical personnel that will ensure proper maintenance, nor a finance person. They are not paid for this role and know that this is an adhoc, so their focus is to ensure the system does not breakdown during their watch. No one seemed to have any interest in strategic business practices.
- The tariffs are not cost based (average tariff is about PhP100 per household per month). They were determined in the general assembly, without any guidance on how much revenue is needed to properly maintain the system. Needless to say there is no tariff formula or parameters for adjustment. In all cases the tariffs are not adequate hence they keep drawing from their annual internal revenue

¹³ LWUA Standard Specifications for Water System Construction

allotments for subsidies. These are however not transparent as the water operations are not ring-fenced. They are able to budget recurrent costs such as power but for major repairs they re-align funds or scrounge from grants from their mayor or congressmen. Back of the envelope calculation shows that the operating subsidy ranges from about 30-60% especially for areas that require power for pumping water to the reservoir and for distribution.

- Compounding the problem is low collection efficiency. The barangay council balances between a hard stance and mere suasion, tipping towards the latter. A hard stance could lose those votes; besides, the subsidy is not coming from their pocket.
- Potability tests are supposed to be conducted at regular intervals but the schedule is not always followed. Surprisingly though, the incidence of water borne diseases was never an issue with the communities, even before the P3W facilities were put up.
- The barangays tend to their respective systems. The municipal governments, apart from giving assistance now and then for repairs or replacement of equipment, do not perform oversight or regulatory function. Kibawe and Quezon, Bukidnon have the opportunity to integrate the systems under the management of existing water districts but this is not an option that the municipal governments are looking at.
- The municipalities clamor for more grant citing the low capacity to pay of unserved constituents but on their own, they have not prepared any plans or investment programs to leverage the grants.

Provision for Sanitation. No sanitation programs were deliberately designed or initiated.

Project Monitoring and Evaluation. There is no monitoring and evaluation system. DPWH did status reporting of physical accomplishments and fund utilization during construction only.

Evidence of Impacts/ Benefits from the Project. The consultation with household beneficiaries validated the very high benefits of the project, the common ones cited are:

- Lower cost, since they no longer buy bottled water
- Time savings from drawing water from dug wells or fetching from a remote source
- Corollary thereto, more time for productive endeavors (some put up backyard piggery)
- Generally better quality of life, especially for women and children, who are tasked in the household to fetch water.

Note that there is no benefit attributed to lowering the incidence of water borne diseases.

3.1.5 Findings on the P3W Program

Institutional Framework- Overall the P3W program has well intentioned guidelines for participatory planning, shared value among stakeholders, accountability and sustainability. However in practice, the good intentions were not realized. There was very little consultation with the affected communities and the WATSAN Councils were not functional. There was no significant leveraging of the national government grant funds. LGUs had no

accountability for the investments given that they were not involved in the prioritization of barangays and given the turnkey arrangement of the DEOs. Most important, sustainability is precarious thus compromising the long term benefits of the investments; in particular:

- Barangay water service associations are not adequately trained to operate and maintain the system properly. Tariffs are not adequate to hire a knowledgeable team to run the utility. Besides the overhead will be uneconomical for such small systems.
- There is an inherent conflict of interest in the barangay council officials acting as managers of the utility, especially since there is no independent regulator.
- The municipality does not exercise policy and management oversight function over the barangay water service associations. The Sanggunian does not perform its economic regulations functions, and so the BWSAs are not required to meet any performance standards or adopt self-sustaining operating principles.

Erosion of program gains- There is no evidence of commercial practices or the glide path towards them, thus it is unlikely for the service to expand or improve without more grants being provided. Improvements in access brought about by the P3W can be eroded by growth in population and shorter than expected economic lives of the systems possibly due to sub-standard construction and most certainly because of poor maintenance.

Monitoring and Evaluation- The monitoring is limited to reporting on physical accomplishments and financial utilization only at construction stage. There were no records of monitoring of outcomes and impact; thus it is easy to lose sight of the program objectives and its targets.

Neglect of sanitation objectives- There was no deliberate strategy to achieve the sanitation objectives. The LGUs were supposed to use the counterpart funds for sanitation initiatives but there was no monitoring of the use of the funds and no consequence to them if they did or did not do sanitation programs.

Inadequate resources to meet program targets- Institutional constraints aside, and assuming constant population, the resources allocated for the program were way below the investment requirement. A previous study estimated at least PhP34 billion is needed for the bringing to 50 percent service coverage of the 449 municipalities using the benchmark cost data of P3W.¹⁴ The Program effectively allocated less than PhP 3.5 billion only for the 449 municipalities, considering that the funds given to LWUA were mostly not used for the 449.

3.2 Salintubig Program

The *Sagana at Ligtas na Tubig Para sa Lahat* (Salintubig) Program was implemented at the turn of the Aquino administration in 2010. The Salintubig guidelines, approved in August 2012, were seen to be an improvement from the P3W guidelines. **Annex A** shows a comparison of the implementing guidelines of both programs.

¹⁴ Las Marias, N, Pollisco, W and Arcenas. A. 2011. Review of Programming Policies of the President's Priority Program on Water (P3W), September 2011, a study under the MDG-F 1919 Enhancing Access to and Provision of Water Services with Active Participation of the Poor

3.1.1 Description of the Program

Objectives. The Salintubig Program aims to contribute to the attainment of the goal of providing potable water to the entire country, meet MDG commitments and the targets defined in the PDP 2011-2016, Philippine Water Supply Sector Roadmap and the Philippine Sustainable Sanitation Roadmap. The Program sets to accomplish the following outcomes from 2011-2016 in these areas:

- a) increased water service coverage for the waterless population to 50 percent;
- b) reduced incidence of water-borne and sanitation related diseases by 20 percent;
- c) improved access of the poor to sanitation services by at least 10 percent; and
- d) sustainable operation of all water supply and sanitation projects constructed, organized and supported by the Program by 80 percent.

The program provides grant funding and capacity development programs to enhance capacities of LGUs and WSPs in planning, implementation, operation and management of water supply systems in a sustainable manner in target municipalities. A total of 455 municipalities nationwide were identified as priority targets of the Salintubig Program. In addition, it also covers 1,353 waterless barangays outside of the identified municipalities and thematic areas such as: i) poorest waterless barangays with high incidence of water borne diseases; ii) resettlement areas for the poor in Bulacan, Rizal, Cavite, Laguna, Batangas and Albay; and iii) health centers ¹⁵ without access to safe water.

Eligible Projects and Support Activities. The eligible investment projects include:

- a) rehabilitation, expansion or upgrading of Level III WS systems including appropriate water treatment systems;
- b) construction, rehabilitation, expansion or upgrading of Level II WS systems; and
- c) construction or rehabilitation of Level I WS systems in areas, where such facilities are only applicable.

Support activities that are funded from the Program partners' budget and LGU counterpart share are as follows:

- a) provision of training for existing or newly organized water users associations/ community-based organizations;
- b) support for new and innovative technologies for WS delivery and sanitation systems; and
- c) training, mentoring, coaching and other capacity development assistance to LGU on planning, implementation and management of WS and sanitation projects.

The projects are appraised and approved based on viability and sustainability criteria listed in the guidelines.

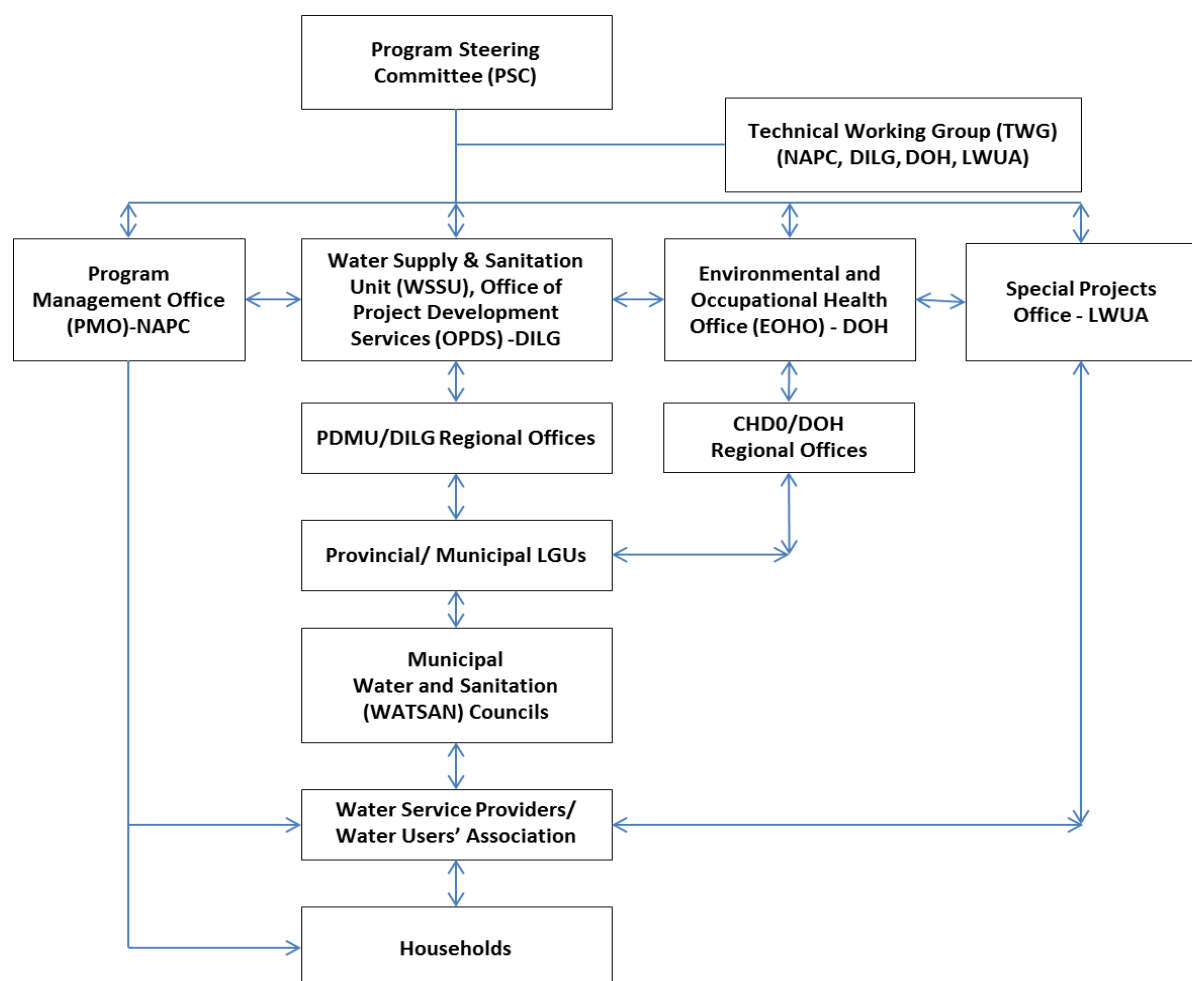
¹⁵ Include Basic Emergency Maternal and Obstetrical New Born Care (BEMONCS), rural health units (RHUs), or birthing facilities

3.1.2 Institutional Set up, Resource Prioritization and Implementation Process

Institutional Set up. The program is implemented by NAPC, Department of Interior and Local Government (DILG), Department of Health (DOH) and LWUA. The NAPC acts as the lead coordinating agency and leads the Program Steering Committee (PSC), the Program policy-advisory body. A Technical Working Group (TWG) serves as the technical arm of the PSC. Policy, technical and operational issues are discussed at the TWG level and raised to the PSC as needed. NAPC is tasked to monitor and evaluate the entire Program, ensure its efficient operation and keep track of its implementation and attainment of agreed performance.

Program management was initially vested in DOH in 2011 with LWUA as the implementing agency. In 2012, it was transferred to DILG given its direct supervision over the LGUs. DILG currently manages the grant program and ensures the implementation of the WS projects through capacity building of LGUs. It issues annual program guidelines to DILG units - DILG Regional Offices (ROs), Provincial Offices (POs) and Municipal Local Government Operations Office (MLGOOs) - and the LGUs related to program implementation. DOH provides the health and sanitation related technical assistance. LWUA is tasked to manage allocated funds and oversee and monitor the implementation of WS projects by WDs in waterless areas. **Figure 3** shows the institutional set-up of the program.

Figure 3. Institutional Set-Up of the Salintubig Program



Source: Salintubig Implementing Guidelines

The Water Supply and Sanitation Unit (WSSU) of DILG Office of Program Development Services (OPDS) coordinates the prioritization, validation of LGU recipients, proposal evaluation, conduct of capacity building activities and progress monitoring of Program implementation. The DILG ROs with their Project Development and Monitoring Units (PDMUs) play a significant role in program implementation from project proposal appraisal and approval, validation, release of funds, procurement and monitoring and reporting. The involvement of the DILG Provincial Offices depends on their Regional Offices. Starting 2014, the Provincial Offices were given a more active role in the review and approval of projects costing PHP 1 million and below.

Resource Allocation. NAPC was tasked to come up with priority targets as agreed upon in a tripartite Memorandum of Agreement among the DILG, DOH and NAPC in December 2010. The Program prioritization and resource allocation strategy adopted the Rationalization Framework for Public Resource Utilization for the WSS sector endorsed by the NEDA Infrastructure Committee (INFRACOM) Sub-Committee on Water Resources (SCWR) in 2010. NAPC used the NHTS-PR data in establishing the number of poor households and their access to safe water generated in 2010. It used DOH data from the Field Health Services Information System (FHSIS) in ascertaining the incidence of water-borne diseases. The NAPC identified 455 municipalities nationwide as priority targets of the Salintubig Program and ranked them using the following prioritization criteria:

- a) access level: areas with the greatest need for improvement of their water supply service delivery covering municipalities which have more than 50 percent of the poor households' population without access to safe water; the NHTS-PR item on the households' main source of drinking water was the basis in determining access level of the household;
- b) poverty incidence: took account of communities with the highest number of poor households/population; and
- c) incidence of waterborne diseases: areas with the highest incidence of waterborne diseases (incidence per 100,000 population of acute bloody diarrhea, acute watery diarrhea, cholera and typhoid and para-typhoid fever).¹⁶

The identified municipalities were also required to comply with the Seal of Good Housekeeping. This criterion was added to ensure that the municipalities comply with the governance policies required by the DILG. The Salintubig list of 455 municipalities included about 70% of the municipalities listed under the P3W Program (excluding those in ARMM), not surprising, given that only 39 of the 449 municipalities graduated.

In addition, NAPC identified other priority beneficiaries of the grant program, namely: (i) poorest barangays with unsafe water and high incidence of water-borne diseases; (ii) resettlement areas with unsafe water in Bulacan, Rizal, Cavite, Laguna, Batangas and Albay; and (iii) health centers (e.g., birthing clinics) with unsafe water. The list of 1,353 waterless barangays falls outside of the 455 waterless municipalities.

¹⁶ Based on prioritization criteria proposed in Navarro, Adoracion M. 2010. Rationalization of Public Resource Utilization for the Water Supply and Sanitation Sector. USAID- Philippine Water Revolving Fund Support Program (PWRFSF).

In 2013, DILG and LWUA identified 247 waterless municipalities with water districts.¹⁷ These were “assigned” to LWUA, and was given an allocation of PhP700 million in 2012. LWUA was supposed to prioritize assistance based on the Salintubig implementing guidelines.

From 2011-2014, the 455 municipalities were ranked based on access levels from the NHTS survey. The grant allocation per recipient LGU ranged from PhP 3 to 10 million depending on the type of system to be developed. DILG fixed the amount of grants based on LWUA cost estimate of PhP 3,000 cost per capita or PhP 15,000 per HH to deliver level 3 water supply systems.

In 2015, the DILG revised the prioritization process. The 247 LGUs with WDs and 62 graduates (33 of which were directly assisted by DILG; the rest funded under DOH and LWUA) were removed from the list of 455. The remaining LGUs were assessed based on current access levels (including coverage from Salintubig Program, bottom-up budgeting (BUB) support and other DILG-managed grant programs with WS components). LGUs that have received prior assistance are not precluded from additional grants from the Salintubig Program and other DILG-managed grant programs if the level of access is still low. A total of 34 LGUs were prioritized from the remaining list. Prioritization was also refocused on the waterless barangays. Out of the identified 1,353 in the long list, 618 barangays were shortlisted. The amount of grant was also increased to cover more HHs based on level of access (**Table 11**).

Table 11. Categories of Access

Access Level	Amount of Grant (PhP)*
With 49% service coverage	Maximum of 8 million
45 – 48% service coverage	Maximum of 10 million
15 – 44% service coverage	Maximum of 12 million
14% and below	Maximum of 15 million
<i>* Amount computed based on PhP 3,000 cost per capita or PhP 15,000 per HH to deliver level 3 water supply systems based on LWUA cost estimate</i>	

Source: DILG

The Salintubig Program has no specific investment targets for the provision of sanitary facilities. As the 2012 Salintubig Implementing Guidelines indicate, activities related to sanitation pertained to services which can be interpreted to include not only provision of sanitary facilities but also advocacy, promotional and capacity building activities related to sanitation. These are clearly reflected in the role of DOH under the Salintubig Program which include: i) conduct of capacity development activities particularly involving sanitation; ii) implement the PSSR, particularly, conduct capacity development to ensure that LGUs comply with its policy recommendations; iii) assist NAPC in monitoring water and sanitation indicators and targets; iv) develop and deploy a localized system of outcome-based monitoring of water quality and water-borne disease reduction to ensure rapid pre-testing and roll-out, and e) assist DILG Regional Offices in the conduct of assessment and evaluation of project sites and review of the project proposals/detailed engineering specifically for Rural Health Unit-Lying-in Clinics. At the LGU level, the guidelines require them to allocate 20 percent of their 10 percent counterpart of total project cost for sustainable sanitation related activities/projects and behaviour change communication.

¹⁷ Of the 247, 123 are operational; 111 are non-operational, 9 are LGU-operated/ taken over by LGU; and 4 are dissolved/for dissolution.

Implementation Process. Program implementation involves several steps (**Table 12**). It starts with the listing and prioritization of recipient LGUs from the list of 455 municipalities.

Table 12. Salintubig Implementation Process

Phase/Activity	Outputs/ Documents Needed	Responsible Unit/s	Implementation Period*
A. Pre-Implementation Phase			
Review, listing & prioritization of recipient LGUs and barangays	Recipient LGUs (annual shortlist from the long-list of 455 municipalities and 1,353 barangays)	DILG CO- OPDS WSSU	-
Orientation on the Program including preparation of project proposals	LGU program advocacy-orientation and FS preparation workshops	DILG with LGUs	3 days
Identification of recipient barangays for LGU recipients;	List of recipient barangays	LGUs	
Assessment & validation of recipient LGUs/ barangays, including water source; community consultations	Assessment report	DILG (PDMU); MLGOOs	2-4 weeks
Proposal/ Feasibility Study (FS) preparation	Source Evaluation (Geo-resistivity) Site Selection Water Quality Route Survey Financial Analysis Tariff Setting Willingness to Connect Survey	LGUs	8 weeks
Submission of documents	Requirements in 2012 guidelines: Signed MOA with SB Resolution EO (Creation of WATSAN Council and WATSAN Team) Copy of FS Certification of newly opened trust account Certification of seal of good housekeeping Additional requirements in latest guidelines: Water potability test results WSS sector plan Appropriation Ordinance for LGU Counterpart to total subproject cost as needed Sustainability Plan	DILG with LGUs	-
Review of FS, source validation and approval	Appraisal report	DILG PDMU and DILG POs with MLGOOs	2-4 weeks
Release of 1 st tranche	50% of total project cost upon submission of preliminary documents: a) proof of certificate of land ownership or legal instrument allowing use of land for the project; b) ECC or CNC; c) application for water	DILG PDMU	3 weeks

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Phase/Activity	Outputs/ Documents Needed	Responsible Unit/s	Implementation Period*
	permit; d) Certificate of Availability of Funds (CAF) to DILG ROs		
Mentoring and coaching on Detailed Engineering Design (DED) preparation	Training, mentoring activities covering DED preparation, construction supervision and fund management and WSS sector plan preparation/reports	DILG with LGUs	8-12 weeks
Submission of DED	DED	LGUs	-
Review and approval of DED	DED Evaluation/Assessment report	DILG PDMU	4 – 6 weeks
Training on procurement and construction supervision	Training reports	DILG with LGUs	2 weeks
Release of 2nd tranche	50% of total project cost upon submission of: a) approved of DED; b) Signed contract with contract if by contract or DILG RO's certification if by admin Completion and validation of water source development by DILG RO; c) Statement of Receipts and Disbursement (SORD)/Statement of Expenditure (SOE) duly signed by the Treasurer/Accountant and COA on at least 10% of first tranche; d) Progress Billing Report of the LGU		3 weeks
B. Implementation Phase			
Procurement	Procurement documents	LGUs	6 – 12 weeks
Mobilization for new WS projects	Pre-construction conference	LGUs	2 weeks
Construction/Rehabilitation / Upgrading/ Repair	POW CS reports	LGUs if by admin; Contractors if by contract	Construction (24-27 weeks) Rehabilitation (12 weeks) Upgrading (8 weeks) Repair (4 weeks)
C. Post-Implementation Phase			
Training on Operation and Maintenance (O&M)	Training activities on O&M, ring-fencing and business planning and M&E/ reports	DILG with LGUs, beneficiaries	2 weeks
Setting up of management structure & development	WS management structure established through LGU ordinance, MOA, CDA registration	LGUs, WDs, CDA, NGO	-
System start-up, final inspection and turn over	Project completion certificate MOA of turn over to beneficiaries/Certificate of acceptance of project signed by recipients/beneficiaries COA certification of liquidation of 100 percent and COA Inspection report	Contractors, LGUs, DILG RO, Beneficiaries	2 weeks
M & E system installation	M&E system	LGUs, WDs, WSPs	

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Phase/Activity	Outputs/ Documents Needed	Responsible Unit/s	Implementation Period*
Total length of project implementation			70- 85 weeks or 18-21 months or 1.5 -1.75 years

* Based on LGU average implementation period

Pre-implementation phase. The annual shortlisting of waterless municipalities and barangays is done by DILG CO (OPDS-WSSU). The DILG RO conducts briefings with the concerned LGUs as soon as they get the list of recipients. The LGUs have a hand in prioritizing barangays and selecting the water source. These are assessed and validated by the DILG RO, PO and MLGOOs. Upon assessment and validation of water source, the LGU may proceed with the preparation of the project documents. Barangay or community consultations on the project are the responsibility of the LGUs.

Project documents are prepared and compiled by the LGUs usually coordinated by their Municipal Planning and Development Office (MPDO) or by the Municipal Engineering Office (MEO). The preparation of the feasibility studies (FS) and detailed engineering design (DED) are either done on their own or with assistance of consultants engaged by the LGU. To facilitate the process, DILG has provided them with standard bid terms of reference for the FS and DED.

Review and approval of projects are done by DILG ROs, with DILG POs and MLGOOs assessing completeness of documents and data. The DEDs are reviewed by consultants (engineers) engaged by DILG ROs and validated by the latter. The appraisal covers technical and financial aspects based on standards and unit costs to ensure there is no overpricing of materials and works. Variation orders are also reviewed and validated by DILG ROs as needed.

Implementation phase. Project implementation is mostly the role of the LGUs. The procurement process and actual construction of WS project take almost half of the time of project gestation. The LGU is required to use the RA 9184 procurement guidelines. However, the LGU may also opt to construct by administration. Considering the size and budget for the project, the LGUs usually implement it by administration. Procurement for DED consulting services is through DILG ROs with representation from DILG- OPDS. DILG ROs (engineers) conduct spot monitoring during the construction phase to check compliance with technical standards. MLGOOs monitor physical and financial status of the projects.

Based on average performance, the length of project implementation from project preparation to construction takes about 1.5 to almost 2 years.

Post-implementation phase . Capacity development is phased over the project implementation period and covers the following activities: a) FS and DED preparation and mentoring, b) procurement, c) construction supervision and d) O&M. Part of the O&M training is a review of the management set –up for the WS system. The LGU is tasked to determine and set –up the appropriate management structure for the WS system & determine the water tariff.

An M&E Manual has been developed for the Salintubig Program defining the framework, institutional arrangements, roles and responsibilities and forms for monitoring progress, outputs and outcomes. The M&E framework, however, has focused only on one outcome - sustainable access to potable supply.

NAPC, in coordination with DILG, DOH and LWUA, is tasked to lead and coordinate the monitoring and evaluation of the entire Program, consolidate the progress reports from DILG, DOH and LWUA and prepare periodic reports to the President and oversight agencies, and document lessons from the Program.

The DILG, through its MLGOOs and PDMUs at the ROs, conducts progress and process monitoring regularly (done monthly and quarterly). The DILG OPDS-WSS PMO is responsible for the development and implementation of M&E and over all monitoring of project implementation and fund utilization of DILG-assisted projects. Monitoring cover: a) physical status and accomplishment; b) financial status including disbursement rates; c) issues and actions taken; and iv) compliance reporting¹⁸ have been developed and currently being used. Upon completion of project construction, DILG RO conducts the final inspection and determines the following:

- a) completion of the system (actual water flow);
- b) number of beneficiaries versus target; and
- c) number of tap stands or connections in targeted sites.

Monitoring information on programs and projects of DILG at the LGU level gathered by the MLGOOs is consolidated by DILG PO and ROs and fed into the DILG's Program and Project Monitoring System (PPMS) lodged at the Central Office. The PPMS is accessible through the internet (<http://ppms.dilg.gov.ph/projectsmapv3/mapprojectv3.php#>) and presents information on number and location of recipient LGUs, types of WS project, project cost, stage and status of implementation with pictures.

Information on access levels for WS and sanitation, poverty incidence (number of poor households) and incidence of waterborne diseases) are not included in the PPMS. Under the guidelines, socio-economic indicators will be collected by DILG to aid outcome evaluation of the Program.

The reliability of services (e.g., capacity for 24/7 service, adequacy of pressure, water quality), customer satisfaction and effect on health and income are neither monitored nor included in the LGU and DILG project completion report.

The final documentation required includes the LGU's project completion report and MOA for turn over to beneficiaries.

At the LGU level, the M&E system is not organized and data are sourced from different units. Physical and financial data on the project are either with the MPDO or MEO and health and sanitation-related information rests with the Municipal Health Office (MHO). The MLGOOs gather these data and submits to DILG PO or RO.

3.1.3 Program Accomplishments

Physical Accomplishments. The Salintubig Program has granted assistance to 407 LGUs (89 % of the 455 target municipalities) and 627 waterless barangays (46% of the target of 1,353). as of June 2015 (**Table 13**). Out of the 407 assisted municipalities, 62 have graduated from

¹⁸ Compliance reporting involves monitoring of LGU compliance to a checklist of documentary requirements per the Salintubig guidelines

being waterless as of June 2015. An estimated 332,379 HHs or 1.7 million beneficiaries in 333 municipalities from 2011-2014 have benefitted from the Program.

Table 13. Status of the Salintubig Program, 2011-2015

	Year of Implementation						
	2011	2012	2013	2014	2015	Total 2011-2015	% of Target
No. of assisted waterless municipalities (DOH, DILG, LWUA) from the 455 list	115	154	56	48	34	407	89%
<i>a) No. assisted by DOH (2011)</i>	115					115	25%
<i>b) No. assisted by DILG (2012-2015)</i>		80	56	48	34	218	48%
<i>c) No. assisted by LWUA (2012)</i>		74				74	16%
No. of waterless barangays assisted in the 1,353 list	58			11	569	638	47%
No. of rural health centers	55	25	-	-	-	80	
No. of resettlement sites	24	5	-	-	-	29	
No. of “non-waterless” municipalities with waterless barangays assisted by DILG*		63	109	53	-	225	
No. of “non-waterless” municipalities with WDs assisted by LWUA*		34				34	
* Outside the list of 455 municipalities							
Sources: a/ 2011 data based on DOH report as of April 2015; 2012-2014 based on June 2015 DILG report; NAPC June 2015 report							

The conduct of pre-implementation and implementation phases was enhanced since DILG took over the supervision of the grant program. The decentralized structure and presence of DILG at the municipality level represented by the MLGOOs have improved project assessment, validation, preparation of documents and verification processes and the lines of monitoring and reporting. DOH has the Centers for Health Development (CHDs) at the regional level and no presence at the municipal level. While the period of project implementation cannot be said to be faster (average length of project implementation ranged from 1.5-2 years similar to DOH assisted projects and P3W projects), the processes have been more thorough and transparent. The rate of project completion has also substantially improved over a shorter timeline with almost 96% completion rate for 2012 projects compared to 63% for 2011 projects by first quarter of 2015.

Financial Accomplishments. Total fund allocation from 2011-2015 stood at Php 5.8 billion of which 95 percent was allotted for capital grant assistance and the rest for capacity building, program administration and M&E (see **Table 14**). The annual budgetary appropriations for the Salintubig Program varied from year to year. Php 1.5 billion was initially appropriated to DOH in 2011 and to DILG starting in 2012. Capacity building activities were conducted by

DILG for the LGUs on the following areas: a) pre-implementation phase: program orientation and feasibility study (FS) preparation; b) implementation phase: detailed engineering design preparation and fund management and training on local water governance for WATSAN Councils/Teams; and c) sustainability phase: operation and maintenance. NAPC also got allocations for M&E in 2011 and 2014. LWUA did not get any allocation from the 2011 budget, partly because it has not been able to fully liquidate previous allocations under the P3W. However, in 2012, it was again given a share of the program budget. LWUA prioritization is based on its roadmap that lists the investment requirements of WDs ranked according to a set of criteria that includes not only service coverage and presence of poor areas but also other performance indicators. The roadmap is used as a reference for allocating funding support including from LWUA's internal cash generation (ICG).¹⁹

Table 14. Budget Allocation and Expenditures for the Salintubig Program, 2011-2015

	Year of Implementation					
	2011	2012	2013	2014	2015	Total
A. Fund Allocation (in PHP million)						
Total Allocation	1,500	1,500	659.98	577.73	1,572.73	5,810.44
<i>a) Grant Facility</i>	<i>1,470</i>	<i>1470</i>	<i>569.98</i>	<i>517.73</i>	<i>1,512.73</i>	<i>5,540.44</i>
-DOH	1,470					1,470.00
-DILG		770	569.98	517.73	1,512.73	3,370.44
- LWUA		700				700
<i>b) Cap Dev & PMO</i>	<i>20</i>	<i>30</i>	<i>90</i>	<i>55.7</i>	<i>60</i>	<i>255.70</i>
<i>c) NAPC M&E</i>	<i>10</i>			<i>4.3</i>		<i>14.30</i>
B. Fund Utilization (in PHP million)						
Total Utilization	1,284.59	1,000.41	466.78	198.94		2,950.72
<i>a) Grant Facility</i>	<i>1,248</i>	<i>754</i>	<i>378.48</i>	<i>186.25</i>		<i>2,566.73</i>
<i>b) Cap Dev & PMO</i>	<i>26.59</i>	<i>28.41</i>	<i>88.30</i>	<i>12.69</i>		<i>155.99</i>
<i>c) NAPC M&E</i>	<i>10</i>			<i>No report yet</i>		<i>10.00</i>
<i>d) LWUA</i>		<i>218</i>				<i>218.00</i>
Utilization Rate (%)	85.6	66.7	70.7			

Source: NAPC, DILG, DOH & LWUA, As of June 2015

¹⁹ The criteria include: 1. Inclusion in 12 Poorest Provinces; 2. Unfinished/suspended projects; 3. Waterless WDs; 4. Non-operational WDs; 5. Non-revenue reduction program; 6. Expansion projects. Ranking based on the criteria is not clear

3.1.4 Salintubig Case Studies

KIIs were conducted with concerned LGU officials, WD manager and staff in nine (9) Salintubig areas on the adoption of program guidelines, execution of implementation processes, and assessment of program outputs and impacts (**Table 15**). Grant assistance for the nine recipients averaged at PhP 8.5 million. The projects involved the construction, upgrading and rehabilitation of independent WS systems. The average number of target household beneficiaries of the water systems stood at 519 per project. The cost of providing access to water averaged at PhP 16,400 per HH (for both level 2 and 3 systems).

Table 15. Profiles of Salintubig LGU Recipients Visited

Municipality/ Water District	Amount of Grant (PhP)/ Year Allocated	Type of Project	Barangays Covered	Implementation Period (from funds downloading to system start-up)	Target HH	Actual HH	Operator
Kibawe	10 M (2011)	Construction of Levels 2 & 3	Marapange; Natulongan	2012-2013	462	240	BWSA; with coop but not yet registered
Kitaotao	10 M (2011)	Construction of Level 3	Magsaysay	2012-2014	300	188	BWSA; with coop but not yet registered
Dangcagan	10 M (2011)	Rehabilitation of Level 3	distributed to: Pobacion- P5M; San Vicente – P2 M; Sagbayan- P2M; Barungkot- P1M	2012-2015	1,108	687	BWSAs in 3 systems; coop in Sagbayan
Quezon	8 M (2011)	Upgrading of Level 3	Kiburiao; Linabo; De la Paz; Mabantay	2013-2014	260	152	BWSA
Gumaca	7M (2012)	Upgrading of source and Level 2	San Vicente; Hagakhakin; Villa Perez; Anonangin; Labnig	2013-2015	1,020	835	BWSAs
Gumaca WD	7.6 M (2010 slid to 2012) from LWUA NLIF	Source dev't. for Level 3	Gumaca	2012-2013	-	-	WD
Plaridel	7 M (2012)	Source dev't & construction of Level 2	Concepcion; Tanauan; Tumangay; Central; & Paaralan	2013-2015	6 bgys	5 bgys	LGU; management TBD
Plaridel WD**	3 M (2011/2 from LWUA)	Source dev't	-	Downloading of funds pending since WD is organizationally non-functional	-	-	
Atimonan***	2.5 M (2012)	Construction of Level 2 with own reservoir	Balubad	2013-2015	490	TBD	LGU; management TBD
General Nakar***	7 M (2012)	Transmission pipes; Level 3	Anoling but benefited 8 other bgys	2013-2015	1 bgy	2,492 (in 9 bgys)	LGU

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Municipality/ Water District	Amount of Grant (PhP)/ Year Allocated	Type of Project	Barangays Covered	Implementation Period (from funds downloading to system start-up)	Target HH	Actual HH	Operator
Pagsanjan LGU w Pag WD ***	5 M (2012)	Construction of Level 2 (transmission & distribution lines and tap stands), convertible to Level 3	Resettlement area in bgy Dingin	2013-2014	105	105	LGU to turn over to Homeowners Association then to WD
<p>* Based on Census and NHTS-PR 2010</p> <p>**Recorded as recipient by LWUA</p> <p>*** Under Thematic Area (Barangay with low WS access; with waterborne diseases; or poor resettlement area)</p>							

Project Site Identification. The LGUs are included in the list of the 455 target municipalities or identified as a “Thematic Area” guided by the Salintubig Program prioritization criteria. Provision for potable water is also included in their Municipal Development and Annual Investment Plans. However, the basis of selecting the beneficiary barangays and sites varied at the LGU level. Some LGUs indicated that the recipient barangays requested for assistance and were prioritized. Lack of access to water, location of or proximity to the water source and need to improve quality of water service were major determinants for the selection of the recipient barangay and HH beneficiaries. Certain barangays were initially identified but since the source was far, they were dropped from project coverage. Income level and incidence of water borne diseases were not factored in the LGU selection process. There were a few reported incidence of water borne diseases in these areas even if the HHs got their water from unsafe sources such as springs, hand pumps or dug wells.

- The LGU of Kitaotao originally targeted another barangay but it had a problem with the water source. Another source was developed which benefitted Magsaysay, a similarly waterless barangay whose residents depended on open dug wells for their source of water. Magsaysay had an old WS system put up by DPWH with a grant from Governor Zubiri in 1996. The system, however, became non-operational after a few months due to design problems. The LGU established the new system beside the old one. Prior to the establishment of the new system, cases of diarrhea were reported. The residents used to boil their drinking water.
- Four barangays (Kiburiao, Linabo, De la Paz and Mabantay) in Quezon, Bukidnon were the original recipients of the project identified by the LGU. Another barangay, Pinalayan, was also covered because the transmission line from the reservoir to the four barangays traversed the area. The LGU noted that these barangays, aside from being waterless, were prioritized because they were in the vicinity of a newly established elementary school.
- In Gumaca, two recipients of the Salintubig grant (Poblacion and San Vicente) were also previously recipients of the P3W in 2006 but since they needed to rehabilitate their existing WS systems, they were included in the project. Hagakhakin had a level 2 WS system but was covered to tap its existing source to serve another barangay. The grant was divided among same barangays and two more (Barungkot and Sagbayan). The old systems in these barangays were previously established with

funding from provincial and congressional initiatives. There were other barangays that had no existing systems.

- In the case of Plaridel, it identified 5 barangays that had hand pumps and dug wells as sources of water. However, many residents were not aware of the newly established WS stand pipes in their area and continued to use their existing sources of water. Plaridel was previously identified as a recipient of a Php 3 million grant from LWUA. A WD was organized by the LGU and granted a Certificate of Conditional Conformance (CCC) by LWUA in 2010. However, the fund has not been downloaded since no institutional structure has been formally created. The LGU more recently created through an SB resolution a water board. According to LWUA, the LGU has to officially file for the dissolution of the WD but the process may take time. In the meantime, the LGU continues to be classified with a non-operational WD and it is not clear whether it should continue to get assistance from DILG or LWUA. The validity of its water board may also be questioned.
- Barangay Balubad in Atimonan was chosen because the place is a potential for tourism being a beach area. Almost majority of the residents there had existing hand pumps in their own backyards. The place also has a refilling station nearby where they get their drinking water.

Planning Process and Implementation. The conduct of the pre-implementation activities (planning, training and funds disbursement) was generally consistent with the Salintubig guidelines but there were also deviations or gaps seen during the implementation phase.

- Role of WATSAN Councils. The LGUs, through an EO, organized their respective WATSAN Councils mostly headed by the mayor (except in Dancagan where the Vice-mayor heads it) and comprised of its department heads and CSO representatives as members. In the Salintubig guidelines, the council's role is generally "to serve as policy and advisory bodies and tasked to complement water and sanitation assistance programs through convergence initiatives". The local EOs, patterned after the DILG template, spell out the detailed tasks of the WATSAN Council in site identification, project coordination, policy setting, mobilizing barangays and resolving conflicts. Most WATSAN Councils were created for compliance but have not been active as in the case of Quezon in Bukidnon, Gumaca and Plaridel. The project management units comprised of the heads of the (MPDO, MEO, Municipal Treasurer's Office (MTO) and Municipal Health Office (MOH), also designated members of the WATSAN Council, are the ones involved in the identification of project sites, project planning, and supervision activities for the LGU.
- Proposal and Design Preparation. Five of the 9 LGUs had their FS and DEDs, including POWs, prepared by their resident engineers led by the Municipal Engineer, except for Kitaotao, Gumaca and General Nakar (done by contract) and Pagsanjan (done by the WD). While trainings were provided by the DILG, the actual preparation for some (Kitaotao, Dancagan and Plaridel) took longer than the target 12 weeks given by DILG. DILG ROs noted that capacities of the LGUs varied in the preparation of FS and DEDs. The quality and length of time involved in DED preparation depend on the LGUs' technical and absorptive capacities. The quality of the DED concomitantly will determine the soundness of construction or improvement works to be undertaken by the LGU.

- Project Implementation. Procurement activities adhered to the RA 9184 guidelines. Kitaotao and Dangcagan experienced failure of bids due to lack of interested contractors given the budget for the projects (Php 10 million or less were considered small by contractors and not commensurate to the effort they would expend for the required documentation). Thus, the LGUs resorted to construction by administration.

In all LGUs, the MEO played a significant role in the supervision and implementation of construction activities. The construction period and quality of works therefore largely depended on the performance of the MEO, not to mention their absorptive capacity being also involved in other projects aside from Salintubig. On the average, it took the LGUs about 1.5 to 2 years to implement the project from the downloading of the first tranche of the grant to project completion (issuance of statement of work accomplished or project completion certificate).

The common problems in implementation included: a) uncertainty of and dwindling water source; b) design problems; c) delay in purchase/securing the lot with water source; and d) problem in procurement of contractors.

- The LGU of Kitaotao spent Php 900,000 for the development of the ground water source in a barangay but found it dry. The original DED was designed without prior water source assessment and needed to be redesigned within the remaining budget when another site was developed. Learning from previous failure, the LGU contracted a private entity (a Korean contractor) which committed to a “no water no pay” arrangement to develop the ground water source in Magsaysay. The project was finally completed with water sufficient for Magsaysay and for some parts of the Poblacion. The LGU claims that the construction of the new WS system including the reticulation is based on standard. However, aside from the MEO who supervised the construction of system, a third party (e.g. DOH, DILG) may need to actually monitor the soundness of the materials used.
- The water source in Quezon, Bukidnon was validated during the rainy season and so water was abundant; but the yield dropped in the summer months. Initially, water in the tap stands was available 24/7, but had to be rationed after 6 months of operation. Water had to be pumped in the evening to fill up the reservoir and opened for a few hours in the daytime. Only about 60% (152 out of the target 260 HHs) were connected and water availability has not improved.
- In Hagakhakin, Gumaca, Quezon, the existing spring source was upgraded by the contractor to improve water pressure and availability through the construction of a bigger reservoir. Before the project, the source served 8 tap stands in the barangay. After the earthworks, foundation and minor appurtenances were improved, water pressure declined and only 6 tap stands were working. The LGU says that when the contractor put up the structures, the water flow deviated. During the summer, only 2 tap stands remain working.
- For Gumaca WD, funding from Salintubig administered by LWUA amounting to Php 7.6 million in 2012 was used for source development. But since source

availability is a problem and other systems improvement are needed, water service of the WD remains problematic.

➤ In Dangcagan, the grant was divided among several sub-projects. The sub-projects were designed to address specific requirements of the four WS systems in the municipality and did not approach the WS problems in these sites system-wide. Thus, despite the project, only 687 of the targeted 1,108 HHs have improved access to WS. In its Poblacion project, source remains insufficient. While water has been made available, it is being rationed for ½ hour in the morning and ½ hour in the afternoon. In San Vicente, while the reservoir has been rehabilitated, water is available only every 2 days. Other parts of the system, e.g. main line, remain dilapidated and there is need for new transmission and distribution lines and new meters. In Barungkot, illegal tapping remains a problem despite the improvement in transmission and distribution lines. In Sagbayan which has a smaller service area with bigger population, better service was observed with the construction of a new reservoir.

➤ The use of sub-standard materials (e.g. the type of pipes used was usually black pipes instead of the more durable UPVC and the size may not be appropriate for conveyance of water for specific pressure yielded by the water source) and signs of poor construction have been observed in the sites visited. According to the guidelines, the LGUs are tasked to supervise and monitor the implementation of sub-projects implemented through contracts; and the DILG ROs are tasked to monitor LGU construction work by administration. The MEO reports on project accomplishments and certifies completion of work. The MEO, however, may have conflicting functions since they are involved in project construction and also monitor and report on their own work. The DILG RO/PO or MLGOOs are invited to inspect construction or installation work, such as well drilling, pump testing, pipe-laying, leakage or hydro commissioning and water sampling for potability. When the project reaches 95 percent physical accomplishment, the LGU requests the DILG RO or PO for inspection and punch listing. The DILG ROs only have a few engineers mostly job orders and may not be able to conduct field inspection on a regular basis. The civil society organizations (CSOs) and barangays are supposed to monitor and report on project implementation but they have not been actively mobilized; they also need to be technically equipped to conduct these activities.

➤ The tap stands serve an average of 4-35 households. The average falls within the Salintubig guidelines ratio of 25 HH per tap for level 2 systems.

➤ The average cost of construction of level 2 systems (Kibawe and Kitaotao) stood at PhP 27,489 per HH. For Pagsanjan, the cost for a level 3-ready system is higher at PhP 47,619 per HH. The costs appear higher compared with the DILG estimated cost of PhP 15,000 per HH for level 3 systems and consultant estimates based on the DPWH data of about PhP 17,500 for level 2 systems.

LGU Counterpart and Fund Management. Safeguards to ensure transparency and accountability of funds were adopted through the setting up of trust fund for the project, enforcement by DILG of documentary requirements linked with funds disbursements and adherence with RA 9184 guidelines.

As required, all the LGUs put up 10 percent of the project cost as counterpart. However, aside from being reflected as part of compliance reporting, there was no monitoring of the actual allocation and utilization of the counterpart funds. LGU counterpart was usually in the form of land (where the water source or reservoir or pump house are located) or equipment support.

Downloading of funds followed the management and disbursement process of the Salintubig guidelines. Some LGUs, however, had difficulty putting together the documentary requirements.

- The LGUs of Dangcagan, Kiatotao and Quezon in Bukidnon noted that it took them time to accomplish project documentation for their Salintubig projects given that there was no support from DOH at the municipal or provincial level and they had to deal directly with regional DOH Centers for Health Development (CHD) (Note that these projects were under DOH administration in 2011). In this case, the LGUs had difficulty synchronizing funds disbursement and contractor billing. Implementation was further delayed if the LGUs could not cover or advance payments for the construction activities. DILG on the other hand was more facilitative; LGUs were assisted by MLGOOs.
- In the case of Salintubig projects in Gumaca, Plaridel and Atimonan funded in 2012, the presence of the MLGOOs at the municipal level and the active involvement of DILG PO in project monitoring facilitated project documentation and processing by DILG RO.

Capacity Building. Selected members of the LGU Project Management Units were trained on FS and DED preparation, then procurement and construction supervision and business planning including tariff setting and ring-fencing under the Salintubig program. The trainings, provided by DILG CO, were done in a phased manner based on their progress in project implementation. The impact of these trainings on the capacities of LGUs in ensuring sustainable water services also needs to be assessed.

Part of the role of the LGUs under the Salintubig as indicated in their MOA with DILG is to undertake capacity development activities for the operation of the WS systems to be funded out of the 30 percent of their 10 percent counterpart for the project. The LGUs have not used their funds for these activities. The BWSAs in Quezon Province in particular noted that they have not received any training on O&M of the WS systems. In Bukidnon, the BWSAs and coops say they would appreciate receiving refresher courses on financial management and tariff setting.

- The LGUs in Bukidnon were selected as pilot sites of the UNDP MDGF 1919 Programme²⁰. The Programme engaged the Philippine Federation of Credit

²⁰ Five (5) provinces and 36 Salintubig municipalities were identified as pilot sites by the UNDP MDGF 1919 Program (Enhancing Access to and Provision of Water Services with the Active Participation of the Poor) 2008-2013 and DILG to be covered by the capacity building program for water service providers to improve their delivery of water supply services. The PFFCCO was engaged to conduct the capacity building program in Bukidnon. A team leader and team organizer were assigned to the pilot sites. The following cap b activities were undertaken: a) barangay consultation; b) key informant interviews focusing on with and without water conditions; c) presentation of WS management options: cooperative or association; then the residents were asked to vote in a general assembly; d) conduct of seminars on cooperative organization and management, leadership, technical skills related

Cooperatives (PFCCO) to capacitate the beneficiaries or WS supply projects or existing water associations. The beneficiaries were organized and given the option to form a BWSA or a cooperative. A number of the barangay beneficiaries covered by PFCCO opted to organize cooperatives (e.g. Marapange in Kibawe, Magsaysay in Kitatoto and Sagbayan in Dangcagan) and the rest as BWSAs. The cooperatives and associations were trained in the preparation of their Articles of Incorporation and By-Laws (for cooperatives only) and their localized customer service codes; O&M of the WS system; and financial management (tariff setting, collection and accounting). There were issues, however, in the provision of capacity building support by the PFCCO. There was clearly no levelling off of expectations between the PFCCO and the LGUs. The LGUs preferred the beneficiaries to organize into BWSAs and suspected PFCCO, a federation of cooperatives, to have a hidden agenda in organizing the beneficiaries into coops. The designated coop managers or BWSA heads were former barangay captains or officers. The organized cooperatives have completed their documentary requirements for registration with the CDA but are waiting for the PFCCO team organizer to submit them. Until now, they remain unregistered entities.

- The operating units in Quezon Province are mostly BWSAs. The beneficiaries were informed of the formation of the BWSAs by the LGUs during their general assemblies but no formal trainings on utility management and O&M were provided. The BWSAs are either headed by the barangay captains (Hagakhakin and 3 other barangays in Gumaca) or designated Presidents who were formerly barangay captains (San Vicente in Gumaca). The associations in the 6 barangays in Plaridel and Balubad in Atimonan are awaiting clearance from their LGUs to go on full operation.

Project O & M and Sustainability. Tariff-setting by the BWSAs and coops has not been based on cost recovery and WS operations are largely subsidized either by the barangay or the municipal LGU. The subsidies account for a significant proportion of their 20 percent development funds. Collection efficiency is also a problem in many LGUs. Delinquent residents say that they will only pay if services are improved.

- The unregistered cooperative in Marapange, Kibawe, operates the WS system as a barangay enterprise. The residents registered as members to connect to the system. To become a member, one has to pay the following fees: PhP 150 registration and membership fee; PhP 250 installation fee and PhP 50 per faucet. Other materials including water meter are paid by the consumers totalling to about PhP 1,500 – 2,000. The cooperative collects the tariffs. The beneficiary households pay PhP 50 per first 10 m³ and PhP 20 on succeeding m³. After expenses for O&M and salaries of meter readers are deducted (no power costs because the WS is gravity operated), part of the net income goes to the barangay fund (5%); coop reserve fund (30%); and the rest for O&M/contingency fund. Currently, tariffs are enough to cover operations for as long as the customers pay regularly. The coop collects from 75 percent of their customers. The rest are delinquent accounts.

to water operations, bookkeeping and accounting; e) preparation for registration: collection of membership and registration fees (P50 and 100 per member, respectively) and installation fees for water service at PhP 250 – 300 per HH and PhP 50 per faucet. Other materials including water meter are paid by the consumers totalling to about PhP 1,500 – 2,000; and f) preparation of customers service code which includes tariff setting.

- Each barangay water system in Quezon, Bukidnon has a set of officers, one collector and 2 plumbers. Barangay Kiburiao, for instance, has 30 tap stands serving about 3-4 HHs per tap stand. Currently, no tariff has been set. The plan is to assign a water tender to each tap stand. The water tenders will collect from the users and will pay P350 per tap stand to the barangay every month. The BWSAs say they are awaiting guidelines from the LGU to set the tariff. The residents say they are willing to pay if the water service will be improved. The current tariff charged by the LGU in its level 3 systems is PhP 70 per 10m³ and PhP 4 per m³ if excess is within 11-20 m³ and PhP 6 /m³ within 20-30 m³ range issued through an ordinance in 2006. At this rate, the LGU cannot cover the O&M costs of the WS systems. It provides a subsidy of about PhP 2 million a year which is about 30 percent of its budget allocated for its local enterprises. The LGU is in the process of updating its revenue code which will incorporate tariff adjustments.
- The WS is currently managed by Barangay Magsaysay in Kitaotao. The residents were informed that the management will be transferred once the cooperative becomes operational. A barangay ordinance was issued setting the tariff initially at PhP 80 per 10 m³ and PhP 25 per m³ in excess of the minimum. The tariff was recently raised to PhP 100 to cover the rising cost of electricity for the water pump. A customer is disconnected after 2 months default on his payments. The current tariff rate can barely cover the O&M of the system. With 129 customers, the BWSA collects less than PhP 12,900 a month with a collection efficiency of 80-90 percent. The BWSA is burdened by the high power cost amounting to more than PhP11, 000 a month. The barangay has in fact allocated almost 20 percent of its development fund to cover for the operations of the WS system. Any increase in the tariff will be raised in a barangay General Assembly.
- The BWSAs manage the WS systems in Poblacion, Barungkot and San Vicente in Dangcagan, Bukidnon with the barangay captains at the helm. Tariffs in Poblacion and San Vicente stand at PhP 100 per 10 m³ and PhP5-10 per m³ in excess. In Barungkot, tariff is PhP 30 per 10m³. In these BWSAs, the respective barangays allocate from 1/6 to ½ of their 20 percent development fund to subsidize the O&M of the WS systems. In Barangay Sagbayan, the WS system is operated by the Sagbayan Water Consumers' Cooperative (SAWACOCO). The cooperative has a functional BOD and full time manager with a meter reader and a resident plumber accredited with TESDA. With tariff set at PhP 120 per 10m³ and PhP 15 per m³ in excess, the cooperative is recovering its costs and earns from its operations. Collection efficiency is high at 98 percent with the improved service from the project.
- Two BWSAs in Gumaca have contrasting performance. In Hagakhakin, water is provided for free from the functional tap stands. Meanwhile, they have left the maintenance, repair and rehabilitation of the WS system to the barangay funded by their development fund. The service has not improved and even deteriorated. The other BWSA in San Vicente has a functional management team led by a President, 18 BOD members, a treasurer and auditor. Collectors have been assigned per tap stand and pay a fixed amount per tap stand per month. He gets 20 percent of the amount collected on top of the fixed amount as incentive. PhP 10 is charged per gallon or container of water fetched from the tap stands. Net income from the WS system is set aside for O&M and expansion.

- In Plaridel and Atimonan, the WS systems are already functional but water services are currently provided for free. The recipient barangays in Plaridel and Balubad in Atimonan are waiting for directions from the municipal LGUs to formally organize their BWSAs and for the tariffs to be set. Except for the turnover to the barangays, the LGUs themselves do not have specific plans for the operation of the WS systems.
- The case of the Dingin resettlement area in Pagsanjan can be considered a best practice in WS system management and sustainability. The LGU, through a MOA, delegated to the Pagsanjan WD the establishment and management of the WS system in the resettlement area. The WD built a Level 2 WS system with a mother meter based on LWUA standards and transformable into a Level 3 system. Three tap stands were established serving about 35 HHs each. The Dingin Homeowners Association (DHA) assigned tap stand leaders who collect Php 2 per 5 gallons from consumers. The tap stand leaders record in a logbook and remit the daily collection to the DHA Treasurer. The WD bills the DHA monthly. After the water bill has been paid, 40 percent of the net collection goes to the tap stand leader as incentive and 60% goes to the DHA fund for O&M costs. The arrangement presents a win-win arrangement for both the LGU and WD. While within its franchise area, it was expensive for the WD to extend its transmission and distribution lines to the resettlement area. The LGU, which acknowledges that the operation of a WS is not within its core business, frees itself from the responsibility of sustaining the WS system. Through the partnership, both performed their mandates to provide water to their poor constituents.

Provision for Sanitation. The LGUs are aware that as a requirement, they have to allocate 20 percent of their 10 percent counterpart for sanitation. However, their current sanitation-related activities cannot be treated as their set aside or contribution to meet the sanitation objective of the Salintubig Program.

- Common among claimed sanitation-related activities were the conduct of potability tests and chlorination. The MHOs of Atimonan, Quezon and Danggagan have sanitary inspectors who conduct potability tests (bacteriological tests) as required by DILG. Not all MHOs conduct chlorination of the water systems (the case of Plaridel, Gumaca, Kibawe and Kitaotao). However, potability tests and chlorination may not exactly fall as sanitation-related activities as defined under the Salintubig guidelines but part of the compliance to PNSDW for the WS systems.
- The distribution of toilet bowls and assistance in the installation of septic tanks and advocacy or behaviour change communication (BCC) under the Community-led Total Sanitation or Zero Open Defecation programs pursued by the LGU MHOs are part of their regular health budgets or existing programs. Through their MHOs, they promote the Zero Open Defecation program of the DOH. There are also assigned Barangay Health Workers who conduct survey and compile reports on incidence of diseases.

Project Monitoring and Evaluation. Monitoring at the LGU level focuses on the physical and financial status of the sub-projects. Data are collected by the MLGOOs from the MEO or MPDO. The LGUs do not have an M&E system for projects.

Evidence of Impacts/ Benefits from the Project. **Table 16** indicates the benefits from completed WS projects funded under the Salintubig Program based on KIIs with beneficiaries in the LGUs visited.

Table 16. Evidence of Impacts from Salintubig WS Projects

Condition	Before project	After project
Source of water	<ul style="list-style-type: none"> • Dug wells • Hand pumps • Spring sources • Bottled water for drinking 	<ul style="list-style-type: none"> • Tap stands/ community taps serving from 4-35 HH • Level 3/ household connection
Time spent in Fetching water (min)	<ul style="list-style-type: none"> • Average of 15-20 min from sources within backyard 2-5 times a day • Average of 30 min to 1 hour from spring sources 1-2 times a day 	<ul style="list-style-type: none"> • Tap stands
Distance from house to source	<ul style="list-style-type: none"> • 100- 500 m 	<ul style="list-style-type: none"> • 0 – 200 m for taps stands
Amount Paid per gallon or m3	<ul style="list-style-type: none"> • PhP 30-50 per gallon of drinking water plus transportation cost • PhP 50-100/ 10 m3 with existing piped systems 	<ul style="list-style-type: none"> • PhP 2 per 5 gallons for tap stands(Dingin, Pagsanjan) • PhP 120-130/ 10 m3 (with improved service)
Availability of water supply (hours/day)	<ul style="list-style-type: none"> • From 0 to 1-2 hours a day 	<ul style="list-style-type: none"> • 4 hours a day to 24/7 • Even if rationed or scheduled, WS service is more convenient (nearer source) and quality/potability and pressure have improved • Pressure is better with no difficulty reaching second floors of the houses
Incidence of waterborne disease (No. of times in a month or year)		<ul style="list-style-type: none"> • Expected decline in cases of helminthiasis with improved access to water by the school children in Sagbayan, Dangcagan. • Waterborne diarrheal cases eliminated in General Nakar.
Others	<ul style="list-style-type: none"> • Burden on mothers and children who mostly do the fetching for washing and cleaning • Cost and time spent in boiling water 	<ul style="list-style-type: none"> • Some residents have engaged in income generating projects (piggeries, car wash) since water for cleaning was made more convenient. • Improved hygiene especially for children • Operational and clean toilets with available water

3.1.5 Findings on the Salintubig Program Implementation

Institutional Framework – From 2011 to 2015, the Salintubig grant has been administered by 3 agencies: DILG, LWUA and DOH, with NAPC serving as the overall Program coordinator. While implementation is supposedly directed by the Salintubig Program guidelines, actual administration of their funding allocation was also determined by their respective internal guidelines and procedures. Under DILG administration, the Salintubig guidelines have been continually reviewed and updated to improve clarity, transparency, accountability, sustainability and stakeholder participation. The provision of detailed annual guidelines has eased project facilitation by DILG and project implementation by the LGUs. DILG's decentralized structure and presence at the regional, provincial and municipality levels have facilitated project assessment, validation, preparation of documents and verification processes and monitoring and reporting. The involvement of the LGUs in project implementation has been substantial and supported by capacity development to enhance their management and governance of the WS supply projects. The accountability of the LGUs for project sustainability, however, needs further improvement. Accomplishments of LGUs have to go beyond producing the facilities and counting WS connections and should include the sustainable operation and management of the WS systems.

The participation of communities and CSOs in project identification, planning and monitoring has been promoted but can be enhanced to make the participation more meaningful. The creation of WATSAN councils is mostly in paper and merely for compliance. The role of the body should be assessed and given more relevance particularly in the identification of beneficiary barangays and sites, project monitoring and planning for a long-term WS development program for the municipality. The CSOs and barangays are supposed to monitor and report on project implementation but they have not been actively mobilized and need to be equipped to conduct these activities.

Targeting and prioritization – While access levels were considered, the implementing agencies applied other criteria based on their agency mandates and procedures. Prioritization or ranking of assistance remains to be improved especially at the LGU and barangay levels to promote transparency, efficiency and effectiveness of the grants in achieving program targets. At the national level, the implications of earmarking funds between municipalities and barangays and across categories of access have to be assessed vis-a-vis Program objectives.

At the local level, the requirement for LGUs to prepare a strategic plan will rationalize prioritization of recipient barangays, as well as inform the optimum use of funds – whether they should be divided into small independent systems to spread the assistance, or used for system wide improvement.

There are possible overlaps among WS projects identified under Salintubig and those identified by the Local Poverty Reduction Action Team (LPRAT) as part of the local planning and bottom-up budgeting (BUB) process. Prioritization of implementation of these projects also becomes a concern given the absorptive capacity of the LGUs.

Management and sustainability of the WS systems – There are varied forms of management systems of WS operations: LGU-run, cooperatives, BWSA and WD. In some LGUs, all four management systems exist. In a lot of cases, the BWSAs and cooperatives are not registered and not regulated. The performance of these water operators also vary. Unfortunately the LGUs do not perform oversight functions.

Cost-based tariff setting, ring fencing and business planning are key sustainability mechanisms. In the LGUs studied, none have business plans for their WS systems. Water continues to be free in some areas and current tariff structures implemented by most LGUs, BWSAs and cooperatives are not cost-based. The highly politicized leadership of BWSAs affect tariff setting and collection efficiencies. Operations of the water systems are largely subsidized either by the barangay or the municipal LGU. The subsidies account for a significant proportion from 20-50 percent of their development funds, which account for 20 percent of total budget. Thus, capacity building and technical assistance to improve water utility governance remain to be an important intervention to improve water service provision and coverage.

The LGU may consider a single management structure for its WS systems through a ring-fenced economic enterprise or through a WD. This way the utility can benefit from economies of scale.

Monitoring and Evaluation – Program monitoring has focused on progress and process monitoring, undertaken by DILG, DOH and LWUA covering their respective implementing units. Current monitoring information includes only physical and financial status and compliance to requirements. Information on the outcomes related to coverage, health and sanitation and sustainable operation and management of the WS systems is still lacking. NAPC has overall responsibility for program monitoring and evaluation but has been constrained by limited resources in performing this function. Its monitoring role has focused on consolidating progress reports from DILG, DOH and LWUA and conduct of case studies on selected on-going and completed WS projects. The development of an integrated outcome and impact monitoring system becomes exigent as the Salintubig Program nears completion.

Capacity Building – NAPC, DILG, DOH and LWUA need capacity building in outcome and impact monitoring to supplement their existing monitoring function. The capacity of DILG ROs in project assessment and monitoring also needs to be beefed up; DILG ROs only have a few engineers mostly job orders and may not be able to conduct field inspection on a regular basis not to mention that they also need to cover other DILG-managed programs. The LGUs and water operators also need to be technical assistance for the O&M of the WS systems to ensure their sustainability. Without the necessary support activities for O&M, the sustainability of the WS systems will be put at risk.

Achievement of targets – The Salintubig Program has assisted 407 municipalities out of the target of 455 and 627 barangays out of the target of 1,353 with a total investment of Php 5.8 B as of June 2015. Sixty two (62) municipalities have graduated from being waterless accounting for 14% of the target of 455 municipalities. The Program has provided 332,379 HHs or 1.7 million beneficiaries in 333 municipalities (2011-2014) (based on completed projects) access to safe water supply. Early indications of impact include improved ease, availability and quality of water services and decline in reported incidence of water-borne diseases. With only

more than a year left, covering the remaining targets and achieving the envisioned outcomes for water supply within the Program timeframe is unlikely.

There have been no dedicated resources for sanitation at the Program level. The LGUs are aware that they have to allocate 20 percent of their 10 percent counterpart for sanitation. Still, sanitation programs or projects have not been deliberately designed or initiated. Their current sanitation-related activities (mostly giving toilet bowls and chlorination) cannot be treated as their set aside or contribution to meet the sanitation objective of the Salintubig Program since these are part of their regular health budgets and activities.

The incidence of waterborne diseases was not directly factored in the selection criteria of the LGUs since this has not been an issue in the communities. There is no information on the direct impacts of improved WS on reduction of waterborne diseases.

Some LGUs are reported to have achieved 50 percent coverage in terms of connection to WS systems. Yet, the quality of services and sustainable operation of the WS systems need to be ensured. There is also the question of covering the remaining 50 percent of the waterless areas. Specific WS projects have been identified on an annual basis by their LPRAT as part of the local planning and bottom-up budgeting process and are included in its Annual Investment Plan (AIP). However, in the absence of strategic plans, most of the investments are used for short-term stop-gap measures to address their water supply problems.

4. Conclusions and Recommendations for the Next WSS Program

Given that the declared objectives of the Salintubig Program were set to be accomplished during the PDP 2011-2016 implementation period or until 2016,²¹ a successor program that also has a nationwide scope (in order to be effective and inclusive) has to be designed. The following discusses the conclusions derived from the process evaluation of the P3W and Salintubig programs and the qualitative impact evaluation of selected case studies. Lessons learned from these programs imply recommendations which can be taken into account in designing the successor program.

4.1 Program Targets

Both the P3W and Salintubig Programs have very ambitious targets:

P3W Targets	Salintubig Targets
Achieve by 2010 the following: <ul style="list-style-type: none">• 50% or more of the population in 449 municipalities with access to safe water supply and sanitation services;• Reduced incidence of diarrhea by 20%;	Achieve by 2016 the following: <ul style="list-style-type: none">• 50% or more of the population with access to safe water supply;• reduced incidence of water-borne and sanitation related diseases by 20%;

²¹ The Salintubig Program Briefer mentioned that the program will be implemented until 2016 (LWUA n.d.).

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

P3W Targets	Salintubig Targets
<ul style="list-style-type: none"> Improved access of the poor to water supply and sanitation services by at least 20%; 100% sustainable operation of all water supply and sanitation projects constructed, organized, and supported by the program 	<ul style="list-style-type: none"> improved access of the poor to sanitation services by at least 10%; and sustainable operation of all water supply and sanitation projects constructed, organized and supported by the Program increased by 80%.
Accomplishments	
Only 8.5% of the 449 municipalities have more than 50% of their population with access to safe water supply	Only 14% of the 455 municipalities have more than 50% of their population with access to safe water supply

Access to safe water supply has barely progressed with only 8.7 percent of the P3W targets and 14 percent of the Salintubig targets able to provide access to safe water to 50 percent or more of their respective population. As these were based on static population figures and projected number of people to be served (actual people served were not monitored until this year) the coverage should be validated with the NHTS-PR2015 survey.

The underachievement of targets may have been a result of weaknesses in the institutional framework, capacity and governance constraints as discussed above, but there were also fundamental gaps in the program implementation:

- a) To begin with, the grant resources for water supply were way below the investment requirements to meet the targets. Compounding this issue is the diversion of the funds to municipalities that are not waterless. Moreover, the 10 percent leveraging from the LGU does not contribute significantly to the required investments and its value was whittled down even more because the counterpart funds may not have been used for the intended purpose.
- b) There has been no clear strategy and action plan for the sanitation components. Most LGUs' appreciation of the sanitation component in the program is limited to doing potability tests. None of the implementing partners of P3W and Salintubig provided assistance to LGUs, nor did they monitor initiatives on sanitation or the lack thereof.

Despite the low achievement of the programs in terms of graduation targets, the grants nonetheless benefitted more than three million people. It is fair to assume that without the grant programs these people would have been left unserved for an indefinite period, given the low propensity of the LGUs to invest in water supply projects.

Recommendations:

1. Given that national government does not have any levers to compel LGUs to invest in water supply projects, the grant program is for now the plausible means to provide poor and marginalized communities, the so-called last mile, access to safe water supply. Hence, the recommendation is to continue the program with the following caveat: ensure integrity of the resource allocation policy and criteria for prioritizing beneficiaries.

The 2015 Census and NHTS-PR surveys will give the program managers an opportunity to validate the gaps and refine the current list of waterless municipalities. The resulting list can be cross referenced with the data gathered by the WB-assisted and NWRB-led Listahang

Tubig nationwide survey. This survey gathered data on coverage, identified the water service providers and jurisdictions, and key performance indicators. The survey provides valuable information on the type of water service providers, particularly information on the legal status and governance structure, and scale of operations.

*2. Identify the investment requirements of the validated list and set realistic targets based on the grant resources that can be supported within the fiscal space of the government. The current policy of the Salintubig Program on investment caps based on level of access (**Table 11**) essentially sets the policy on efficiency and equity of grant investments. Equity considerations rightly get the higher priority.*

The on-going discussion on the Unified Financing Framework²² for the water supply and sanitation sector is opportune. A sector-wide approach will enable the government to plan for financing strategies for segments of the market, including ways to leverage national government resources with commercial credit and private equity. This sets the progression from grant financing for last mile connections to concessional loans (grant-loan mix) to market-based loans as services achieve financial viability. The financing policy should be enabled by other reforms that encourage water utilities to achieve financial viability. In this regard, the grant program should be accompanied by the following:

- Bigger allocation for technical assistance to cover preparation of long term strategic plans and feasibility studies. The strategic plans should cover the investment program and financing plan. It should also establish the appropriate management structure, under a legal entity with clear governance system. For example, the municipal government should stand as the public utility, represented by a ring-fenced economic enterprise, and be accountable for the management and operation of decentralized systems. They may still use barangay water service associations for the day to day operations, but these should be constituted separately from barangay councils and governed by a policy framework, financial management system, and operating guidelines, and subject to common service standards. The feasibility studies should have robust analysis of ability to pay to justify the capital subsidy requirement and projections when the investments can be recovered from the tariffs.*
- Allocation for capacity building requirements. LGUs should have access to training or mentoring services on demand, based on what their pressing needs are.*

3. Expand the options of the LGUs on the use of the grant funds. Presently, the Program requires LGUs to fit the funds to a fully operational system. Subject to the appraisal of the LGUs proposal, they should be allowed to use the grant funds to leverage loan funds, other grants or private equity to put up a bigger system.

4. Deliberately design the sub-program for sanitation to ensure that it gets the focus it deserves. The sanitation roadmap shows that the required interventions in sanitation go beyond hard investments. The advocacy and behavior change, and strengthening of regulations are just as critical. (See recommendations in Section 4.3).

²² NEDA with the assistance of World Bank commissioned a policy study to formulate the strategy for the financing of the sector. The recommendations include rationale for public resource allocation, eligible activities, conditions and mechanisms for the resource allocation. The NEDA Board is expected to issue policy guidelines after the deliberations on the recommendations.

4.2 Sustainability Measures

Another critical issue that the program should address is the sustainability of the benefits of the investments. Once the systems cease to be going concerns, the reversal of program gains will be certain. To avoid this situation the following measures are recommended:

- 1) *A defined management structure should be a minimum requirement for the provision of grants. This can either be a municipality setting up a ring-fenced economic enterprise for the water utility, or if a water district exists by appending the new system to the water district's network, or by contracting a private concessionaire to run the utility.*
- 2) *As a condition of the grant require the adoption of NWRB economic regulatory guidelines for LGUs, so that they have a standard system for setting and adjusting tariffs, and performance indicators.*
- 3) *Require participation of grantees in Listahang Tubig and its annual reporting requirement to sustain the benchmarking of utilities. The publication of the benchmarking results is a means for light-handed regulation. The comparison of performances exerts peer pressure for laggards to do better.*

4.3 Deliberate Focus on Sanitation

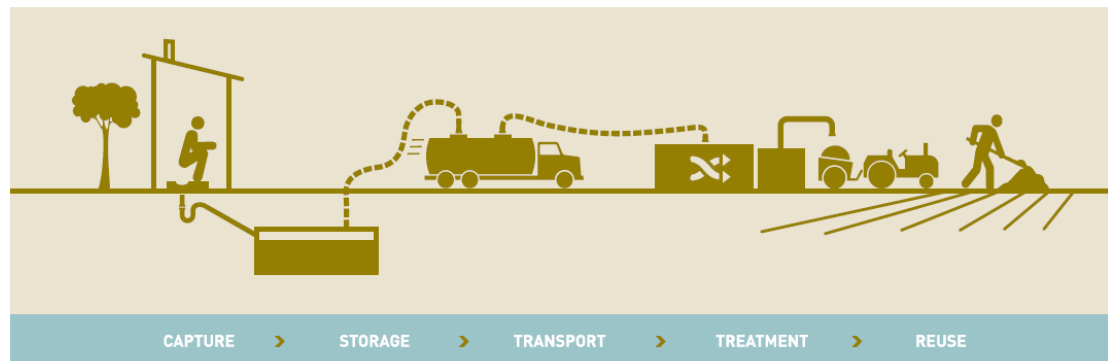
In the evaluation of P3W Program implementation, note that one of the findings is that although funding for sanitation projects were allowed, no funding went to sanitation technical assistance, development or adoption of innovative sanitation technologies, and investments on sanitation facilities (see Section 4.1.3 on Program Accomplishments).

In the case of the Salintubig Program implementation, note also that sanitation programs or projects have not been deliberately designed or initiated. Moreover, most LGUs' appreciation of the sanitation component in the program is limited to doing water potability tests.

Recommendations:

- 1) *To give sanitation the focus it deserves, the successor WSS program must deliberately design the components of and funding for an integrated sanitation sub-program. The sanitation sub-program must have a nationwide scope. The deliberate design must also consider the following:*
 - *Program designers should come up with a comprehensive assessment, and design for updating the assessment, of the: sanitation access coverage in the country, the households' levels of access to improved sanitation, the households' levels of linkage with the community's sanitation value chain (see Figure 4), the types of investments necessary nationwide, and the service providers or partners that deliver or can deliver sanitation services.*

Figure 4. The Sanitation Value Chain



Source: Bill & Melinda Gates Foundation. 2010.

- *Program designers should come up with specific interlinked strategies for each step in the sanitation value chain, namely: (i) waste capture (e.g., activities aiming to influence behavioral change of communities and households and giving incentives for the installation of improved sanitation facilities), (ii) waste storage (e.g., giving incentives for the installation of septic tanks); (iii) transport (e.g., integrating into water districts' and water utilities' service obligations the emptying of households' and community septic tanks every five years); (iv) treatment (e.g., giving incentives to or financing package for water districts and water utilities for the establishment of septage treatment facilities); and (v) reuse (e.g., on re-using waste as fertilizer, partnerships with LGUs, civil society organizations, or business establishments for such).*
 - *Program designers and implementors should formulate specific and measurable targets, identify where the sanitation problems are most severe, identify what the gaps are, and come up with a prioritization scheme for deploying resources*
 - *More concrete information on the sanitation sector must aim to reduce the blind spots of policymakers strategically addressing the sanitation challenge*
 - *The design should specify the institutional setup (including overlaps with the water supply sub-program of the whole WSS program), accountability mechanisms, tracking of responsibilities, and monitoring of outcomes*
 - *Have a focused tracking system, come up with procedures for regularly assessing the country's progress in giving Filipinos a universal sanitation access coverage and sustainable sanitation facilities (or facilities that are linked to a sanitation value chain), and formulate a feedback system with policymakers for the assessment and recommendations.*
- 2) *Take off from the articulation of desired outcomes and outputs in the Philippine Sustainable Sanitation Roadmap (PSSR). The PSSR already has a logical framework that can be used, for example, one output under Outcome 4 - Financing, investments*

and infrastructure provision for sanitation are developed in strategic priority areas is as follows:

Output	Objectively Verifiable Indicator	Means of Verification	Risks and Assumptions
Output 4.1 - Prioritized intervention in highly vulnerable areas that are seriously affected by the lack of sanitation	List of highly vulnerable areas and corresponding maps	Vulnerability maps	<p>Risks:</p> <ul style="list-style-type: none"> -Concerned agencies do not have information and maps -No funding is available to undertake proposed project on the inventory, identification and mapping of highly vulnerable areas <p>Assumption: Concerned agencies willing to share information and resources are made available to produce lacking info and maps</p>
	Database system developed	Operational database	
	Policy prioritizing sanitation investment in highly vulnerable areas	Copy of the policy	
	Investment priority criteria and guidelines	Copy of the criteria and guideline	

- 3) *Decide early what the broad design is for carving out public resources for the successor program.*
- 4) *Revalidate and translate the relevant portions of the PSSR into actual dedicated investment projects under the sanitation sub-program, add as a strategy the need to integrate households, communities and WSS service providers into the sanitation value chain, identify geographic areas where sanitation interventions are most needed, come up with a prioritization scheme for those areas, design a monitoring and evaluation system (including the gathering of baseline data for impact evaluation later on), implement the sanitation investment projects, and conduct an impact evaluation after a significant period of implementation has lapsed.*

4.4 Institutional Framework

4.4.1 Program Design and Guidelines

1. Conformance to program guidelines- There have been notable improvements in the implementation framework and guidelines between the P3W and Salintubig Programs particularly in the transparency and accountability of project implementation, LGU involvement, community participation, capacity building and funds management and disbursement (refer to **Annex A** for a detailed comparison of the guidelines).

By design, the Salintubig Program aligned its resource allocation criteria to the social and health goals of the government, particularly with the inclusion of poverty incidence and incidence of waterborne diseases in the prioritization criteria. In practice, the 455 municipalities and 1,353 barangays identified by NAPC were selected based on the number of poor households and access to safe water supply and sanitary facilities. The health criterion, however, was not clearly factored in the targeting process except for prioritization of barangays with high incidence of waterborne diseases and health facilities to be supported under the thematic area of assistance. Municipal level data on incidence of waterborne diseases (FHSIS of DOH has provincial aggregation only by type of waterborne disease) is not readily available and therefore needs to be collated at this level for prioritization, investment programming and monitoring purposes..

There were deviations, however, in grant allocation and prioritization. Allocation and prioritization of grant assistance by the implementing agencies were based primarily on access levels but other considerations were applied e.g., DILG has added the seal of good housekeeping, DOH prioritized thematic areas primarily based on need for WS services in the health facilities and set guidelines following its own internal procedures for funds disbursement and LWUA considered its investment roadmap and allocated funds to WDs on a 50:50 grant –loan basis. Thus, non-waterless municipalities and other sites outside of the target municipalities and barangays were provided assistance.

Compounding the issue on inconsistent use of resource allocation criteria is the emergence of other programs, for example, the Kapit-Bisig Laban sa Kahirapan- Comprehensive and Integrated Delivery of Social Services: Kapangyarihan at Kaunlaran sa Barangay (KALAHI-CIDSS)²³ and of foreign-assisted projects such as the Philippine Rural Development Program, and support programs for the Agrarian Reform Communities that include water supply investments. These programs do not use the criteria or operating guidelines of the Salintubig, lending more incoherence to the development strategy. With the absence of a comprehensive WSS sector program accompanying the local annual investment plans and programs, the investments for WSS will continue to be sporadic, disaggregated and unsustainable.

Recommendation: The grant allocation criteria of Salintubig are sound and support the inclusive growth goal of the government. However, there has to be consistency in the application of the criteria in the prioritization of program beneficiaries. Stricter controls can be imposed as follows: i) the program guidelines should be adopted through a NEDA Board resolution to make it more difficult for implementing agencies to change the criteria or insert ineligible beneficiaries; this will also ensure a higher

²³ KALAHI-CIDSS is implemented by the DSWD and seeks to reduce poverty and vulnerabilities to poverty by addressing a lack of capacity and resources at the local level and limited responsiveness of local governments to community priorities. Its three main components are capacity-building and implementation support, community grants, and monitoring and evaluation. Grants for community subprojects, including water supply projects, are provided to participating municipalities with each municipality's allocation equal to the number of villages within its jurisdiction multiplied by approximately \$14,000 per year for 3 years. Since the grant to a municipality is not enough to meet the funding needs of proposed subprojects from all villages within the municipality, funds for subprojects are allocated through a competitive community priority-setting process (Source: . <http://www.adb.org/sites/default/files/publication/29878/kalahi-cidss-project-philippines.pdf> (accessed on 11/29/2015))

level oversight on the implementation of the program; ii) earmark the program budget to the list of eligible and prioritized municipalities; and iii) incorporate an M&E system to the design of the program to track the intermediate outcomes, particularly number of target beneficiaries connected.

Should the government approve the proposed Unified Financing Framework for the sector, currently pending NEDA Board approval, the program and its guidelines should be subsumed under this framework.

2. Stakeholder participation – Under P3W, there was absence of consultations among DPWH, municipal governments and the barangays. NAPC prescribed to DPWH the prioritization of municipalities and the grant amounts. DPWH on its part implemented the projects directly, with little or nil involvement of the LGUs.

The Salintubig Program guidelines, on the other hand, provide more opportunities for stakeholder participation. The LGUs have been given a larger role in project implementation with corresponding responsibilities and accountabilities. That said the improvements are far from ideal. The participation of the community and CSOs in project planning, coordination and monitoring still needs to be enhanced through their membership in the WATSAN council and provision of capacity development interventions.

Recommendations: The institutionalization of the WATSAN Council through the establishment of a Secretariat and provision of a regular budget for its activities from the LGU counterpart share for capacity building should be required to enhance LGU involvement and community participation in project planning, implementation and monitoring. DILG MC 2013-70 has initiated the accreditation of CSOs to strengthen their participation in local special bodies such as the local development council and health board. Mobilization of these accredited CSOs/ private sector to help in monitoring soundness, progress and impacts of WS projects should be encouraged at the LGU level.

3. Capacity building - P3W did not include capacity development as part of project implementation. Again, in this regard, there is marked improvement in the Salintubig Program. Capacity development has been a salient component of the Salintubig Program. A regular budget has been allocated for capacity development under the Program. The LGUs have also been required to allocate a portion of their counterpart share for capacity development activities. Program implementors (NAPC, DILG, DOH, and LWUA) have been trained in the various aspects of project development and implementation including water utility governance and improvement. The trainings provided for LGUs covered FS and DED preparation, construction supervision and fund management and WSS sector plan preparation and O&M and were conducted in a phased manner based on their progress in project implementation.

However, capacity development needs to be a continuing effort. Given the duration (2-3 days each phase) of the trainings on FS and DED preparation, procurement and construction supervision and business planning including tariff setting and ring-fencing under the Salintubig program, they will at most familiarize and orient the LGUs on the processes only. They will need refresher courses or consultants for mentoring on hands-on application. LGUs particularly need assistance in FS and DED

preparation to ensure soundness in design and proper implementation of their WS projects. Organization of the beneficiaries and capacity building for the water operators on O&M will be provided by the LGUs. The LGUs will need guidance or TA on the conduct of capacity development activities for the operation of WS projects specifically in setting up the management systems.

Recommendations: DILG can link the LGUs with technical assistance service providers from the WATSAN regional hubs organized by DILG, LGA LOGOTRIPhilNet and the Accredited Technical Service Providers (ATSP) Program of the NWRB²⁴ for their specific capacity building requirements. LGUs in particular can engage WDs and SUCs on a government to government arrangement, through a MOA, in the preparation of FS and DEDs. As part of policy, LGUs can charge up to 6% of the total project cost for FS and DED preparation. With the assistance of accredited service providers, DILG may no longer procure the services of consultant engineers to assist the LGUs, only for assistance in the review of the proposals and designs. This arrangement is expected to lessen time allocated for project proposal preparation and review.

4. Funds management and disbursement – The P3W funds for the construction of the projects were not downloaded; rather the infrastructure facilities were constructed by the DPWH DEO on a turnkey basis. Most often, LGU and beneficiary barangays were not informed of the project cost, thus could not validate the quality of materials and constructed facilities (designs and plans were not even prepared or turned over to the LGUs).

Fund management and disbursement under the Salintubig Program has been made more transparent and accountability measures are put in place linked with fund

²⁴ The WATSAN hubs are regional bodies organized by DILG comprised of a pool of trainers, resource persons and experts from the academe, civil societies (NGOs, CBOs, civic clubs, professional organizations), WS Providers (WDs, water supply entrepreneurs, Sanitation providers) and Local consulting firms who can be tapped for training, mentoring and coaching LGUs and communities on the different aspects of planning and management of WATSAN facilities. WATSAN members can also share the use of their facilities for training, research, water quality testing, and other activities necessary to support WATSAN development and management. Local Government Academy (LGA), the capacity development arm of DILG, oversees the operations of the Regional Hubs.

The Local Governance Training and Research Institutes - Philippine Network, Inc. (LOGOTRIPhilNet) is a network of local resource institutes (academe, civil societies, professional organizations) also organized by the Local Government Academy (LGA). Institutional members apply their specialized field for accreditation and are assessed based on developed curriculum and capacity to deliver the services. The network, through its accredited LRIs, provides the following services: a) technical advisory services; b) training; c) study tours; d) research studies; e) documentation; f) knowledge management; and g) staff exchange. Some members are also members of the WATSAN hub. (<http://pcglg.org/index.php/9-organization/19-logotriphilnet-lga> accessed on August 2, 2015)

The ATSP Program provides a roster of experts who have been accredited by the NWRB to provide advisory and technical, institutional or financial assistance to water utilities (WUs) on their operations and/or assist them in their water permit, CPC or tariff setting/adjustment application at affordable standard prices. Eligible services include assistance in formulation/review of business plans, formulation of operations manual and customer service code and conducting of performance audit, tariff proposal preparation or review, and formulation of programs to improve financial efficiency, internal controls and financial management. NWRB also established the ATSP Revolving Fund to provide bridge financing for fees of experts paid in lump sum at the end of each assignment. WUs can amortize this loan over a 12-month period starting from the fifth month after release of funds to the ATSP (www7.denr.gov.ph/NWRBACCREDITATIONSystem/ accessed on August 2, 2015).

releases. The opening of the trust account, strict observance with procurement guidelines and enforcement of compliance with documentary requirements for fund release based on accomplishment of project outputs provide safeguards for the utilization of the grant. However, these processes take time to accomplish resulting in delay in funds releases.

Recommendations: The proposed Unified Financing Framework (UFF)²⁵ includes an output-based aid (OBA) mechanism for the grant program. In an OBA mechanism the grant is contingent on an agreed output or performance, such as basing it on the number of eligible beneficiaries connected to safe water supply. Once the agreed outputs or performance are verified to have been delivered or achieved then grant funds will be downloaded to the recipient. This mechanism has the benefit of ensuring outcomes are achieved. However, this assumes that the recipient has a means of advancing the funds and the capability to manage the implementation of the project. In other countries, Kenya for example, the utilities or the local government got bridge financing from lending institutions, using the grant as the primary loan collateral. The lenders became monitors of project implementation as it was in their interest to have the utility or local government complete the project and get the grant award. In our case, bridge financing can be secured from the Municipal Development Fund Office, LWUA or GFIs.

As regards capability for project implementation, the UFF includes a separate technical assistance grant component that can be tapped prior to the application for capital grant funds. The technical assistance can cover not just the project construction but the management and operating system.

5. Water source assessment and validation –The identification, assessment and validation of the water source are pre-requisites to project preparation. Uncertainty of the water source has been an issue in many areas and water source development has taken substantial time and resources for many of the LGUs and delayed project implementation. Some LGUs needed to conduct geo-resistivity studies to identify groundwater sources or hydrology and hydro-geologic studies to estimate quantities and check quality of water from spring or surface water sources. Moreover, the determination and payment of royalties of private lands often delay confirmation and development of the water source and water permit application. For LGU-owned lands, the signing of MOAs assigning the land where the source is developed to the WS operator is easier done but the legal right to use the water still rests on the acquisition of a water permit.

Recommendations: Water source development is a project itself that would need funding and technical assistance services. Government should reconsider including water source development as a separate project. This approach will lessen the risk of insufficient water supply at operation stage, as being experienced now by many

²⁵ The UFF study proposes a financing framework for the whole WSS sector and recommends technical assistance grants, output-based aid and viability gap funds. The framework was endorsed by the NEDA Infrastructure Committee and had been proposed for discussion by the NEDA Cabinet Committee. (Refer to Grant Program for Output-Based Aid, World Bank and AusAid. May 4, 2015. Philippines Unified Financing Framework for Water Supply and Sanitation. The International Bank for Reconstruction and Development.

Salintubig projects, as well as contribute to more efficient use of scarce water resources (consistent with integrated water resource management principles and strategies of the government). This subprogram can be undertaken by a national government agency (such as NWRB, DILG or LWUA). Priority should be given to water stressed areas, or where sources are difficult to identify. In areas where the source is apparent, e.g., spring sources, verified groundwater sources, the grant recipient can be allowed to submit a proposal including source development.

The subprogram for source development can also include developing strategies for source development such as PPP bulk water supply arrangements. It should also rationalize the option of building a number of decentralized sources (mostly groundwater) compared to say surface water source development that can serve a cluster of barangays or LGUs.

6. Monitoring and evaluation – Despite the clear responsibilities for M&E and development of an M&E framework and manual for Salintubig Program, the system for monitoring program/project outcomes and impact has yet to be operationalized.

Recommendations. The gap in Program outcome and impact evaluation needs to be addressed. The current progress and process monitoring system should be expanded to include outcome and impact monitoring. This implies allocating higher budget for M&E. Other recommendations on M&E are expounded in Section 6 of this report.

4.4.2 Roles of Implementing Agencies

An assessment of the roles and performance of the implementing agencies and the LGUs point to the rationalization of roles and need for capacity building to improve the implementation of future grant programs for WSS. Below are the findings and recommendations:

Agency /LGU Roles	Activities/ Performance	Recommendations
<p>a) <u>NAPC</u></p> <p>Lead coordinating agency in the implementation of the Salintubig Program</p> <p>Overall responsibility for monitoring and evaluation</p> <p>Study and recommend institutional, financial and regulatory arrangements to support continuing improvement of service levels in recipient LGUs</p> <p>Secretariat to PSC</p>	<p>NAPC has performed coordinating role in terms of providing policy directions and harmonizing operational guidelines and monitoring and reporting forms of implementing agencies. With a very lean staff and no presence at the sub-national level, it has been limited to fully undertake its monitoring and evaluation functions. Its PMO is mainly manned by contractuels and it needs to install measures to ensure the continuity of efforts and upkeep of information on the</p>	<p><i>As part of its mandate to craft anti-poverty strategies, NAPC should continue to identify poor sectors deserving of WSS grants.²⁶</i></p> <p><i>Given its limited resources and presence at the local level, it will be constrained to serve as lead agency in the conduct of M&E for WSS grant programs. However, it can continue to be lead convenor and advocacy arm for the grant programs using</i></p>

²⁶ Under the UFF, it is LWUA as designated Technical Secretariat and Grant Administrator that will prioritize the needs of WSPs. (page 45 of the GPOBA, World Bank and AusAid. Philippines Unified Financing Framework for Water Supply and Sanitation, May 4, 2015. The International Bank for Reconstruction and Development.

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Agency /LGU Roles	Activities/ Performance	Recommendations
	P3W and Salintubig Programs. NAPC has depended on the budget allocation for M&E carved from the DILG allocation to conduct its coordinating and monitoring functions. Its monitoring role has thus focused on consolidating progress reports from DILG, DOH and LWUA and conduct of case studies on selected project sites to assess consistency of activities with the program guidelines and technical standards and outcomes of completed WS projects.	<i>results of studies and M&E information.</i>
<p>b) <u>DILG</u></p> <p><u>OPDS-WSSP MO</u> Develop and implement cap dev and infrastructure investment strategies Establish collaborative partnerships Provide funding requirements for approved project proposals and requirements of NAPC, DOH and other agencies for technical support for program implementation Monitor project implementation</p> <p><u>DILG-ROs/POs/MLGOOs</u></p> <ul style="list-style-type: none"> DILG-PDMUs are responsible for the review and approval of the LGUs' FS and DED, fund management and disbursement, inspection of construction works of the LGUs if done by administration, and monitoring and reporting not only of the Salintubig Program but also of other DILG managed programs. 	<p>DILG's decentralized structure from national to municipal level makes it an appropriate agency to lead the Salintubig Program implementation. DILG has a well-defined program implementing structure and a dedicated management unit for water supply and sanitation (WSS PMO).</p> <p>DILG has developed training modules and phased capacity development programs for LGUs. To facilitate provision of technical assistance to the LGUs, it organized the WATSAN regional hubs. Through MOAs, it has established working arrangements with the relevant NGAs, NGOs, academe and other and collaborated with other government and donor-assisted programs to implement Program activities. It comes up with the annual shortlist of waterless municipalities and barangays for the allocation of the grants. It has established an M&E process with a web-based reporting system (PPMS). However, the system has focused so far on progress and process monitoring.</p> <p>The DILG RO/PDMUs and MLGOOs perform key roles in facilitating project implementation at the local level.</p>	<p><i>The recommended UFF for the WS sector recognizes DILG's role in providing inputs on priorities that need to be addressed in LGUs, especially in areas that are not covered by the WDs.</i></p> <p><i>DILG will need technical assistance in enhancing its capacity in a) capacity development interventions for LGUs in the management and sustainability of their WS systems; and b) development of framework and operational guidelines in enhancing its present M&E system and database and knowledge management to include sustainability and outcome monitoring of WS systems.</i></p> <p><i>More funds need to be allocated for the operationalization of the expanded M&E and conduct of impact evaluation studies on Salintubig Program.</i></p> <p><i>The mobilization of the WATSAN hubs and linkage with technical service providers from WDs, SUCs, NWRB's ATSP Program and LGA's LOGOTRIPhilNet in provision of technical assistance in FS and DED preparation and O&M and sustainability of the WS for the LGUs and BWSAs and</i></p>

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Agency /LGU Roles	Activities/ Performance	Recommendations
<ul style="list-style-type: none"> POs/MLGOOs provide support in terms of progress and process monitoring 	<p>The DILG ROs only have a few engineers mostly job orders and may not be able to conduct water source validation and field inspection of construction works on a regular basis. The MLGOOs would be in the best position to monitor and report on project implementation but they are not technically equipped to conduct these activities. The services of consultant engineers have been procured to provide TA on DED preparation for the LGUs and review of FS and DEDs to augment the PDMUs' capacity.</p>	<p><i>coop operators should be actively pursued.</i></p> <p><i>The WSS PMO, currently an ad hoc unit, has to be established as an organic staff under the DILG structure to institutionalize its functions. The capacity of DILG ROs and POs in outcome monitoring also needs to be strengthened.</i></p>
<p><u>DOH</u></p> <ul style="list-style-type: none"> Assist DILG in conduct of cap dev activities on water quality and sanitation Assist NAPC in monitoring water and sanitation indicators and targets Through the CHDs, assist DILG ROs in the assessment of project sites and review of FS and DEDs for under thematic areas Monitor health outcomes of the WS projects, particularly on the sustainability of the water quality and reduction of waterborne diseases 	<p>DOH's Environmental and Occupational Health Office (EOHO) implemented and monitored project implementation with the concerned Centers for Health Development (CHDs) at the regional level. Funds disbursement and project monitoring take time because DOH does not have provincial and municipal units.</p>	<p><i>DOH will need to strengthen its capacity to provide technical assistance in the following: a) development and operationalization of a sustainable system for water quality testing, and monitoring ; b) provision of assistance to LGUs in the preparation of water safety plans; and c)development of a localized system of outcome-based monitoring of water quality and water-borne disease reduction</i></p> <p><i>The latter has also been recommended under the UFF study to ensure that information on water-borne and sanitation-related diseases and health impacts of WSS programs are factored in establishing priorities to improve water services.</i></p>
<p><u>LWUA</u></p> <ul style="list-style-type: none"> Implement the provision of potable water to waterless municipalities with WDs Assist DILG in cap dev activities particularly on the O&M WS systems Identify target areas based on the list of 	<p>LWUA's Special Projects Office (SPO) manages the Salintubig Program grant and deals directly with the recipient WDs. LWUA has provided the Salintubig grants on a grant-loan basis based on its roadmap. It also administers funding assistance from other government funded programs such as the DPWH Tourism Water. The SPO coordinates and</p>	<p><i>LWUA should continue to serve as the executing arm for WDs but should abide by the WSS program guidelines. It should also be tapped to mobilize WDs in providing technical assistance on O&M to LGUs and other service providers in coordination with DILG. .It needs technical assistance in outcome monitoring.</i></p>

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Agency /LGU Roles	Activities/ Performance	Recommendations
<p>waterless municipalities provided by NAPC</p> <ul style="list-style-type: none"> • Review and approve project proposals of WDs • Provide funding requirements and ensure release of funds for the implementation of the approved WD projects • Monitor project implementation and the disbursement and utilization of the funds 	<p>monitors project implementation by the WDs.</p>	<p><i>Under the UFF, LWUA is recommended to be the Technical Secretariat given its sector knowledge and core technical expertise and Grant Administrator for WSPs. As Technical Secretariat, it will; a) manage grant funds for FSs and investment preparation and PPP arrangements; b) pre-qualify consultants to assist WSPs; c) provide technical assistance to weak WSPs to improve their governance and management systems; and assist WSPs in commercial finance. As Grant Administrator, it will review WSPs' viability gap funding and OBA grant applications and provide technical assistance; disburse grant funds to WSPs based on allocations approved by the INFRACOM and ICC; and monitor WSPs and projects that have accessed financial support. It will also continue to regulate WDs.</i></p>
<p><u>LGUs</u></p> <ul style="list-style-type: none"> • Identify recipient barangays and water sources • Provide counterpart to projects equivalent to 10% of TPC • Organize WATSAN Councils and the Program Management Unit (PMU) • Conduct barangay or community consultations • Ensure participation of CSO in project processes • Implement the WS projects • Prepare Water and Sanitation Development Plans as basis for investments/ funding 	<p>Identification of barangay recipients has been based largely on water source availability, thus, there are barangays that are not provided assistance. The LGUs have organized their WATSAN Councils but mostly for compliance. Community and CSO participation still need to be enhanced at their level especially in WATSAN planning and monitoring.</p> <p>Many LGUs lack the capacity to develop WS project proposals and prepare the DEDs. Some LGUs have the resources to engage consultants but many rely on their MEOs to prepare the DEDs. Based on average performance, the length of project implementation from project preparation to construction takes about 1.5 to almost 2 years. Procurement process and actual construction of WS project take</p>	<p><i>LGUs need capacity building on a) FS and DED preparation to ensure that projects are compliant to technical standards (they may be linked to WDs, SUCs, NWRB's ATSP Program, LGA's LOGOTRIPhilNet and WATSAN hubs for technical assistance); b) water source assessment; c) water quality testing and monitoring; d) set up of appropriate management structure and O&M of the WS systems to ensure their sustainable operations and services. Trainings will include ring-fencing, tariff setting, financial management and strategic business planning to rationalize prioritization of recipient barangays, as well as optimum use of grant funds; and e) development and implementation of their Water and Sanitation Development Plans and to include fund</i></p>

Agency /LGU Roles	Activities/ Performance	Recommendations
	<p>almost half of the time of project gestation. Considering the size and budget for the project, most LGUs implement projects by administration.</p> <p>O&M and sustainability of completed WS projects need to be addressed.</p>	<p><i>sourcing, capacity development, infrastructure requirements, sustainability, among others.</i></p> <p><i>LGUs, CSOs and the communities should also be actively involved in quality and service monitoring involving their WS systems.</i></p>

5 Monitoring and Evaluation Going Forward

This section discusses the aspects of monitoring and evaluation that would be useful for continually determining the efficiency and effectiveness of the Program²⁷. As mentioned in the findings, while the Program guidelines mention monitoring and evaluation, in practice, there is no operational monitoring and evaluation system other than reporting of the physical accomplishments of the projects and the status of the utilization of the disbursed funds to the municipalities.

To ensure a common understanding of the concepts, below are definitions of monitoring and evaluation, culled from the World Bank textbook, Impact Evaluation in Practice by Paul Gertler, et al.²⁸

Monitoring - a continuous process that tracks the progress of the program. It uses data collected to inform program implementation and day to day management and decisions. Using mostly administrative data, monitoring tracks program performance against expected results, makes comparisons across programs and analyzes trends over time. Usually monitoring tracks inputs, activities and outputs, though occasionally it can include outcomes, such as progress toward national development goals.

Impact Evaluation - a periodic, objective assessment of a planned, ongoing or completed project, program or policy. Evaluations are used to answer specific questions on design, implementation and results. In contrast to monitoring, evaluation is conducted at discrete points in time.

Impact evaluation should answer the question, "What is the impact (or causal effect) of a program on an outcome of interest? Beyond this basic question, it can also answer the question: If there are different ways of implementing a program, which is the most effective way?

Both monitoring and impact evaluation are useful for the Program, especially given the magnitude of the resources required to meet the goal of providing access to safe water supply to at least 50% of the population in identified waterless municipalities. They are part of evidenced-based policy making. They allow policy makers to focus on results rather than

²⁷ The discussion of the concepts and methods of impact evaluation essentially summarizes the write up in the Gertler, Paul et.al, Impact Evaluation in Practice, a World Bank Interactive Textbook; see <http://www.worldbank.org/pdt> accessed on 10/15/ 2015.

²⁸ Ibid

the inputs to the Program. They can be used not only to set and track targets, but also to enhance the accountability of program managers, inform budget allocations, and guide policy decisions.

5.1 Monitoring Methodology

The Program monitoring methodology for process evaluation and community empowerment has been described in Section 1.2 of this report. Process evaluation is an important component of an M&E program and complements impact evaluation. It can provide the evaluator information on the number of participants or beneficiaries of the program, status of utilization of resources, problems or issues in implementation, and consistency of implementation with the program guidelines. It can also highlight key lessons from the development process and actual operation. Process evaluation can also provide information critical to impact evaluation, for example, has the baseline data been collected before the program is introduced and is there integrity in the selection of the treatment and comparison groups (those who benefitted and did not from the program, respectively). In addition, it provides information on the cost of implementing the program, which feeds into the cost-benefit analysis.

Impact Evaluation Methodologies

Before going into the alternative methodologies, it is important to first discuss vital elements of impact evaluation, as follows:

Identifying the comparison group- In practice, impact evaluation requires identifying a comparison group to estimate what would have happened to the program participants without the program. Put another way; were the participants better off with the program compared to the absence thereof? Hence a critical component of evaluation methods is identifying the comparison group. However, finding the right comparison group can be tricky since the group has to have the closest attributes to the program participants or the treatment group to ensure that the effect of the program is not diluted or enhanced by some other factors.

Cost-benefit analysis- Impact evaluation can use cost benefit analysis; however not all costs and benefits are quantifiable, hence may not always be representative of the correct impact of the program.

Prospective or retrospective- Impact evaluation can be prospective or retrospective. Prospective evaluations are developed alongside the program design and built into the implementation process. Retrospective evaluations, on the other hand, assess program impact after the program has been implemented, generating treatment and comparison groups, and ex-post. Between the two, prospective evaluation will likely produce stronger and credible results. Baseline data can be collected to establish pre-program measures of outcomes of interest and comparison groups can be identified before the start of the program. The impact evaluation design can also be fully aligned to program operating rules and the rollout or expansion plan.

Use of quantitative and qualitative data – Impact evaluation can be made more robust with the use of quantitative methods, supplemented by qualitative data gathered through focused group discussions (FGD) or key informant interviews (KII). The FGDs and KIIs will be particularly useful during the 3 stages of an impact evaluation:

- at the outset, in developing the hypotheses that should be addressed in the quantitative impact evaluation;
- at interim stage, in providing policy makers with quick insights on what is happening in the program and
- in the analysis stage, in providing context and explanations for the quantitative results to explore outlier cases of success and failure, and to develop systematic explanations of the program's performance as it was found in the quantitative results.

Clarifying the theory of change – the theory of change describes the causality of the program intervention and the intended outcome. For example, in the case of the P3W and the Salintubig Program, the program is expected to improve access to safe water supply, which in turn will result to lower incidence of water borne diseases.

The theory of change for a program should be developed at design stage and best undertaken in consultation with stakeholders who can agree on a common vision, goals and strategies. The program targets set should be informed by literature or conclusive studies on the degree of the impact of the interventions. For example, in the case of the P3W and Salintubig goal of reducing incidence of waterborne diseases by at least 20% with the provision of safe water supply, what was the basis for it? Is 20% reasonable or is it too low or too high?

A theory of change can be modelled using the results chain, as illustrated below.

Figure 5. Results Chain

Inputs	Activities	Outputs	Outcomes	Final Outcomes
Financial, human and other resources mobilized to support the activities	Actions taken or work performed to convert inputs into specific outputs	Products resulting from converting inputs into tangible outputs	Use of outputs by targeted population	The final objective of the program Long term goals
Basic staffing and other available resources	Series of activities undertaken to produce goods and services	Goods and services produced and delivered, under the control of the implementing agency	Not fully under the control of the implementing agency	Changes in outcomes with multiple drivers
Implementation (SUPPLY SIDE)			Results (DEMAND+SUPPLY)	

Source: Gertler, Paul, et.al.

The results chain has three main parts:

Implementation: The implementation includes inputs, activities, and outputs; areas that the implementing agency should monitor to measure the project's performance.

Results: Intended results consist of the outcomes and final outcomes, which are contingent on behavioral changes by program beneficiaries; hence they depend on how the beneficiaries react to the project implementation. For example when piped water service was offered, did the clients connect to the service? This is an area subject to impact evaluation to measure effectiveness.

Assumptions and risks: These include any evidence from the literature on the proposed causal logic and the assumptions on which it relies, references to similar programs' performance, and a mention of risks that may affect the realization of intended results and any mitigation strategy to manage those risks.

A clearly articulated results chain will help identify appropriate program indicators, for both process and impact. Again, it is useful to engage program stakeholders in selecting these indicators. The acronym *SMART* is a widely used and useful rule of thumb to ensure that indicators used are

- *Specific:* to measure the information required as closely as possible
- *Measurable:* to ensure that the information can be readily obtained
- *Attributable:* to ensure that each measure is linked to the project's efforts
- *Realistic:* to ensure that the data can be obtained in a timely fashion, with reasonable frequency, and at reasonable cost
- *Targeted:* to the objective population.

Apart from selecting the indicators, it is also useful to consider the arrangements for producing the data. **Table 17** lists the basic elements of a monitoring and evaluation (M&E) plan, covering the arrangements needed to produce each of the indicators reliably and on time.

Table 17. Elements of a Monitoring and Evaluation Plan

Element	Description
Expected results (outcomes and outputs)	Obtained from program design documents and results chain
Indicators (with baseline and indicative targets)	Derived from results chain; indicators should be SMART
Data source	Identify secondary sources and where primary data collection is required
Data frequency	Frequency of data availability
Responsibilities	Who is responsible for organizing the data collection and verifying data quality and source?
Analysis and reporting	Frequency of analysis, analysis method, and responsibility of reporting
Resources	Estimate or resources required and committed for carrying out planned M&E activities
End use	Who will receive and review the information? What purpose does it serve?

Risks	What are the risks and assumptions in carrying out the planned M&E activities? How might they affect the planned M&E events and the quality of the data
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Source: Adapted from UNDP, 2009

Impact Evaluation Methodologies

At this point, the alternative impact evaluation methodologies are presented, with the end in view of identifying one or a combination of methodologies most appropriate and practicable for the water supply program.

There are two key concepts integral to these models: causal inference and counterfactual. Causal inference refers to the basic evaluation question; assessing the impact of a program on a series of outcomes is equivalent to assessing the causal effect of the program on those outcomes. The counterfactual is an estimate of what the outcome would have been for a program participant without the program.

The measurement of the counterfactual, require the identification of the comparison group to the treatment group or beneficiaries of the program. To ensure that the measurement of the program impact is reliable, the comparison group should have the same or similar characteristics as the treatment group.

Four impact evaluation methodologies are described below. Note that the key parameter in the selection of the evaluation method is the program's rules for selecting participants. It is important that the evaluation method fits within the context of a program's operational rules. However, this starts from the premise that *all social programs should have fair and transparent rules for program assignment*.

Randomized Selection Method

The randomized selection method is the strongest method in impact evaluation; in particular, it is the gold standard for estimating the counterfactuals. However, it is important that the selection method for the beneficiaries of the program is done by random selection too. Random selection is very much like a lottery among the eligible population on who is prioritized for treatment; in a case where program resources are not enough to accommodate eligible beneficiaries in any given time. As in the case of P3W or Salintubig, annual appropriations of PhP1.5 billion can cover only a small portion of target beneficiaries, hence the need to prioritize who gets the grant funding each year.

Randomized selection method works best for programs with the following characteristics:

- Wide coverage, such as, immunization programs of Department of Health or the primary and secondary public education programs of the Department of Education
- Eligible participants for the program given equal chances of being selected, so much so that a lottery can be used to determine who can benefit first and who does not-- instead of using selection sub-criteria on the prioritization among eligible participants
- Big enough base of eligible population to select randomly both the treatment and observation groups

The key to the method is that when units are randomly selected and assigned to the treatment and comparison groups, that randomized assignment process produces two groups that have a high probability of being statistically identical, as long as the number of potential participants to which the randomized assignment process is sufficiently large. Specifically, with a large enough number of observations, the randomized assignment process will produce groups that have statistically equivalent *averages for all their characteristics*.

Regression Discontinuity Design

The Regression Discontinuity Design (RDD) is an impact evaluation method that can be used for programs that have a continuous eligibility index with a clearly defined cut-off score to determine who is eligible and who is not. For example, to be eligible for the P3W and Salintubig Programs the municipalities should have less than 50% of their population without access to safe water supply.

To apply a regression discontinuity design, two main conditions are needed:

- A continuous measure on which the target population can be ranked, such as a poverty index, or in the case of the water program percentage of the population with access to safe water supply.
- A clearly defined cut-off score, that is, a point on the index above or below which the population is classified as eligible for the program. For example, municipalities with at most 50% only of their population have access to safe water supply are classified as waterless. The cut-off score is thus 50%.

The comparison group could be selected from the units just above the eligibility cut-off. For example the municipalities with say 51-55% of the population with access to safe water supply will likely be similar to the municipalities with say 45-50% of the population with access to safe water supply.

The regression discontinuity measures the difference in post intervention outcomes between the units near the eligibility cut-off. Considering the similar features of the two groups at baseline, the difference in outcomes, post intervention, may plausibly be attributed to the program. However note that its main limitation is that the estimated impact is only valid in the neighborhood around the eligibility cut-off index. Because the method estimates the impact of the program around the cut-off index, the estimated counterfactual cannot necessarily be generalized to the units whose scores are further away from the cut-off index; hence it will not be able to compute for an average treatment effect for all program participants. Moreover, it raises concern on the statistical power of the analysis since it uses fewer observations, given that effects are estimated around the cut-off only. Relatively large evaluation samples are required to obtain sufficient statistical power when applying this method.

With this limitation, the method is not appropriate in answering the policy question of whether the program should or should not continue. However, it becomes appropriate if the policy question is, should the program be cut or expanded, that is increasing the threshold of eligible participants.

In theory, randomized assignment and regression discontinuity design do not require baseline data, but in practice having baseline data will help confirm that the characteristics of the treatment and comparison groups are indeed similar. For this reason, it is recommended including a baseline as part of the evaluation. Moreover, having a baseline data offers other advantages to the evaluator, notably: it enables the evaluator to determine whether the program has different impacts to different groups of the eligible population and the baseline data can serve as an “insurance policy” in case randomized assignment is not implemented. Also, baseline data can add statistical power to the analysis when the number of units in the treatment and comparison groups is limited.

Difference in Differences

The randomized selection and the regression discontinuity design both produce estimates of the counterfactuals based on clear program assignment rules. The difference-in-difference as well as matching (discussed in the next section) methods, offer tools that can be used in situations in which the program rules are not clear or rules by which treatment is assigned. Both methods can be powerful statistical tools. Many times they will be used together or in conjunction with other evaluation methods.

Both difference-in-differences and matching methods require stronger assumptions and more importantly, they absolutely require the existence of baseline data.

The difference-in-differences method compares the changes in outcomes over time between a treatment group and a comparison group. To apply difference-in-differences, all that is necessary is to measure outcomes in the group that receives the program (the treatment group) and the group that does not (the comparison group) both before and after the program. The comparison can come from the unserved segment of the eligible population or identified using matching method. The estimate of the impact is illustrated in **Table 18** below.

Table 18. The Difference-in-differences Method

	After	Before	Difference
Treatment/ enrolled	<i>B</i>	<i>A</i>	<i>B-A</i>
Comparison/ non-enrolled	<i>D</i>	<i>C</i>	<i>D-C</i>
Differences	<i>B-D</i>	<i>A-C</i>	<i>DD=(B-A)-(D-C)</i>
	After	Before	Difference
Treatment enrolled	0.74	0.60	0.14
Comparison/ non-enrolled	0.81	0.78	0.03
Difference	-0.07	-0.18	<i>DD=0.14-0.03=0.11</i>

Source: Gertler, Paul, et.al

The difference-in-differences method computes the impact estimate as follows:

1. Calculate the difference in the outcome (Y) between the before and after situations for the treatment group ($B - A$).

2. Calculate the difference in the outcome (Y) between the before and after situations for the comparison group (D – C).
3. Then calculate the difference between the difference in outcomes for the treatment group (B – A) and the difference for the comparison group (D – C), or $DD = (B - A) - (D - C)$. This “difference-in-differences” is the impact estimate.

The main assumption in this method is the "Equal Trends" assumption. This assumes that without the program, the differences in outcomes over a given period of time between the treatment and comparison group will move in tandem; or outcomes would increase or decrease at the same rate in both groups-- or equal trends in the absence of treatment.

If outcome trends are different for the treatment and comparison groups, then the estimated treatment effect obtained by difference-in-difference methods would be invalid, or biased. The reason is that the trend for the comparison group is not a valid estimate of the counterfactual trend that would have prevailed for the treatment group in the absence of the program.

Matching

The matching method can be applied to any program provided there is a group that has not participated yet. The identification of the comparison group relies on observable characteristics and so requires the strong assumption of no unobserved differences in the treatment and comparison populations associated with the outcomes. In using this method the evaluator has to contend with the "the curse of dimensionality". The evaluator can use few simple variables, hence making it easy to find matches, he runs the risk of leaving out potentially important characteristics; or it can increase the variables but would run the risk of not getting a good match.

One way of dealing with this issue is to use a method called "propensity score matching" (Rosenbaum and Rubin 1983). In this approach, the evaluator does not need to match each enrolled unit to a non-enrolled unit with exactly the same value for all observed control characteristics. Instead for each unit in the treatment group and in the pool of non-enrolees the evaluator computes for the probability that a unit will enrol in the program based on observed values of its characteristics, the so called propensity score. This score is a single number ranging from 0 to 1 that summarizes all of the observed characteristics of the units as they influence the likelihood of enrolling in the program.

Once the propensity score has been computed for all units, then units in the treatment group can be matched with units in the pool of non-enrolees that have the closest propensity score, who then become the comparison group. The difference in outcomes between the treatment and comparison units produces the estimated impact of the program.

Overall, it is important to remember two crucial issues about matching. First, matching must be done using baseline characteristics. Second, the matching method is only as good as the characteristics that are used for matching, so that having a large number of background characteristics is crucial.

Compared to the other evaluation methods, matching is the least robust. First it requires extensive data sets on a large sample of units. Second it can be performed on observed

characteristics only, so to identify a valid comparison group, there should be no systematic differences in the observed characteristics. Since this cannot be proven, then it is assumed that none exists-- a very strong assumption that may cast doubt on the analysis. Hence matching should be resorted to when the other three methods are not possible.

The ideal conditions in the use of the four evaluation methods are summarized below juxtaposed with the conditions of Salintubig. This way it will become apparent what is the most appropriate option, considering a retrospective view.

Ideal Conditions for Evaluation Methods	Salintubig Attributes
1. Randomized Selection	
Selection of beneficiaries from among the eligible group can be done in a random process	Selection of beneficiaries is based on sub-prioritization criteria; in practice the criteria were not followed and basis for selection was murky
2. Regression Discontinuity	
Should have sufficient data for beneficiaries around the cut-off score	Most of the beneficiaries of the program are below the cut-off score Significant portion of the beneficiaries are not even among the eligible population
3. Difference-in-difference	
Requires baseline data Assumes equal trends between the treatment and comparison groups; hence the advisability of having a pre-program implementation survey on the trend of the causal inference of the program. In particular without the program what would have been the improvement or regression on the access level and its impact on the incidence of water borne diseases	No baseline data Eligibility criteria for the beneficiaries make the band narrow; similar attributes augur well on equal trends assumption
4. Matching	
Requires baseline data Requires large data sets to find the appropriate match for the treatment group May use propensity score matching to construct the comparison group	No baseline data Will likely be easy to find from among the eligible population a comparison group from the unserved segment

None of the four methods work perfectly for an ex-post evaluation of the Salintubig Program given the lack of baseline data and counterfactual selection before the program started. In view thereof, should the government design a successor program, the data requirements and impact evaluation design should be set beforehand.

5.3 Recommendations for the M&E Plan of the Next Program

With the conclusion of the Salintubig Program in 2016, an opportunity opens for the next program to deliberately include a prospective monitoring and evaluation plan as it is being designed.

Results Framework

The results framework of the program is presented in **Figure 6** and the elements of the M&E plan in **Table 19**.

Figure 6. Results Framework

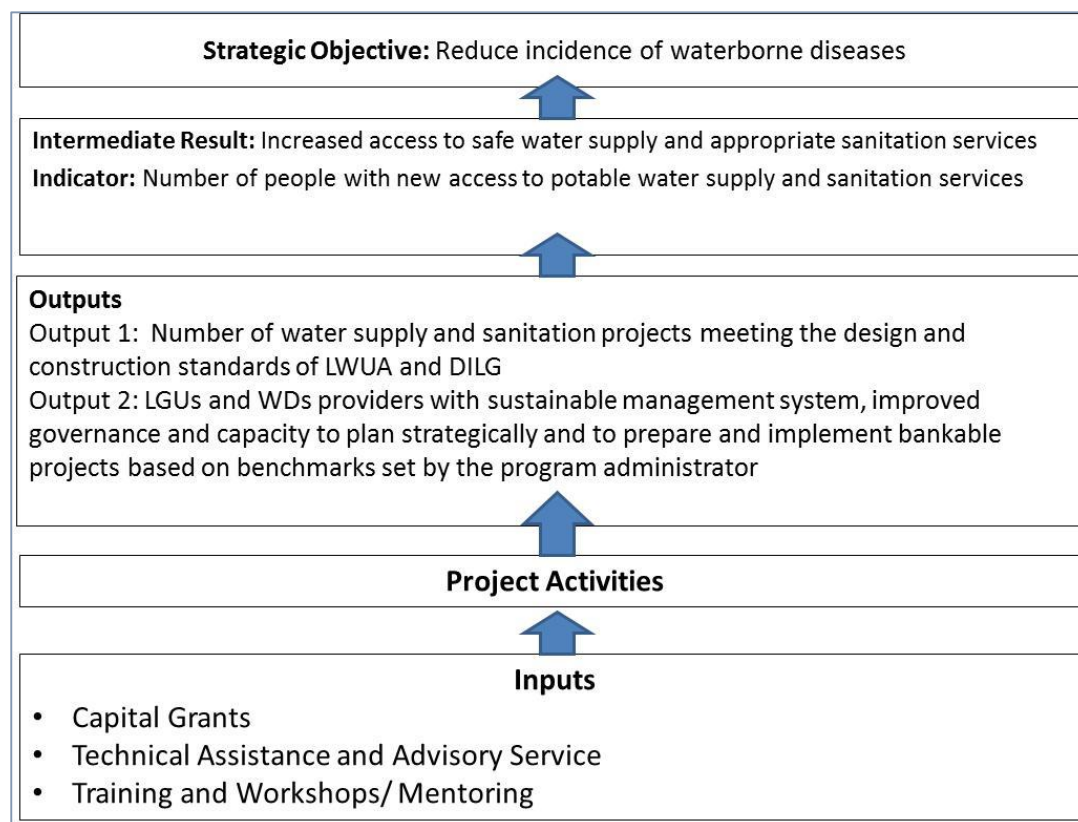


Table 19. Elements of the M&E Plan

Element	Description
Expected results (outcomes and outputs)	Decrease in incidence of waterborne diseases Viable and sustainable utility operation
Indicators (with baseline and indicative targets)	Increase in population with access to safe water supply Utilities meeting standards of management and operations
Data source	NHTS for the selection of the eligible population FHSIS (include baseline data on water supply and sanitation access and level of water supply service)
Data frequency	NHTS collected every 3 years FHSIS collected annually Data on utility operation- to be collected annually

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Responsibilities	<p>NHTS- DWSD</p> <p>FHSIS- DOH</p> <p>Program monitoring- program administrator</p> <p>Impact evaluation- independent entity</p>
Analysis	<p>Impact evaluation related to reduction of the incidence of waterborne diseases- once, suggested to be conducted in 2019</p> <p>Outcome monitoring on utility operation to be done annually reckoned against utility key performance indicators</p>
Reporting/ End Use	<p>Reporting to the Program Steering Committee</p> <p>Impact evaluation report to inform decision to continue and/or expand public resources for the program</p> <p>Outcome evaluation on utility operations to inform technical assistance interventions; utility reform program and financing schemes for expansion of the service beyond the investments from the grant program</p>
Resources	<p>NHTS will be undertaken with or without the water supply and sanitation program, hence no additional resources required to do this survey</p> <p>FHSIS- DOH to invest additional resources to conduct municipality level survey</p> <p>Outcome evaluation will require constant data gathering by program beneficiaries (LGU or WD) and the program administrator. The data gathering is best to be complemented with interviews or focused group discussions with the beneficiaries to get qualitative insights on the effectiveness of the program. It will also require an independent validator of the performance of the utilities.</p>
Risks	<p>The use of the difference-in-differences method will be applied without the benefit of two surveys prior to the implementation of the program, needed for the equal trends analysis. As such, the evaluators will have to strongly assume equal trends in comparing the baseline and the post intervention survey.</p> <p>Validation of performance indicators is critical to ensuring the effectiveness of the technical assistance and capacity building component of the program. The program administrator may not have sufficient staff with the required capability to do the validation. This can be mitigated by outsourcing validation such as using the Accredited Technical Assistance Providers registered with NWRB or accredited staff from water districts.</p>

What is the recommended evaluation method?

The study team recommends the use of the difference –in-difference method, as it is deemed to be the most appropriate option given the rules of the program in the selection of the eligible population and the prioritization criteria within the group. As in any of the four methods, it cannot be overemphasized that the key assumptions in the validity of the evaluation are clear, transparent and consistently applied rules in the selection of beneficiaries. The results of the impact evaluation will lose integrity if there are insertions to the eligible and top priority beneficiaries.

The analysis will be at the household level and may be limited to selected municipalities considering the cost of the evaluation. The treatment and comparison groups can be identified based on the prioritization criteria for the beneficiaries. It is expected that the next program will also phase implementation given budgetary constraints, and therefore prioritize based on the immediacy of needs.

The study team recommends enjoining DOH to expand the FHSIS survey to cover not just incidence of waterborne diseases but to include data on access of water supply and sanitation services and level of service.

Moreover, it is recommended to DOH to gather data at the municipality level, tag households during the baseline survey so that the post intervention survey can go back to the same households. Statistical robustness is importance hence the need to consult a statistician for the adequate number of samples.

There is a pending policy reform with the NEDA Board for a unified financing framework (UFF) for the sector (see **Box 2** on the salient points of the UFF). If this is adopted, the revised program will include a bigger technical assistance component and an output-based aid mechanism for the capital grant program. Thus the evaluation should focus as well on the effectiveness of the technical assistance component in terms of ensuring the services can be continued and improved.

In particular, the impact evaluation on incidence of waterborne diseases should be complemented by:

- i. evaluation of the outputs related to:
 - Viability and sustainability of operations
 - Capacity to expand operations after the grant support to expand access to safe water to at least 50% of the population
 - Governance and accountability of LGUs
- ii. process evaluation, as was done in this study, particularly the effectiveness of the administrative structures and the effect of the output-based-aid mechanism on enrolment of eligible LGUs and WDs. This should of particular interest

Box. 2: Key Performance Indicators for Water Utilities

- Hours of water availability per day
- Water availability (liters per capita per day)
- Water service coverage
- Water pressure (psi)
- Drinking water quality (according to the Philippine National Standard for Drinking Water)
- Collection efficiency
- Operating ratio
- Non-revenue water
- Staff per 1000 connections
- Average tariff per cubic meter

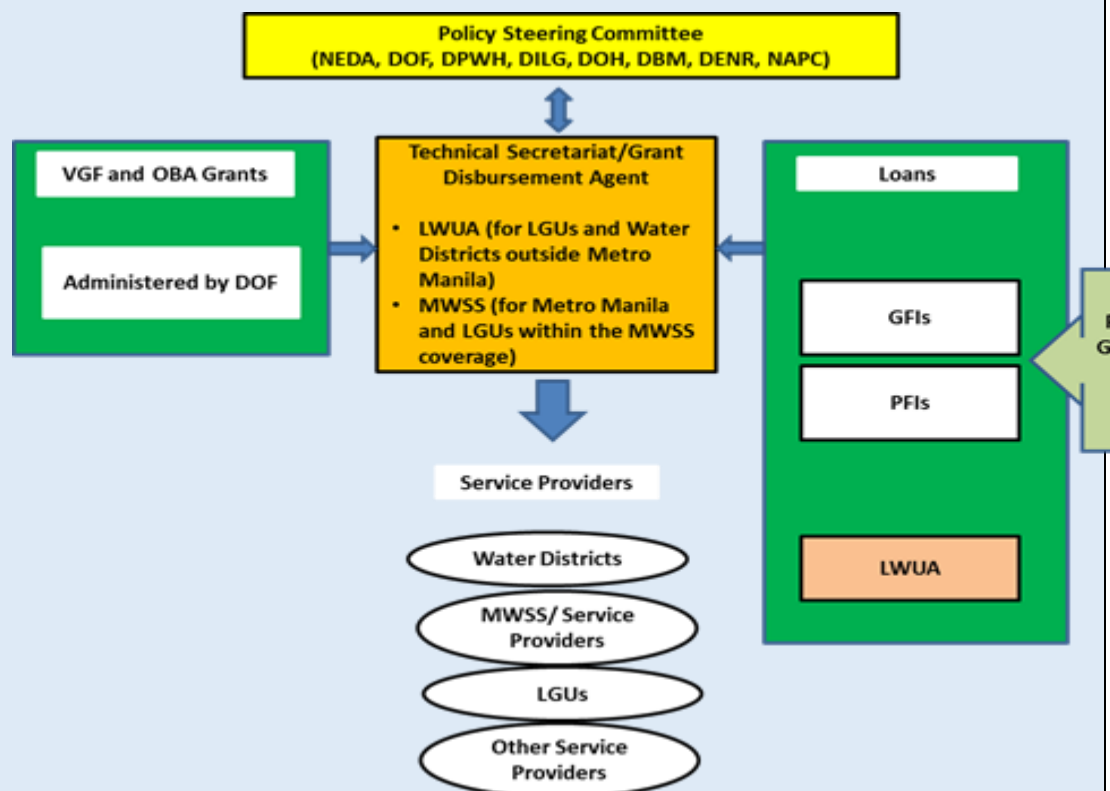
considering that global experience show OBA works on the condition that the project implementer has the ability to defray the cost in advance and the technical capacity to execute the project.

Standards should be set on the sustainability of operations and in particular the ideal management system and governance structure. For consistency with what the sector uses, the key performance indicators adopted for benchmarking of utilities should be used as indicators for evaluating utility operation (see Box 3).

Box 3. Highlights of the Proposed Unified Financing Framework for Water Supply and Sanitation

1. The Unified Financing Framework is based on a study commissioned by NEDA with the assistance of WB and AusAid. The Unified Financing Framework (UFF) should be implemented as a new National Water and Sanitation Program (NWSP). This program would consist of the Unified Financing Framework, and the Priority Investment Program to be developed by the Government. An initial list of potential investments has been identified; this needs to be refined and prioritized. The objective of the UFF is to unify the financing of the sector. Thus, all programs that are currently focused on expanding water and sanitation access should follow the UFF.

The overall UFF structure and implementation is shown in the figure below:



The framework includes a mix of market-based financing and public resources for viability gap funds and output-based aid grants administered by DOF, both for technical assistance and capital investments.

VGF and OBA grants will be used to complement loans. On an annual basis, budget allocations will be made to support investments, based on proposals made by the

Technical Secretariat drawn from the feasibility studies. VGF will be based on affordability criteria. For a WSP to receive VGF grants, conditions on governance, project readiness and commitment to meet regulatory requirements should be met. To provide connections to the poor, Output Based Aid (OBA) will be used for water and/or wastewater. For a WSP to receive OBA grants conditions on governance, project readiness and verification mechanisms should be met.

Technical Assistance Grants. There are three types of Technical Assistance proposed: (a) Project Feasibility Grants; (b) Project Implementation Grants; (c) Technical assistance for PPP and amalgamation of WSP, if needed. Grant eligibility for Technical Assistance will be demand driven. All WSPs are eligible to receive the above grants as long as they are distinct and autonomous legal entities, and have clear and accountable governance provisions.

Credit enhancement needed to increase lending in the sector. The VGF and OBA grants will help to increase the financial viability of projects, to provide additional assurances to the GFIs and PFIs, a credit enhancement mechanism is proposed through increasing the capital of LGU GC. With the expanded use of the guarantee facility, it is expected that the PFI and GFI will have the same level playing field leading to more commercial lending in the sector.

In terms of institutional responsibilities, these are summarized below:

- A Policy Steering Committee, including the same members as that of the existing Investment Co-ordination Committee (ICC) will head the operations of the UFF in planning, monitoring, and funding activities. Responsibilities for individual agencies are as follows:
 - i. NEDA will lead in the formulation and implementation of policies leading to economic development for the country and in a coordinating role as the Secretariat for ICC.
 - ii. DOF will advise on the fiscal affordability of public investments for the sector and have an oversight role for LWUA and the GFIs to ensure that operations are aligned with the UFF. DOF is also best placed to lead the enhancement of the guarantees that can be provided to the GFIs and PFIs by the LGU GC.
 - iii. DPWH will monitor sector development and oversee LWUA and MWSS.
 - iv. DBM will provide inputs on the grants for VGF and OBA and the budget support that would be provided for Technical Assistance.
 - v. DILG, DOH and DENR will provide information on LGUs, local health problems and environmental conditions respectively to inform prioritization.
 - vi. LWUA will be a development lender, grant administrator and technical secretariat for WSPs outside Metro Manila; additional capacity building and reforms will be required for LWUA to take on this role.

<p>vii. MWSS will administer grants, facilitate lending, and regulate in the Metro Manila area. In light of the higher technical capacities of the MWSS concessionaries, it is not expected that MWSS will need to offer technical support.</p> <p>viii. Implementation should be led by the WSPs, with support and oversight from public agencies. As public resources are being used, the WSPs will have to report to the public agencies on the use of the funds and the progress made in improving services.</p> <ul style="list-style-type: none"> • LWUA will be the technical assistance provider. The Technical Assistance needs will be higher outside Metro Manila and a standardized training program is needed through accredited providers. There are three types of Technical Assistance proposed: (a) Project Feasibility Grants; (b) Project Implementation Grants; (c) Technical assistance for PPP and amalgamation of WSP, if needed. Grant eligibility for Technical Assistance will be demand driven. All WSPs are eligible to receive the above grants as long as they are distinct and autonomous legal entities, and have clear and accountable governance provisions. <p><i>Source: World Bank, Unified Financing Framework Study, 2015</i></p>

When should impact evaluation be done?

Considering that the new program will likely run for six years-- coinciding with the term of the next president, the impact evaluation could be midterm, in 2019, which is enough time for the subprojects to be completed and utilized; as well as enough time to revise the program should there be negative findings. It also recommended undertaking the process evaluation at this time. However, the evaluation of outputs should be done annually so that measures can still be taken to ensure sustainability and capacity to deliver quality service. The output evaluation will require the preparation of standards and benchmarks on the ideal management system (addressing current weakness of too many disaggregated and poorly managed systems) and performance indicators.

What are the data and data sources required to do impact evaluation?

The results of the 2015 NHTS could be used to validate the list of waterless municipalities and get the baseline characteristics of the eligible population. However, the NHTS has a missing critical component, the incidence of water borne diseases—the main element of the causal inference of the program. Hence as previously suggested the next expedient option is to expand the FHSIS coverage of access and level of service, as well as disaggregating the data collection at the municipal level.

Below are the required data sheets for monitoring the program:

Performance Indicator Data Sheet 1
Strategic Objective: Reduction of the incidence of waterborne diseases
Intermediate Result: Increased access to safe water supply
Indicator: Number of people with improved access to safe water supply
A. Description

Performance Indicator Data Sheet 1
Definition: This indicator will focus on incremental served population with access to potable water supply, referring to new connections. Potable water supply means the source meets Philippine National Drinking Water Standards, and regularly tested based on the prescribed frequency by the Department of Health.
Unit of Measure: Number of persons with new access to potable water supply
Disaggregated by: Water Districts (WDs) or LGU-operated water systems. If desired, the numbers can be converted into number of men and women benefited using the average family size and male-female ratio in the LGU.
B. Plan for Data Collection
Data Collection Method: Annual collection by DOH of the incidence of water borne diseases at the municipality level Annual recording of new connections or households served by the LGU or WD Annual collection of data on utility performance indicators
Data Source(s): DOH household survey under FHSIS Demand projections stated in the project feasibility study and LGU data on actual households served Water utility operating and financial data
Timing / Frequency of Data Collection: Annual
Cost of Collection: Cost of generating data will be part of the grant program
Responsible Organization/Individual(s): Program administrator

Performance Indicator Data Sheet 2
Strategic Objective: Reduction of the incidence of waterborne diseases
Intermediate Result: Increased access to sanitation services
Indicator: Number of people with appropriate sanitation services
A. Description
Definition: This indicator will focus on incremental served population with access to appropriate sanitation facilities at the household level based on the standard of DOH and wastewater treatment services.
Unit of Measure: Number of persons with new access to sanitation facilities or wastewater treatment services
Disaggregated by: Water Districts (WDs) or LGU-operated water systems and sanitation services. If desired, the numbers can be converted into number of men and women benefited using the average family size and male-female ratio in the LGU.
B. Plan for Data Collection
Data Collection Method: Annual collection by DOH of the incidence of water borne diseases at the municipality level Annual recording of new sanitation facilities/services
Data Source(s): DOH household survey under FHSIS Demand projections stated in the project feasibility study and LGU data on actual households served
Timing / Frequency of Data Collection: Annual
Cost of Collection: Cost of generating data will be part of the grant program
Responsible Organization/Individual(s): Program administrator

Performance Output Data Sheet 1	
Strategic Objective: Reduction of the incidence of waterborne diseases	
Intermediate Result: Increased access to water supply and sanitation services	
Indicator: Number of with potable water supply and appropriate sanitation services	
Output: Number of water supply meeting the design and performance standards of LWUA or DILG and sanitation projects meeting the standards of DOH	
A. Description	
Definition: This output ensures that facilities are up to par with accepted design and performance standards; for example in terms of water supply availability, adequacy, pressure and quality of water.	
Unit of Measure: Implemented projects meeting standards	
B. Plan for Data Collection	
Data Collection Method: Record projects approved for implementation or implemented	
Data Source(s): Status reports of the program administrator <ul style="list-style-type: none"> • Review of detailed design • Review of as built plans 	
Timing / Frequency of Data Collection: Annual	
Cost of Collection: Cost of generating the information will be part of the grant program	
Responsible Organization/Individual(s): Program administrator	

Performance Output Data Sheet 2	
Strategic Objective: Reduction of the incidence of waterborne diseases	
Intermediate Result: Increased access to water supply and sanitation services	
Indicator: Number of people with potable water supply and appropriate sanitation services	
Output: LGUs and WDs providers with sustainable management system, improved governance and capacity to plan strategically and to prepare and implement bankable projects	
A. Description	
refers to the management structure of the utility, in particular if it is established using sound governance and accountability principles, and if its operations have adequate economies of scale that will support the long-term viability of the utility. This set up is in contrast with the current practice of LGUs to set up decentralized systems and leaving the operation to loosely formed barangay associations.	
management systems under a water district or if there is no water district, under a ring-fenced economic enterprise of the LGU responsible for the overall management of decentralized systems or if feasible an integrated system.	
Benchmarking of utilities based on the sector's key performance indicators	
B. Plan for Data Collection	
Data Collection Method: Qualitative assessment of the technical competence of the LGU or WD by the program administrator. The qualitative assessment will be based on benchmarks set for the management system.	

Performance Output Data Sheet 2	
Data Source(s):	Reports from program administrator
Timing / Frequency of Data Collection:	Annual
Cost of Collection:	Cost of generating the information will be part of the program funding
Responsible Organization/Individual(s):	Program administrator

6. Development of WSS Database

The study was accompanied by the development of a database on WSS to support the implementation of the recommended M&E system.

Contents of the Database. The following information can be gathered from the database:

Water Supply (2000 & 2010)

- No. of HHs with access to safe water (categorized by type of system: Levels 1-3; bottled water)
- Access levels (Proportion of HHs with access to safe water/No. of HHs)

Sanitation (2000 & 2010)

- No. of HHs with & without access to sanitary facilities;
- Access levels (Proportion of Household with & without access to sanitary facilities)

Poverty Incidence (2006, 2009, 2012)

Incidence of Waterborne Diseases (2000, 2007, 2010)

- No. of cases/ (total pop/100k)

Data on population and access to WSS were gathered from the CPH of the PSA, poverty incidence from the Small Area Estimates, also by the PSA, and cases of waterborne diseases from the FSHIS of the DOH. Data are disaggregated by rregion; province; city; and municipality.

Uses of the Database. The data can be used in a) ranking and prioritization of municipalities; b) monitoring access levels by municipality; and c) estimating investment requirements. Since the data were not gathered in the same years, a multi-step ranking and prioritization is recommended as follows:

- a) use access level for selection of waterless municipalities;
- b) apply poverty incidence for ranking those deserving of grants; and
- c) apply incidence of diseases to demonstrate severity of problem.

The database is lodged with the PIDS until a pertinent agency will be identified for its upkeep and updating. There will be a placeholder at the existing PIDS Economic and Social Database at <http://econdb.pids.gov.ph/#> for the WSS database and the PIDS is targeting to launch the municipal-level database within 2016.

Related Data Sources and Links. Other data on WSS can be accessed from the following links:

- a) DILG Program and Project Monitoring System (PPMS) on the Salintubig Program subprojects at ppms.dilg.gov.ph. The link provides data on the:
 - Number and location of recipient LGUs
 - Types of WS project
 - Project cost
 - Stage and status of implementation with pictures
 - For completed projects, the no. of target households and actual beneficiaries
- b) DSWD's Listahanan and results of the NHTS-PR at <http://listahanan.dswd.gov.ph/> ; and <http://maps.napc.gov.ph/downloads/index.php/2-uncategorised/2-nhts-data>. The link provides municipality and barangay level data on:
 - Number of poor households
 - Number of waterless households
 - Number of households without toilets
- c) NWRB's Listahang Tubig at <http://listahangtubig.cloudapp.net> on the nationwide listing of all water service providers classified by:
 - Management type
 - Level of service

The link provides a directory of participating WSPs with the following content:

- Contact details
- Service area and households served
- Average daily volume of water extracted
- Technical and financial data for Level 3 only
- Other information on operating for profit, expansion of service area, community based organization

The data below will also be made available on the website:

- Dashboard general reports
- Key performance indicators
- Volume extracted
- Sources of water
- Count and status of encoding
- Other reports
- Water utility data inquiry.

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Annex A – A Comparison of P3W and Salintubig Program Guidelines

Feature	P3W	Salintubig Program
1. Who prepared guidelines	NAPC with assistance from Streams of Knowledge, German Technical Cooperation (GTZ) and World Bank's Water and Sanitation program (WB-WSP)	DILG, in coordination with NAPC, DOH, LWUA with TA from USAID PWRFFP; Annual implementation guidelines to DILG ROs and POs and LGUs by DILG
2. Scope of the Guidelines	covered all WSS projects in the "waterless" areas selected by NAPC including those barangays and municipalities with existing and on-going WSS projects under the KALAH-CIDSS program and some foreign donor agencies	covers all WS projects, with local government-sponsored sanitation components in "waterless" areas identified by NAPC, with DOH and DILG, and priority projects in resettlement areas/relocation, poorest communities with high incidence of water-borne and sanitation related diseases and waterless maternity/health facilities
3. Definition of waterless areas	municipalities and barangays with less than 50% water supply coverage	communities where more than 50 % of the poor households do not have access to safe water and with particularly high incidence of waterborne and sanitation-related diseases
4. Criteria for target setting and prioritization	access to safe or potable water; percentage of local counterpart contribution	access level; poverty incidence; and incidence of waterborne diseases (based on the Rationalization Framework for Public Resource Utilization for the WSS sector) ²⁹
5. Basis for determining waterless areas	2000 Census of Population and Housing (CPH)	2010 National Household Targeting System for Poverty Reduction (NHTS-PR) of the DSWD in establishing the number of poor households and their access to safe water; DOH Field Health Services Information System (FHSIS) ³⁰ data in ascertaining the incidence of water-borne diseases (population with acute watery diarrhea and diarrheal cases involving children 0-59 months old)
6. Period of Implementation	2005-2010	2011- 2016
7. Implementing agencies	NAPC acting as overall coordinating agency; from 2005 to 2008 implementing agency was DPWH; from	NAPC as the lead coordinating agency; the DOH provides the health and sanitation related technical assistance; DILG provides the funding and ensures

²⁹ Chapter 3 Article 4 of the Salintubig Implementing Guidelines

³⁰ The Field Health Services Information System (FHSIS) of the DOH provides information different public health programs and designated health statistics as per EO 352 (Designation of statistical activities that will generate critical data for decision-making of government and private sector) issued in 1996. It provides health services data to monitor activities of public health programs on a routine basis (monthly, annually or quarterly from barangay health stations, municipality, province, cities and regions). FHSIS reports from DOH are prepared on annually reflecting provincial and city level data.

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Feature	P3W	Salintubig Program
	2009 to 2010, the fund allocation was transferred to DOH with LWUA as program partner	the implementation of the WS projects through capacity building of LGUs; and LWUA for implementation of WS projects in waterless areas with water districts
8. Target outcomes	<ul style="list-style-type: none"> a) increased access to water supply and sanitation services coverage to at least 50 %; b) reduced incidence of diarrhea by 20%; c) improved access of the poor to water supply and sanitation services by at least 20%; d) 100% sustainable operation of all WSS projects constructed, organized and supported by the program; and e) qualitative reduction of social tension and inequity brought about by inadequate access to WSS in areas with peace agreements 	<ul style="list-style-type: none"> a) increased water service for the waterless population -to 50%; b) reduced incidence of water-borne and sanitation related diseases by 20%; c) improved access of the poor to sanitation services by at least 10%; and d) sustainable operation of all water supply and sanitation projects constructed, organized and supported by the Program by 80%
9. No. of target waterless areas	432 municipalities; became 449 with the split of some ARMM municipalities	455 municipalities and 1,353 barangays by 2016; and for thematic concerns: i) poorest waterless barangays with high incidence of water borne diseases; ii) identified resettlement areas; and iii) health centers without access to safe water
10. Sanitation targets	no specific target on coverage and number of sanitary facilities and budget; sanitation projects and services were identified for funding in the open menu of projects to be supported under P3W such as a) support for new and innovative technologies for WS delivery and sanitation system, b) training on planning, implementation and management of WSS projects, and c) construction of ecological sanitation projects	no specific investment targets for the provision of sanitary facilities; requires LGU to allocate 20% of its 10% counterpart of total project cost for sustainable sanitation related activities/projects and behaviour change communication; DILG MC 2014-96 has imposed as one of the requirements the submission of water potability tests (before, during and after sub-project implementation) and the WSS sector plan to meet sanitation aspects/outcomes
11. Eligible projects for grant	<ul style="list-style-type: none"> a) construction and/or rehabilitation of Level 1 or Level 2 WS systems; b) upgrading of existing Level 1 to Level 2 WS systems; and 	<ul style="list-style-type: none"> a) rehabilitation/expansion/upgrading of Level III WS systems including appropriate water treatment systems; b) construction/rehabilitation/expansion/upgrading of Level II WS systems; and

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Feature	P3W	Salintubig Program
	c) expansion of Level 2 or 3 systems	c) construction/rehabilitation of Level I WS systems in areas, where such facilities are only applicable
12. Special Arrangements with non-LGU WSPs and WDs	provision for WD participation in franchise and non-franchise areas either as operator, bidder-contractor or implementing entity; with tariff to be determined by the WD	Support for projects of non-LGU utilities such as BWSAs and cooperatives may be provided with the LGU still as the proponent; LGU also responsible for procurement and review of tariff to be set for the system. WD participation will be through LWUA which shall identify waterless areas with WDs based on NAPC list.
13. Role of WATSAN Council	municipal level body headed by the LCE; tasked to design an LGU long-term WSS plan to achieve and sustain 100% sustainable access to safe water and adequate basic sanitation; oversee the implementation of WSS projects	Creation of the WATSAN Council is a requirement for the release of the first tranche of the grant. The municipal level council is tasked to complement water and sanitation assistance programs through convergence initiatives
14. Project appraisal guidelines	<p>a) Preference is given to projects with high percentage local counterpart cost (LCC); LCC can be in cash or in-kind contributions (local materials) from members of the community, the barangay LGU, the municipal LGU, the provincial LGU if any, development funds of congress, persons, NGO donors, loans granted to LGU from public or private sources, and all other sources mobilized by the community. Very high priority shall be given to LGUs with very high percentage of their LCC coming from internally generated funds and Internal Revenue Allocations.</p> <p>b) Cost effectiveness pertaining to the ratio of total cost to the number of households directly benefiting from the project</p> <p>c) Number of poor households benefited</p> <p>d) Adequacy of the proposal- in terms of addressing the cause of the water supply and sanitation-related problem of the community and demonstrating project</p>	<p>Project proposals are assessed based on the following parameters:</p> <p>a) benefit-cost analysis: 4:1 or better;</p> <p>b) sustainability of identified water sources;</p> <p>c) appropriate sizing of facilities and systems;</p> <p>d) affordability of construction and sustainability: introduction of low-cost appropriate WS and facilities design and construction technologies to be implemented; and</p> <p>e) appropriate tariffs to cover costs, except in low-capacity communities such as disaster refugee camps and impoverished indigenous communities</p>

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Feature	P3W	Salintubig Program
	sustainability from the technical, financial and environment viewpoints d) Sustainability- the project should show evidences of financial, technical, social and institutional capacity to operate the service, and environmental sustainability.	
15. Funds Management/ Disbursement	Grant was managed by DPWH and released and disbursed according to the MOA between the LGU and the DPWH. The fund managers and custodians (Municipal Treasurer and members Chairpersons of the PMC, are accountable for the proper use of funds. Funds are downloaded by DPWH to the LGU or DPWH DEO whichever will implement the WS project.	<p>In 2011, the grant was managed by DOH. In 2011, under DOH management, funds were downloaded in three tranches: 40% -50% -10%.</p> <p>Starting 2012, the grant is managed by DILG. Funds are downloaded from DILG CO to the Modified Disbursement Scheme (MDS) Fund 101 of DILG RO. DILG RO releases funds to LGUs. The first tranche (50%) is released upon approval of project proposal, water source confirmation and completion of the following required documents: a) creation of WATSAN council; b) signed MOA; c) certification of newly opened trust account; and d) certification of seal of good housekeeping. The second tranche (50%) is released after a) approval of DED; b) signed contract with contractor if by contract or DILG RO's certification if by admin; c) completion and validation of water source development by DILG RO; d) audit report by COA; e) liquidation of at least 20% of first tranche; and f) water permit for the source. In 2015, funds will be downloaded in two tranches at 80% - 20%, with funds validity up to 2 years.</p> <p>Up to 6% of the cost of DED preparation is chargeable against the DILG fund</p> <p>Funds for project operations and capacity development is managed by the DILG CO-OPDS- WSSU and/or downloaded to respective DILG ROs.</p>
16. LGU Counterpart	counterpart funds included: i) technical and non-technical training of existing and newly organized water user associations/community-based organizations; ii) support for new and innovative technologies for WS delivery and sanitation	10% of total project cost to be allocated as follows: i) 20% for sanitation related activities such as construction of sustainable sanitation related activities/projects and behavior change communication; ii) 30% for capacity

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Feature	P3W	Salintubig Program
	system; iii) training on planning, implementation and management of WS and sanitation projects; and iv) construction of ecological sanitation projects. The percentage of Local Counterpart Contribution (LCC) to Total Project Cost (TPC) was initially made as part of the prioritization process, with projects with high percentage LCC being preferred.	development activities ³¹ ; and iii) the remaining 50% to other water related supply activities including but not limited to civil works, operation of water systems, establishment of monitoring system for environmental health related diseases and outbreaks, and funds for hauling of materials In recent guidelines: counterpart funds can cover implementation of projects; in-house DED preparation; FS preparation; construction supervision; admin cost and participation in trainings and workshops; 20% is specifically allocated for sanitation-related activities
17. Financing Options	No mention of possible financing options to leverage project cost	Lists possible financing options to leverage project cost through private sector participation involving various contractual arrangements including concession or management contracts, BOT and joint ventures. It also allows a WD to implement and operate the WS supply project through a MOA. Other funds and grants may be used for the project.
18. Procurement	All procurement-related activities of the projects were required to follow the IRR of RA 9184 (Government Procurement Reform Act). LGUs were responsible for the procurement for the projects involving BWSAs. Procurement for projects to be managed and operated by WDs will be undertaken by them. Existing Procurement, and Bids and Awards Committees of implementing LGUs or WDs were utilized.	All procurement for WS projects shall adhere to RA 9184. The Provincial/Municipal Bids and Awards Committee (BAC) are responsible for procurement. Procurement for DED consulting services is through DILG ROs with representation from DILG- OPDS. Mode of implementation may be by: a) administration; b) contract; or c) design and build
19. M&E	No clear M&E system was developed. NAPC, as part of its role, was tasked to monitor progress of the various WSS projects under this Program; the implementing agencies	An M&E manual forms part of the guidelines. The M&E system is guided by a logical framework focusing on the four outcomes envisioned under the Program. It requires both progress and outcome monitoring. The institutional set up for program monitoring is clearly defined.

³¹ Support/capacity activities that are funded from the Program partners' budget and LGU counterpart share are as follows: a) provision of training for existing or newly organized water users associations/ community-based organizations; b) support for new and innovative technologies for WS delivery and sanitation systems; and c) training, mentoring, coaching and other capacity development assistance to LGU on planning, implementation and management of WS and sanitation projects.

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

Feature	P3W	Salintubig Program
	(DPWH, DOH and LWUA) were to monitor physical and financial progress of the projects.	The DILG monitors progress in terms of physical and financial status through its PDMUs at the ROs, POs and MLGOOs. DOH is tasked to monitor sanitation-related program activities and outcomes. NAPC is tasked to monitor outcomes.

Annex B - Survey Questionnaires

FGD with DILG Regional Office/Provincial Office

Date of FGD: _____

Name and Location of Office: _____

Participants:

Name	Position	Contact details

Questions:

A. Institutional Structure and Roles

- 1) What is the organizational structure for Salintubig?
- 2) How many staffs and units are involved? Permanent ____ Contractual ____ Total ____
- 3) What is the role of DILG RO/PO?
- 4) What are the roles of other agencies?
- 5) Are the roles of the institutions involved in the program clearly defined and do they have the capability to implement the assigned tasks?
- 6) What are the benefits of Watsan Councils?
- 7) Problems/ Issues concerning structure and coordination
- 8) What are your capacity building requirements to facilitate Salintubig implementation?

B. Process of Project Development

- 1) How were the project sites (LGU recipients and barangay beneficiaries) identified and selected? Was there a prioritization criteria used?
- 2) Was the problem clearly defined? Were there adequate consultations with the community, for example on the level of service, tariffs, responsibilities of the communities, operators?
- 3) Who were involved in project ID and planning?
- 4) What are the guidelines used in project implementation? What are the major bottlenecks, using as guide the project development lifecycle: project ID, preparation, appraisal, detailed design, construction, and operation?
- 5) Are the guidelines strictly followed/adhered to? Any deviations from the guidelines?

- 6) Information on Salintubig beneficiaries:

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

	Year of Implementation					
	2011	2012	2013	2014	2015	Total (2011-2015)
No. of LGUs						
<i>No. of Sub-projects</i>						
No. of barangays						
<i>No. of Sub-projects</i>						
No. of Rural Health Centers						
No. of resettlement sites						
Total Sub-projects						
No. of completed sub-projects						

C. Budget Allocation and Funds Flow

- 1) Describe the funds flow for the projects
- 2) Are transfer and use of funds transparent? Are there safeguards to ensure accountability?
- 3) What are the requirements for funds transfer/release?
- 4) Is the LGU counterpart strictly enforced? How much? How is it disbursed, for example, before or along with Salintubig funds? Who monitors or ensures that counterpart is provided?
- 5) Are there sanctions if not used for intended purpose?
- 6) Breakdown of annual budget allocation to the Region/Province from 2011-2015

	Year of Implementation					
	2011	2012	2013	2014	2015	Total (2011-2015)
A. Budget Allocation (in PhP)						
Total Budget						
- Grants						
- Operations						
- Others						
% Utilization Rate:						

- 7) Can the program resources, both capital and institutional capacity, realistically achieve the desired outcomes?
- 8) Problems related to funds allocation and utilization?

D. Procurement

- 1) What is the procurement process for the Salintubig program?
- 2) Who are involved?

- 3) What are the problems encountered?
- 4) Recommendations to improve the process?

E. Program M&E and Outcomes

- 1) Who monitors program implementation? What are the roles of various entities involved?
- 2) What aspects are being monitored?
- 3) Are there prescribed monitoring forms?
- 4) What is the reporting flow?
- 5) How are the outcomes and impacts monitored (number of households actually benefited, availability of water, effect on incidence of diseases, etc.)?
- 6) Beyond the investments for facilities, does the program have effective measures to ensure sustainability of the service, i.e., adequate O&M, sound pricing?
- 7) Are the LGU graduates capable of expanding the services and achieving 100% coverage?
- 8) Problems/ Issues concerning M&E
- 9) What are your capacity building requirements to improve M&E of Salintubig Program?

FGD with LGU/ WD

Date of FGD: _____

Name of Municipality/ Water District: _____

Province: _____

Participants:

Name	Position	Contact details

Questions:

A. Institutional Structure and Roles

- 1) What is the LGU/WD organizational structure for P3W/Salintubig?
- 2) How many staffs and units are involved? Permanent ____ Contractual ____ Total ____
- 3) What are the roles of the LGU/WD in implementing the P3W/Salintubig?
- 4) Are the roles of the institutions involved in the program clearly defined and do they have the capability to implement the assigned tasks?
- 5) What are the benefits of Watsan Councils?
- 6) Problems/ Issues concerning structure and coordination
- 7) What are your capacity building requirements to facilitate Salintubig implementation?

B. Process of Project Development

- 1) How were the project sites (LGU recipients and barangay beneficiaries) identified and selected? Was there a prioritization criteria used?
- 2) Was the problem clearly defined? Were there adequate consultations with the community? Please describe how consultations were conducted; how many, who were targeted; what were the questions asked? Were recommendations considered in the planning, design and implementation of the project?
- 3) Is the capital grant adequate to address the problem?
- 4) Who were involved in project ID and planning?
- 5) What are the guidelines used in project implementation?
- 6) Are the guidelines strictly followed/adhered to? Any deviations from the guidelines?

C. Budget Allocation and Funds Flow

- 1) Describe the funds flow for the projects
- 2) Are transfer and use of funds transparent?
- 3) Are there safeguards to ensure accountability?
- 4) What are the requirements for funds transfer/release?
- 5) Is the LGU/WD able to provide the required counterpart?
10% of project cost? In what form (in kind or cash?)
Of the total counterpart, how much went to capital investment? ___to sanitation___? to capacity building? ___
- 6) Breakdown of annual budget allocation to the LGU/WD from 2011-2015

	Year of Implementation					
	2011	2012	2013	2014	2015	Total (2011-2015)
A. Budget Allocation (in PhP)						
Total Budget						
- Grants						
- Operations						
- Others						
% Utilization Rate:						

- 7) Please describe any activity undertaken related to improvement of sanitation services.
What have you achieved with these activities?
- 8) Can the program resources, both capital and institutional capacity, realistically achieve the desired outcomes?
- 9) Problems related to funds allocation and utilization?

D. Procurement

- 1) What is the procurement process for the P3W? Salintubig program?
- 2) Who are involved?
- 3) What are the problems encountered?

4) Recommendations to improve the process?

E. Project O&M and Sustainability

- 1) Who maintains and operates the water system?
- 2) How much tariff is being paid per household?
- 3) How was the tariff determined? Are there guidelines for tariff adjustments?
- 4) What other measures have been put in place to ensure sustainability of the water system?
 - a. Is there an O&M manual?
 - b. Is there a financial management system? Are the water supply operations ring-fenced?
 - c. Are there measures to ensure collection efficiency?
 - d. Are there efforts to prepare business plans, particularly for performance improvement and expansion of the service or upgrade to say level 3?

F. Program M&E and Outcomes

- 1) Who monitors program implementation at the LGU/WD level? What are the roles of various entities involved?
- 2) What aspects are being monitored?
- 3) Are there prescribed monitoring forms?
- 4) What is the reporting flow?
- 5) How the outcomes and impacts are monitored (number of households actually benefited, availability of water, effect on incidence of diseases, etc.)?
- 6) Beyond the investments for facilities, does the program have effective measures to ensure sustainability of the service, i.e., adequate O&M, sound pricing?
- 7) Are the LGU graduates capable of expanding the services and achieving 100% coverage?
- 8) Problems/ Issues concerning M&E
- 9) What are your capacity building requirements to improve M&E of Salintubig Program?

FGD with Barangay Level/HH Beneficiaries

Date of FGD: _____

Municipality: _____

Name of Barangay: _____

Participants:

Name	Position	Contact details

Questions:

A. Project Details

1) Type of Project:

- New construction of level 1__ level 2__ level 3__
- Rehabilitation of level 1__ level 2__ level 3__
- Upgrading of level 2__ level 3__
- New construction of level 2__ level 3__

2) Source of water:

Spring__ Ground__ River__ Lake__ Other __

3) Source of Funding/Year Allocated:

P3W _____ 2005/2006/2007/2008/2009/2010

DILG Salintubig _____ 2011/2012/2013/2014

WD Salintubig _____ 2011/2012/2013/2014

Others:

4) Project Cost (P):

Total Project Cost: _____

LGU/WD Counterpart: _____

P3W/ Salintubig: _____

Others: _____

5) Project Duration:

Date Started: _____

Expected Completion Date: _____

Actual Date Completed/Turned over: _____

B. Process of Project Development

- 1) How was your project/site (LGU recipients and barangay beneficiaries) identified and selected? Was there a prioritization criteria used?
- 2) Was the problem clearly defined? Were there adequate consultations with the community? Please describe how consultations were conducted; how many, who were targeted; what were the questions asked? Were your recommendations considered in the planning, design and implementation of the project?
- 3) Who were involved in project ID and planning?
- 4) Do you have a Watsan Council? Is it active? What is your understanding of its role?
- 5) Problems encountered during project implementation
- 6) Was there any consultation and activity done related to improvement of sanitation services?
- 7) What are the community's needs as regards sanitation services?

C. Project O&M and Sustainability

- 1) Who maintains and operates the water system?
- 2) Are you satisfied with the service? If not, what improvements do you want to get?

Results of the Process and Impact Evaluation for Selected Government Water Supply and Sanitation Programs

- 3) Do you want to upgrade to a level 3 system?
- 4) How much tariff is being paid per household?
- 5) How was the tariff determined? Were you consulted?
- 6) If no tariff, are you willing to pay tariff to improve service or upgrade the system?
 ___yes ___no
- 7) If yes, how much are you willing to pay per month? _____

D. Project Benefits and Outcomes

Condition	Before project	After project
Source of water		
Time spent in Fetching water (min)		
Distance from house to source		
Amount Paid per gallon		
Availability of water supply (hours/day)		
Incidence of waterborne disease (No. of times in a month or year)		
Others		