MDG ACHIEVEMENT FUND IN THE PHILIPPINES

MDGF-1919:
Enhancing Access to and Provision of Water Services with the Active Participation of the Poor

Manual of Guidelines for
Baseline Survey of Thirty-Six Waterless Municipalities

Volume II. Manual of Guidelines for Spot Mapping, Technical Inventory and Assessment of Water Supply and Sanitation Facilities





March 29, 2010

Department of the Interior and Local Government (DILG)
Office of Project Development Services (OPDS)
Water Supply and Sanitation Unit (WSSU)

For more information, visit our website: www.dilg-mdgf1919.org.ph

ACRONYMS, ABBREVIATIONS AND SYMBOLS USED

BLGU	Barangay Local Governmen Unit
BWSA	Barangay Water Supply Association
CADD	Computer-Aided Design and Drawing
DILG	Department of the Interior and Local Government
FGD	Focus Group Discussion
GPS	Global Positioning System
HH/s	Household/s
HP	Horsepower
IRA	Internal Revenue Allotment
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
LGU/s	Local Government Unit/s
LPS, lps	Liters Per Second
MDGF	Milleneum Development Goal Fund
MW4SP	Municipal Water Supply and Sanitation Sector Plan
OPDS	Office of Project Development Services
P/MWATSAN	Provincial/Municipal WATSAN Team
P3W	President's Priority Program on Water
PNSDW	Philippine National Standard for Drinking Water
PWD/s	Person/s with Disability
UNDP	United Nations Development Programme
WATSAN	Water and Sanitation
WSPs	Water Sector Plan
WSSU	Water Supply and Sanitation Unit

Symbols and Indicators Used

ST	School Toilet
PT	Public Toilet
DT	Solid Waste Disposal (Dumpsite)
F	Functional Facility
PF	Partially Functional Facility
NF	Non-Functional Facility
W	Groundwater or Well Source
S	Spring Source
R	Surface Water or River source

ACKNOWLEDGMENT

This Manual of Guidelines for the Baseline Survey of Thirty-Six Waterless Municipalities under the Joint Programme *Enhancing Access to and Provision of Water Services with the Active Participation of the Poor* is intended to be a tool for establishing the actual situation of water and sanitation in the target municipalities. It was prepared through the convergence of efforts and inputs from different stakeholder.

In this connection, the Department of the Interior and Local Government (DILG) wishes to acknowledge the participation and contribution of different stakeholders who have been involved in its drafting, pre-test and completion:

- the DILG Regional Offices, Water and Sanitation Focal Persons at Regional, Provincial and Municipal levels;
- the Provincial and Municipal Local Government Units participating in the Joint Programme and their respective Water and Sanitation (WATSAN) Teams;
- Non-governmental organizations which participated in deliberations;
- Our partner agencies – the National Economic and Development Authority, National Water Resources Board, Local Water Utilities Administration, to name a few;
- The Municipalities of Tungawan and Dangcagan of the provinces of Zamboanga Sibugay and Bukidnon, respectively, which were the areas for the pre-test of guidelines for field level data gathering and assessment;
- Our donors- the United Nations Development Programme, the United Nations International Children's Emergency Fund and the Government of Spain without whose support the preparations would have not been pursued;
- And all others who in one way or another made this output possible.

It is hoped that appropriate use of the guidelines contained herein would provide useful basis for sustainable development and management of water and sanitation programs.

INTRODUCTION

Referred to as MDGF 1919, the UNDP-assisted Joint Programme *Enhancing Access to and Provision of Water Services with the Active Participation of the Poor* focuses on institutional strengthening to complement the infrastructural interventions in the water and sanitation sector, mainly in thirty-six waterless municipalities. The main outcomes of the Joint Programme (JP), which are in line with the Philippine Water Supply Sector Road Map are: (1) Investment support mechanisms shall have been established for poor communities/municipalities to improve efficiency, access, affordability and quality of affordable water; and (2) enhanced local capacities to develop, operate and manage water utilities by fostering participation in decisions relating to water service provision.

Towards assuring sustainability, the JP needs to refer to baseline data and information on what is currently in place. The Baseline Survey is the first key component under outcome 2 (enhanced local capacities) that is envisioned to provide useful basis for planning the development efforts for water and sanitation. The survey focuses on three major components: technical inventory, assessment and mapping of existing infrastructures; profile and status of households; and profile and capacities of water users associations, local water service providers and local government units, particularly the water and sanitation councils.

To guide the DILG Water and Sanitation Unit and its counterpart teams at Regional, Provincial and Municipal levels in undertaking such task, the Baseline Survey Manual is compiled in four volumes containing general and specific guidelines and tools for activities at field level : **Volume I** The MDGF 1919 Complete Manual of Guidelines for Baseline Survey of Thirty-Six Waterless Municipalities; **Volume II** The Manual of Guidelines for Facilities Mapping, Technical Inventory and Assessment; **Volume III** The Manual of Guidelines for Household Survey; and **Volume IV** The Manual of Guidelines for Institutional Assessment. Another separate package, **Volume V**, shall be issued towards the culmination of the Baseline survey to serve as guide for data management, preservation, updating and retrieval.

It is hoped that these guidelines could best help in accomplishing the desired outputs. Our office will welcome any further comments and suggestions as the survey progresses.

GENERAL GUIDELINES FOR CONDUCTING THE MDGF 1919 BASELINE SURVEY

1 Background and Introduction

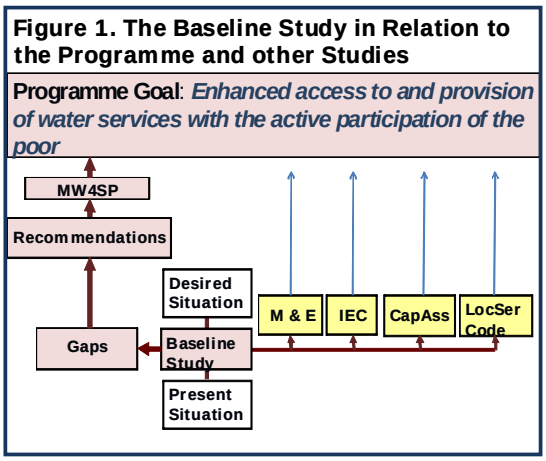
1.1 Anchorage: The Joint Programme

The United Nations, the Government of Spain and the Government of the Philippines pursues the Joint Programme (JP) "Enhancing Access to, and Provision of Water Services with the Active Participation of the Poor". The JP shall complement the existing infrastructure programs on potable water supply, particularly the President's Priority Program on Water (P3W) by providing the "soft" components. The main outcomes of the JP, which are in line with the Philippine Water Supply Sector Road Map are: (1) Investment support mechanisms shall have been established for poor communities/municipalities to improve efficiency, access, affordability and quality of affordable water; and (2) enhanced local capacities to develop, operate and manage water utilities by fostering participation in decisions relating to water service provision.

Towards assuring sustainability, the JP needs to refer to baseline data and information on what is currently in place: inventory and mapping of existing infrastructures; profile and capacities of water users associations and/or local water service providers; and factors which hinder or facilitate the access to, and provision of water services with special focus on the poor and the disadvantaged.

An assessment of the local situation in connection with water supply will best support the direction for sustainable development in the sector by establishing the gaps and corresponding recommendations which would be useful reference for the preparation of Municipal Water Supply, Sewerage, and Sanitation Sector Plan (MW4SP). The study, simply called the *MDGF 1919 Baseline Survey*, would be coordinated with other components of the Joint Programme – Monitoring and Evaluation, Information, Education and Communication, Capacity Assessment, and Local Service Code. This is illustrated in Figure 1.

Figure 1. The Baseline Study in Relation to the Programme and other Studies



1.2 Purpose of the MDGF 1919 Baseline Survey

The MDGF 1919 Baseline Survey is envisioned to be a conscientious situation analysis which could serve as useful baseline data and information on Water and Sanitation in the target municipalities. Key question to be answered is:

"What factors facilitate or hinder the access to and provision of water services to beneficiaries, especially the poor?"

Specifically, the Survey aims to establish the current situation in terms of:

- Current state of the infrastructure facilities whether : (1) fully functional; (2) partially functional; or (3) non-functional;
- Profile, status of the households, with special focus on women and children, the extent by which they access, or are served by the water supply facilities, and the extent by which they are involved in decision-making;
- An assessment of water users' associations, roles and capacities to engage in local governance processes (decision-making, planning and implementation); demand accountabilities; and practice gender equality;
- An assessment of water service providers in terms of roles and capacities: 1) in providing safe, adequate, affordable and continuous water services; 2) ensuring gender equality and integrity in the provision of water services; 3) and regularly consulting and providing information to the community;
- An assessment of the Municipal Water and Sanitation (WATSAN) Councils' roles and capacities: as a) local oversight body on water matters and engaging the community in regular dialogues and consultations; b) in promoting gender equality in policies and plans; and c) in ensuring integrity in the whole local water governance and the rights of its local citizens to water is promoted, protected and fulfilled.

1.3 Focus of the Study

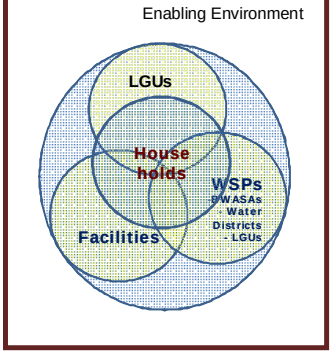
The Study, therefore, focuses on:

1) the households

2) the physical facilities

3) the Water Service Providers (WSPs) and the Local Government Units (LGUs); and

Figure 2. Focus of Study



4) the enabling environment – external factors such as policies, relationships, the environment, and others which affect the households, the facilities, the water service providers, the LGUs and their relationships in the course of accessing/delivering water services.

1.4 Target Municipalities

The target municipalities for baseline survey are listed below.

Table 1. List of Thirty-Six (36) Waterless Municipalities for Baseline Survey

Region	Province		Municipality	
II	1	Cagayan	1	Abulug
			2	Alacapan
			3	Ballesteros
			4	Lasam
			5	Pamplona
			6	Sto. Niño
	2	Isabela	7	Palanan
V	3	Camarines Norte	8	Basud
			9	Capalonga
	4	Camarines Sur	10	Garchitorena
			11	Siruma
IX	5	Zamboanga del Norte	12	Gutalac
			13	Jose Dalman
			14	Kalawit
			15	Katipunan
			16	Siayan
			17	Siocon
			18	Sirawai
	6	Zamboanga Sibugay	19	Alicia
			20	Payao
			21	Titay
			22	Tungawan
	7	Zamboanga del Sur	23	Lapuyan
			24	Midsalip
			25	Tigbao
X	8	Bukidnon	26	Dangcagan
			27	Don Carlos
			28	Kadingilan
			29	Kibawe
			30	Kitaotao
	9	Lanao del Norte	31	Sultan Naga Dimaporo
	10	Misamis Occidental	32	Baliangao
			33	Sinacaban
	11	Misamis Oriental	34	Claveria
CARAGA	12	Agusan del Sur	35	La Paz
			36	Sibagat

2 Users and Uses of the Baseline Survey Guidelines

These guidelines provide the requirements, processes and tools in pursuing the baseline survey, adopting unified approach and methodology that espouse participatory concepts and strategies. Basic roles and responsibilities of different groups are also identified, as well as reporting form. *WATSAN Teams may be*

allowed to undertake subject to a prior notification and agreement with the Water Supply and Sanitation Unit (WSSU).

Table 2. Specific Users and Uses of the Baseline Survey Guidelines

Users	Uses
DILG-OPDS/WSSU and DILG regional, provincial and municipal level offices	Provision of guidance for implementing teams Monitoring of progress of activities and expected outputs
Provincial and Municipal LGUs	Reference for related decisions
Provincial and Municipal WATSAN Teams	Guide for the conduct of baseline survey activities Reference for the implementation and supervision of activities
Enumerators/Technical Inventory Teams	Guide for data gathering

3 Key Activities

The activities for the baseline survey is grouped into five phases involving the different focus of attention:

- capacity building for WATSAN teams and those to be involved in data gathering
- data gathering with the use of prescribed tools and procedures
- analysis – processing and analysis of data culminating in participatory analysis at LGU level
- ownership – consisting of presentation of findings and generation of further from WATSAN Teams, LGUs, communities and other stakeholders
- reporting – involves the incorporation of findings, analysis and recommendations in a report per municipality.

The outline of activities and description of details are shown in the next pages.

Figure 1. Outline of Baseline Survey Activities

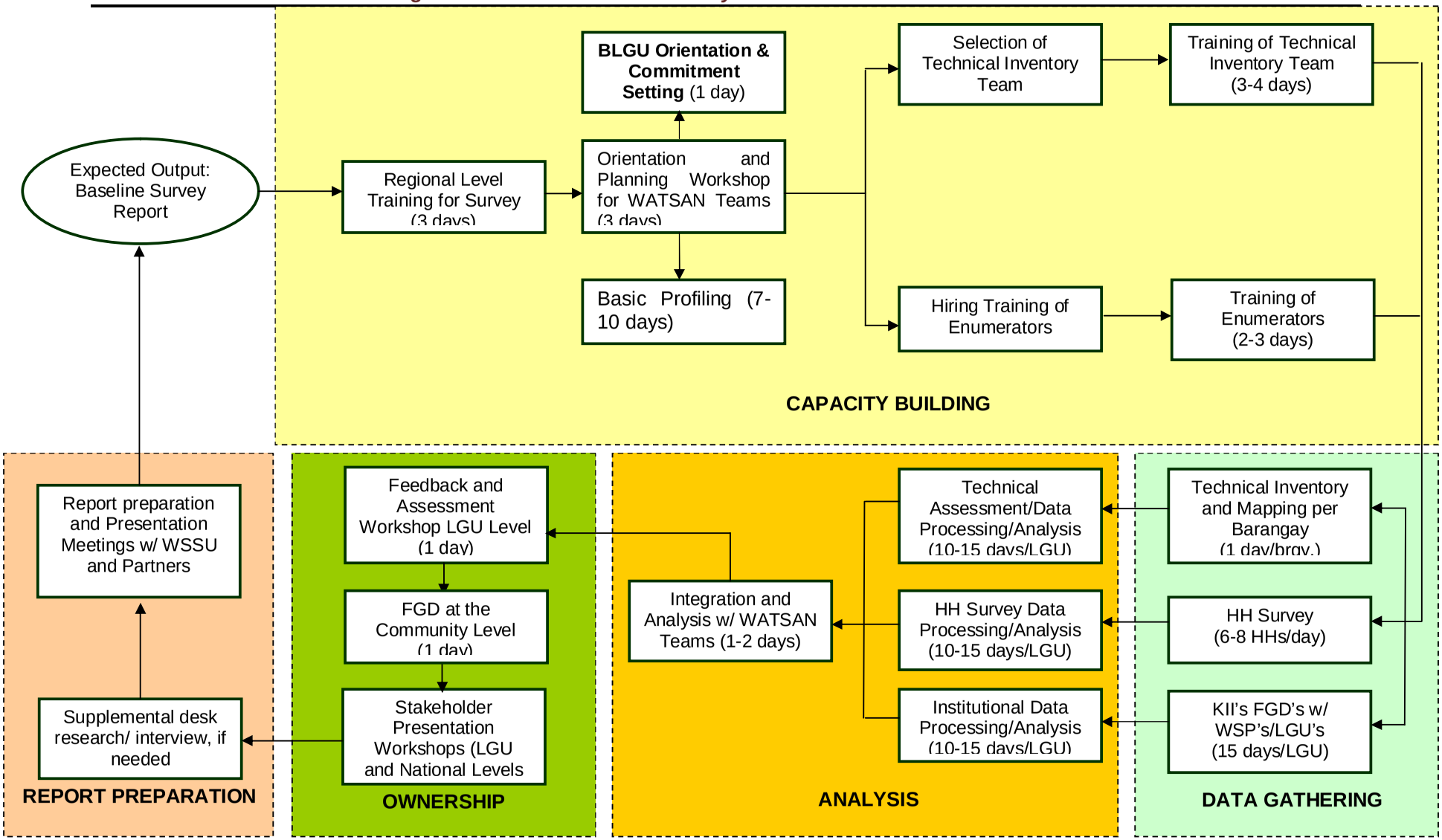


Table 3. Description of Specific Activities for the Baseline Survey

Activity/Key Outputs	Specific Objectives	Specific Activities	Who Will Do It	Target Source/ Participants
CAPACITY BUILDING PHASE				
1. Regional level training for Baseline Survey Key outputs: Regional Detailed Work Plan for Baseline Survey	Orient the Regional counterparts on the guidelines for survey	Review of agreements and schedules during regional JP orientation	WSSU and consultants	WATSAN Teams at Regional and Provincial levels
	Enable preparation of specific action plans and strategies	Discussion of Baseline Survey guidelines		Municipal WATSAN Teams
	Enable subdivision of tasks among WATSAN teams	Contextualization of questionnaires; strategy formulation		
		Detailed planning		
		Role Delineation		
		Reporting system		
2. Orientation and Planning Workshops for WATSAN Teams Key outputs: P/MWATSAN Work Plans for Baseline Survey Task Subdivision within teams	Orient the Provincial and Municipal WATSAN Teams on Baseline Survey Guidelines	Review/contextualization of Baseline Survey Guidelines		
	Enable preparation of specific work plans and strategies	Assessment of local situations and available resources		
		Work Planning		
	Agree on operating norms, including reporting	General Interaction		
3. BLGU Orientation and Commitment Setting	Orient BLGU and generate commitment and work plans for the conduct of survey	Overview of the Baseline Survey: background, purpose, activities	Municipal WATSAN Team	BLGU key officials (at least the Brgy. Chairperson, Chairperson of Infrastructure Committee, Brgy. Secretary)
		List of activity schedules and action requirements from BLGU		
		BLGU scheduling of activities: -Basic Profiling -technical inventory and mapping -Household survey -Community Feedback meeting/FGDs -others		
4. Basic profiling Key Outputs: -Basic Profiles	Establish extent of coverage of water and sanitation services	Review of records at municipal and/or barangay levels	Municipal WATSAN Team/Barangay leaders	WATSAN Records, barangay profiles, project

per Municipality				records
5. Selection of Technical Team	Assign team to undertake technical inventory and assessment	Clarification of tasks Formal designation	Municipal WATSAN team	
7. Selection/ hiring of enumerators	Assign team to undertake household census and survey	Clarification of tasks and qualifications	Municipal WATSAN Team	BHW, BPO or equivalent, designated/hired enumerators
		Formal designation		
8. Training of Enumerators and Technical Inventory Team	Install, observe knowledge and skills in the conduct of activities	Orientation/ classroom training On-the-job training/guided practice	Municipal WATSAN Team	Assigned/hired technical team and enumerators
DATA GATHERING PHASE				
9. Technical inventory/assessment and mapping per barangay	Gather data requirements	Inventory/assessment of source, facilities and service areas	Technical team	Water source, water supply facilities, sanitation facilities, key informants
10. Census and Survey		Interviews	Enumerators	Sample households
11. Institutional Assessment		Documents review, key informant interview, FGDs	Consultant/ WATSAn Teams	Key informants from WSPs, LGUs, etc.
ANALYSIS PHASE				
12. Processing and analysis of data	Analyze data and information gathered	Review, editing, encoding, tabulation, analysis	WSSU and consultants	
13. Integration and analysis at WATSAN level	Undertake overall analysis and interpretation	Discussion of findings Incorporation of inputs from WATSAN Teams	WSSU/ PDMU	WATSAN Teams
OWNERSHIP PHASE				
14. Feedback and assessment workshop at LGU level	Promote LGU ownership of findings	Presentation of findings Further situation analysis (gaps, factors and constraints)	WSSU/ PDMU	LGU management and staff
15. FGD at the community level	Provide feedback on survey results and generate community assessment of WATSAN	Presentation of findings - Potentials - Gaps - Factor/ Constraints - Opportunities	WATSAN Teams	Sample inhabitants; If there are IPs, IPs must have separate FGD
16. Feedback meeting at LGU level	Present, discuss baseline survey results and generate list of next steps by LGUs	Half day meeting	MWATSAN Team with support from WSSU/ PDMU	LGU LCE and key LGU management and staff
REPORTING PHASE				
17.Supplemental	To support, validate	Documents review,	Consultants	

Desk Research/ Interview	or probe findings as may be necessary	Interviews, or e-research		
18. Report preparation and Presentation Meetings	To present findings, incorporate further views of partners and stakeholders	Presentation Workshops; Report preparation/ packaging	Consultants with WSSU	Partner institutions, other stakeholders

4 Directory of Tools

The tools for the baseline survey consist of:

- instructional guidelines (general and specific guidelines). The specific guidelines accompany each specific data gathering form and questionnaire
- data gathering forms
- questionnaires, and
- Activity guides.

For easier reference, the tools are packaged according to the users and categories of data/information to be gathered. Shown in the next page is the directory of data gathering tools

Table 4. Directory of Data Gathering Tools for the Baseline Survey for MDGF 1919

	Title	Code	Main User/s
A	General Guidelines	MDGF-BS-GGL	All
B	Guide for BLGU Orientation	MDGF-BS-BLO	P/MWATSAN Teams
C	Guidelines for Basic Profiling	MDGF-BS-PGL	
	Assessment of Water Supply Coverage	MDGF-BS-PWS	WSSU-Regional Coordinators (RCs)/WATSAN Teams
	List of Health and Sanitation Facilities	MDGF-BS-PSF	
	General Information on Water Service Providers (WSPs)	MDGF-BS-PSP	
D	Guide for Selection and Training of Technical Assessment Team and Enumerators	MDGF-BS-STE	PMWATSAN Teams
E	Technical Assessment		Technical Inventory/ Assessment Team
	Guidelines for Spot Mapping of Water Supply and Sanitation Facilities	MDGF-BS-SMP	
	Guidelines for Technical Inventory and Assessment of Water and Sanitation Facilities	MDGF-BS-TGL	
	Forms:		
	- General Information on Water Supply Facilities	MDGF-BS-GWS	
	- Level I Facilities Technical Information	MDGF-BS-WS1	
	- Level II Facilities Technical Information	MDGF-BS-WS2	
	- Level III Facilities Technical Information	MDGF-BS-WS3	

	- General Information on Sanitation Facilities	MDGF-BS-SF1	
	- Technical Information on Sanitation Facilities	MDGF-BS-SF2	
	- Guide for Computerized Entry of Technical Data	MDGF-BS-TDC	
F	Guidelines for Conducting Household Survey	MDGF-BS-SGH	Enumerators and Household Survey Supervisors,
	Interview Schedule	MDGF-BS-HSQ	
G	Guidelines for Institutional Assessment		Institutional Assessment Team
	Plan and Guidelines for Institutional Assessment	MDGF-BS-PGI	
	Detailed Guidelines for Data Gathering	MDGF-BS-DGI	
	Data Generation Tools	MDGF-BS-GTI	
	Key Informant Interview Questionnaires and Guides	MDGF-BS-KII	
	Focus Group Discussion (FGD) Guide	MDGF-BS-FGD	

5 Roles and Responsibilities

Table 5. Roles and Responsibilities of Groups in the Baseline Survey

Pre-Implementation	Implementation	Post-Implementation
WSSU		
Orient/train regional/provincial WATSAN Teams Disseminate policies/guidelines and information materials Prepare simple monitoring reports (physical and financial)	Monitor progress of baseline survey Participate in consultation/sharing sessions with consultants Coordinate baseline activities with other components Review/analyze outputs of consultants and of WATSAN Teams, participate in review sessions/workshops	Reproduce, disseminate survey outputs Facilitate utilization of survey results in MW4SP preparation and other tasks under JP Maintain data bank of baseline – related data and information Undertake relevant advocacy, information sharing and dissemination
Baseline Consultants		
Participatory preparation of survey guidelines/tools including activity designs Assist WSSU in the conduct of JP orientation and planning	Install capacities for the conduct of baseline survey including data management Provide technical assistance and supportive monitoring to WATSAN Teams in coordination with WSSU and the PDMU Prepare/submit progress reports Prepare/submit baseline survey reports in accordance with the TOR requirements Conduct review sessions	Turnover relevant documents and data to WSSU upon task completion

	in collaboration with the WSSU Project Officer and RCs	
PDMU		
Initiate planning for baseline survey within the region Mobilize manpower and resources	Coordinate the baseline activities and related support at the regional and provincial levels including those with NGOs and other stakeholders Initiate preparation of work plans by WATSAN Teams Monitor progress of activities within the region, submit progress reports to WSSU Centralize the documentation and reporting system, submit reports to WSSU	Centralize regional level documentation and other relevant documents for reference purposes Initiate project development activities as may be identified during implementation phase Undertake continuing monitoring of gaps, recommendations and actions identified during baseline survey implementation
Provincial WATSAN Teams		

Support, assist the Municipal WATSAN Teams in plan and strategy preparation Coordinate with PDMU Mobilize resources at provincial level, if necessary	Support, assist the WATSAN Teams in the implementation of survey Coordinate the activities at provincial level Mobilize resources at provincial level, if necessary Consolidate reports from Municipal WATSAN Teams, submit to PDMU with analysis and recommendations Provide technical guidance and inputs during workshops, conferences and similar sessions.	Initiate provincial level policies and plans in support to the results of baseline survey Provide support to MLGUs on actions in relation to Baseline survey results
Municipal WATSAN Teams		
Prepare plans and strategies for the implementation of baseline survey Facilitate preparation/ submission of pre-baseline survey implementation requirements Identify/recommend enumerators, members of technical inventory team, and other necessary personnel	Supervise, enforce baseline survey guidelines Check, validate outputs of data gathering, ensure completeness and compliance with requirements and guidelines Prepare/submit progress reports Attend sharing/assessment sessions as may be called for. Undertake advocacy and information sharing/dissemination at Municipal level	Initiate provincial level policies and plans in support to the results of baseline survey Advocate for related local water-related advocacy funds Propose for related studies for the furtherance of relevant survey findings.

6 Reporting

The WATSAN Teams shall report the progress of activities to the Project Development Management Unit (PDMU) of the DILG Regional Office. The PDMU shall in turn submit reports to the WSSU. Frequency of reporting shall be monthly. Reports shall be submitted via email to WSSU through the Regional Coordinator every 5th working day of succeeding month.

Format shall be as follows:

Progress Report on Baseline Survey for MDGF 1919: Enhancing Access to and Provision of Water Services with the Active Participation of the Poor

Region
For the month of
Date start of activities
Target date of completion

	Outputs	Targets		Accomplishment	
		Qty	Date	Qty	Date
1	Enumerators assigned/hired				
2	Technical team				
3	Trained Enumerators and technical team				
4	Spot Maps				
5	Households Surveyed				
6	Key Informant Interviews				
7	Focus Group Discussions				
	others				

Issues/Concerns

Submitted by: PDMU	Date Received by WSSU:

MDGF-BS-BLO

GUIDE FOR BLGU ORIENTATION

1. Why Conduct the BLGU Orientation

- To orient the Barangay LGUs, through its leaders, on the purpose, activities and requirements of the Baseline Survey, including the needed support and participation from them
- To generate initial commitment to provide support for, and participate in, the Baseline Survey activities
- To facilitate schedules/work plans for Barangay level activities

2. Participants

- At least the Barangay Chairpersons of target barangays, that is, the barangays covered by the target municipality; at most, the Barangay Chairperson and the chairpersons of relevant Barangay Committees, ex., infrastructure, health, population committees

3. Strategy for Implementation

- Half to one-day live-out conference
- Venue may be the municipal hall, or other strategic places for a one-batch activity; any other strategic places for other schemes of implementation such as clustered municipalities

Key pointers: ***Materials be translated into the local dialect***
Dry-run/preparatory meeting be conducted by the WATSAN Team to level off roles and working norms
Disseminate notifications/invitations within ample time prior to date of conduct. Notification/invitation shall contain date, venue, time, purpose/agenda

4. Content Areas/Suggested Program

See next page

Suggested Program for the BLGU Orientation

Estimated Duration	Activities	In-Charge
30 min	Arrival and Registration	Conference Secretariat
30 min	Overview of the Baseline Survey: Background, Purpose, Coverage, Uses of the Results	Head, MWATSAN Team
30 min	General Guidelines for Baseline Survey	MPDC
30 min to 1.0 hr	Guidelines for Basic Profiling	Technical Member of MWATSAN Team
30 min to 1.0 hr.	Schedule of Baseline Survey Activities and Needed Action from BLGU	Head, MWATSAN Team
30 min	Open Forum	MPDC
1.0 to 1.5 hrs.	Scheduling of Barangay level activities to include among others: - Basic Profiling - Technical inventory and mapping - Scouting for potential enumerators - FGDs	MPDC
30 min	Wrap up	

Possible strategies:

- Conduct the orientation during meetings of Barangay leaders, ex., ABC meetings/conferences, and other activities where Barangay leaders/officials are convened
- Orientation by cluster of barangays
- One-on-one orientation

5. Materials (minimum requirements)

- Visuals or leaflets showing key information on the Baseline Survey - Overview of Baseline Survey (attached), list of target barangays per target municipality
- Guidelines/forms for Basic Profiling (see specific Guidelines and Forms for Basic Profiling) and other forms as may be necessary

6. Documentation and Report Requirement

The Municipal WATSAN Team shall submit immediately to the DILG-OPDS Water Supply and Sanitation Unit through appropriate Channels a post – conference Completion Report with Highlights, Results/Agreements, specially the schedule of Barangay Level activities. Attendance sheets and other supporting data/documents shall be attached to the report. The report must be received by the WSSU in no more than ten (10) working days after the conference.

Overview of Baseline Survey: Basic Orientation Material/Contents

MDG ACHIEVEMENT FUND IN THE PHILIPPINES

MDGF-1919

ENHANCING ACCESS TO AND PROVISION OF WATER SERVICES WITH THE ACTIVE PARTICIPATION OF THE POOR

OVERVIEW OF THE SOCIO-ECONOMIC HOUSEHOLD SURVEY AND ASSESSMENT

1

Purpose

Establish current situation,
Establish gaps and factors
Identify recommendations in terms of:
- **facilities**
- **households/users**
- **water service providers**
- **LGUS, other stakeholders**

In relation to access to and provision of water services

2

Expected Results

Current state of the infrastructure facilities whether : (1) fully functional; (2) partially functional; or (3) non-functional

Profile, status of the households, with special focus on women , disadvantaged people and children, and the extent by which they are served by the water supply facilities, and the extent by which they are involved in decision-making

3

Expected Results

An assessment of water users' associations roles and capacities to engage in local governance processes (decision-making, planning and implementation); demand accountabilities; and practice gender equality

An assessment of water providers in terms of roles and capacities: 1) in providing safe, adequate, affordable and continues water services; 2) ensuring gender equality and integrity in the provision of water services; 3) and regularly consulting and providing information to the community

4

Expected Results

An assessment of the Municipal Water and Sanitation (WATSAN) Councils' roles and capacities as

a) local oversight body on water matters and engaging the community in regular dialogues and consultations;

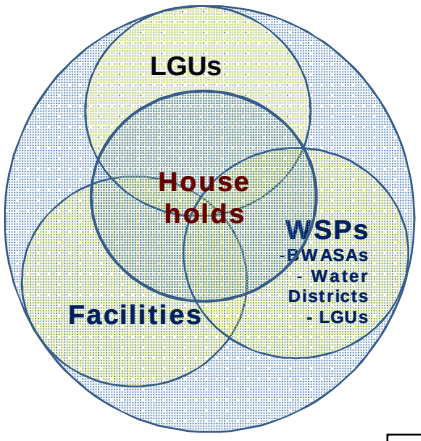
b) b) in promoting gender equality in policies and plans; and

c) c) in ensuring integrity in the whole local water governance and the rights of its local citizens to water is promoted, protected and fulfilled

5

Focus of Study

Enabling Environment



6

General Approach

Participatory and consultative
Location-specific adjustments
Cascading approach of technology transfer

Activities
-Review of documents/ experiences
-Participatory questionnaire preparation, pre-test, finalization
-Orientations/consultations/training
-Spot mapping/physical inventory
-Household survey
-Key Informant Interviews
-FGDs

7

Questionnaires and Tools consist of:

- **Profile Sheets per Municipality and per Barangay – Facilities (Water and Sanitation), Households/Population, Water Service Provider**
- **Physical/Facilities inventory sheets per water system**
- **Spot maps indicating facilities, water source, households and other related community resources**
- **Questionnaires for Key Informant Interviews and Household Survey**
- **Activity Designs for Focus Group Discussions, trainings, workshops**
- **Instructional Guides**

8

MDGF-BS-PGL

Guide for Accomplishing the Forms For Basic Profiling

MDGF-BS-PWS: Assessment of Water Supply Coverage

1	Objective	To establish the extent of coverage of water supply facilities/services within the municipality
2	Uses	Reference for : detailed planning of survey activities; spot mapping of facilities; sampling of respondents for household survey
3	Specific Activities	Basic Profiling: Collection of available data from records at DILG Head Office, Regional, Provincial and/or Municipal levels
4	Responsible	WSSU Regional Coordinators
5	Sources of Data/Information	Main sources: Water and Sanitation Profiles at DILG Head Office, Regional, Provincial and/or Municipal levels
		Secondary sources: Municipal LGUs
6	Explanation of Entries	
	Heading	In the space provided for, enter name of Region, Province and Municipality
	Column (1) Barangay	Name of Barangay. (Assign number for each barangay in the space provided at the left)
	Barangay Coverage	This is intended to establish the whole coverage of the Barangay
	Column (2) No. of HHs	Number of households where one household means a single family or an extended family residing in one abode
	Population	
	Column (3) Total	Total number of people in the barangay
	Column (4) Female	Out of the total population, how may are female?

	Column (5)	Identify projects or fund sources which have facilitated or supported the establishment of water supply facilities
	Service Level	This is intended to establish the coverage of water facilities per service level
	Level I	
	Column (6) No. of Facilities	Number of Level I facilities
	Column (7) HHs	Number of Households served by the Level I facilities
	Column (8) Total Pop	Total population/number of persons served by the Level I facilities
	Column (9) Female	Out of the total population served, how many are female.
	Level II	
	Column (10) No. of Facilities	Number of Level II facilities
	Column (11) HHs	Number of Households served by the Level II facilities
	Column (12) Total Pop	Total population/number of persons served by the Level II facilities
	Column (13) Female	Out of the total population served, how many are female.
	Level III	
	Column (14) No. of Facilities	Number of Level III facilities
	Column (15) HHs	Number of Households served by the Level III facilities
	Column (16) Total Pop	Total population/number of persons served by the Level III facilities
	Column (17) Female	Out of the total population served, how many are female.

MDGF-BS-PSF : List of Sanitation Facilities

1	Objective	To establish the extent of coverage of sanitation facilities/services within the municipality
2	Uses	Reference for : detailed planning of survey activities; spot mapping of facilities; sampling of respondents for household survey
3	Specific Activities	Basic Profiling: Collection of available data from records at DILG Head Office, Regional, Provincial and/or Municipal levels
4	Responsible	WSSU Regional Coordinators/WATSAN Teams
5	Sources of Data/Information	Main sources: Water and Sanitation Profiles at DILG Head Office, Regional, Provincial and/or Municipal levels
		Secondary sources: Municipal LGUs
6	Explanation of Entries	
	Facilities	State type of facility or the name given to it by the community
	Barangay	Self-explanatory
	Purok	Self-explanatory
	No. of HHs served	Number of households served or using the facility. Estimates will be acceptable.
	Population	Total population using the facility. In some cases, it may be difficult to get exact number. Estimates will be acceptable.
	Female	Of the total population using the facility, indicate number of female using or served by the facility.
	No. of Children	Of the total population using the facility, indicate number of children using or served by the facility

	Managed by	State who manages the facility – barangay (name of barangay) school (name of school), etc.

MDGF-BS-PSP: General Information on Water Service Providers

1	Objective	To establish the extent of coverage of sanitation facilities/services within the municipality
2	Uses	Reference for : detailed planning of survey activities; spot mapping of facilities; sampling of respondents for household survey
3	Specific Activities	Basic Profiling: Collection of available data from records at DILG Head Office, Regional, Provincial and/or Municipal levels
4	Responsible	WSSU Regional Coordinators
5	Sources of Data/Information	Main sources: Water and Sanitation Profiles at DILG Head Office, Regional, Provincial and/or Municipal levels
		Secondary sources: Municipal LGUs
6	Explanation of Entries	
	Name Of Water Service Provider	Enter full/official name of WSP. In the case of LGU as Water Service Provider, indicate the name of LGU
	Purok/Barangays Covered	Self-explanatory
	Contact Person, Address/ Contact Number	Self-explanatory
	Coverage	
	For Level I	Enter the number of level I facilities, Number of Households, Total number of population and number of female out of the total population covered/served by the level I facilities

	For Level II	Enter the number of level II facilities, Number of Households, Total number of population and number of female out of the total population covered/served by the level II facilities
	For Level III	Enter the number of level III facilities, Number of Households, Total number of population and number of female out of the total population covered/served by the level III facilities

GENERAL INFORMATION ON WATER SERVICE PROVIDERS IN THE MUNICIPALITY

Region	*Province*	*Municipality*

	Name of Water Service Provider	Purok/ Barangay/s Covered	Contact Person, Address/Contact Number	Service Level											
				Level I				Level II				Level III			
				No. of Facilities	HHs	Total Pop	Female	No. of Facilities	HHs	Total Pop	Female	No. of Facilities	HHs	Total Pop	Female

Prepared by :	Noted by:		Date:

MDGF-BS-STE

Guide for Selection and Training of Technical Assessment Team and Enumerators

Selection of Technical Inventory Team

Tasks	Undertake inventory of WATSAN facilities – location, coverage, and conditions affecting performance
	Locate facilities and relevant institutions in the spot map
	Facilitate assessment of facilities in coordination with other aspects of the baseline survey
	Document findings in the prescribed forms and spot maps
Composition and Qualifications	At least one infrastructure engineer with experience in design, construction, operation or assessment and evaluation of WATSAN facilities
	At least one rural health/social worker or equivalent with experience in community assessment of rural infrastructure preferably WATSAN facility
	Barangay level chairman or member of infrastructure committee
	One representative from Water Service Provider in target barangay
	Able and willing to work in extended hours of the day

Selection of Enumerators

Tasks	Prepare a demographic survey of households in the target area in accordance with the prescribed survey form
	Interview target households using the interview schedule

	Submit to the supervisor/WATSAN Team the accomplished questionnaires within the agreed time frame
Qualifications	Experienced in conducting similar surveys, e.g., CBMS, etc.
	Good interviewing skills – high capability in motivating responses, keen in note-taking, analytical
	Highly familiar with the local situation in target area.
	Able and willing to work in extended hours of the day

The Supervisors

Technical Supervisor	
Who	Preferably from the PWATSAN Team (from PMEO)
Tasks	Orient/train the technical inventory team on the requirements and procedures of data gathering, inventory, mapping and assessment
	Check the outputs of the technical team
	Facilitate transmittal of data to WSSU
HH Survey Supervisor	
Who	Preferably from MWATSAN Team experienced in conducting/supervising HH Surveys (1 supervisor: 4-5 enumerators)
Tasks	Assist in the conduct of sampling
	Facilitate translation of interview schedules/questionnaires into the local dialect
	Orient/train the enumerators on the requirements, procedures and quality of interview, including note-taking
	Conduct spot check of surveys being undertaken
	Check completeness and quality of entries to the

	interview schedule
	Compile the outputs according to the assigned codes
	Submit accomplished questionnaires and other reports/documents as may be required to WSSU

Training of Technical Assessment Team and Enumerators

Objective	To equip the technical inventory team and enumerators with appropriate knowledge, attitude and skills for the Baseline survey
Responsible	MWATSAN Team
Participants	Technical Inventory Team and Enumerators
Venue and Duration	Within the municipality, 3 days
Classification	Combination of classroom training and guided practice
Content Areas	
Classroom training	Orientation on Joint Programme – 1 hr
	Orientation on Baseline Survey - 2 hrs
	Discussion of Guidelines - 2 to 4 hrs
	Simulation - 2 to 3 hrs
On-field	Guided practice 1 to 2 days
Materials and Tools	Briefs on the Joint Programme Baseline Survey Guidelines Interview Schedules for use in guided practice Workshop Materials – Whiteboard or Manila paper, markers, LCD Projector, computer, writing pads, ball pens and pencils, notebooks

Guidelines for Spot Mapping of Water Supply and Sanitation Facilities

A. General Guidelines

For a more concise and accurate plotting of existing facilities in reference to the location of the users of a particular municipality, Global Positioning System (GPS) instruments shall be used. Plotting will be based on a coordinate system, using available software like AUTOCADD. By applying these modern technologies, gaps in access and service provision of the existing facilities will be presented more accurately.

B. Procedures and Outputs

The results of the Baseline Survey shall be graphically presented through Spot Maps, for the target barangays identified as having existing facilities on water supply and sanitation, and likewise presented in Municipal Spot Maps showing all barangays composing a particular municipality. The required data and technical information shall be extracted from the accomplished Survey Questionnaire Form.

To ensure that data collected will be a detailed and precise presentation of the existing conditions of water supply and sanitation facilities and structures of a particular survey area, the Questionnaire Form have undergone a series of refinements and critiquing starting with in-office meetings and workshops participated by experts culled from the Consultants, DILG and representatives from the other stakeholders. Thereafter, the draft Questionnaire shall be presented to the LGUs and will then undergo pre-testing in select areas to determine the effectiveness of the survey tool. Refinements and finalization follows.

The survey proper shall be conducted by enumerators who will likewise undergo a series of orientations and mentoring so that the correct data and information are extracted in the target areas. During the survey, the survey team will also be provided with pointers and checklist to ensure the completeness of data collection.

C. Resource Requirements

As elaborated above, resource requirements shall include:

- GPS equipment , topographic maps, scanner, digitizer and printer, and
- Drawing and plotting shall be by AUTOCADD.

D. Items to be Reflected in the Spot Map

- Location of water supply and sanitation facilities with indicators/symbols of their functionality, partial functionality or non-functionality
- Extent and level of coverage
- General location of HHs and other institutions of the service area

E. Symbols and Indicators

Water Supply


Groundwater or well source


Spring source


Surface water or river source

Sanitation

School Toilet

Public Toilet

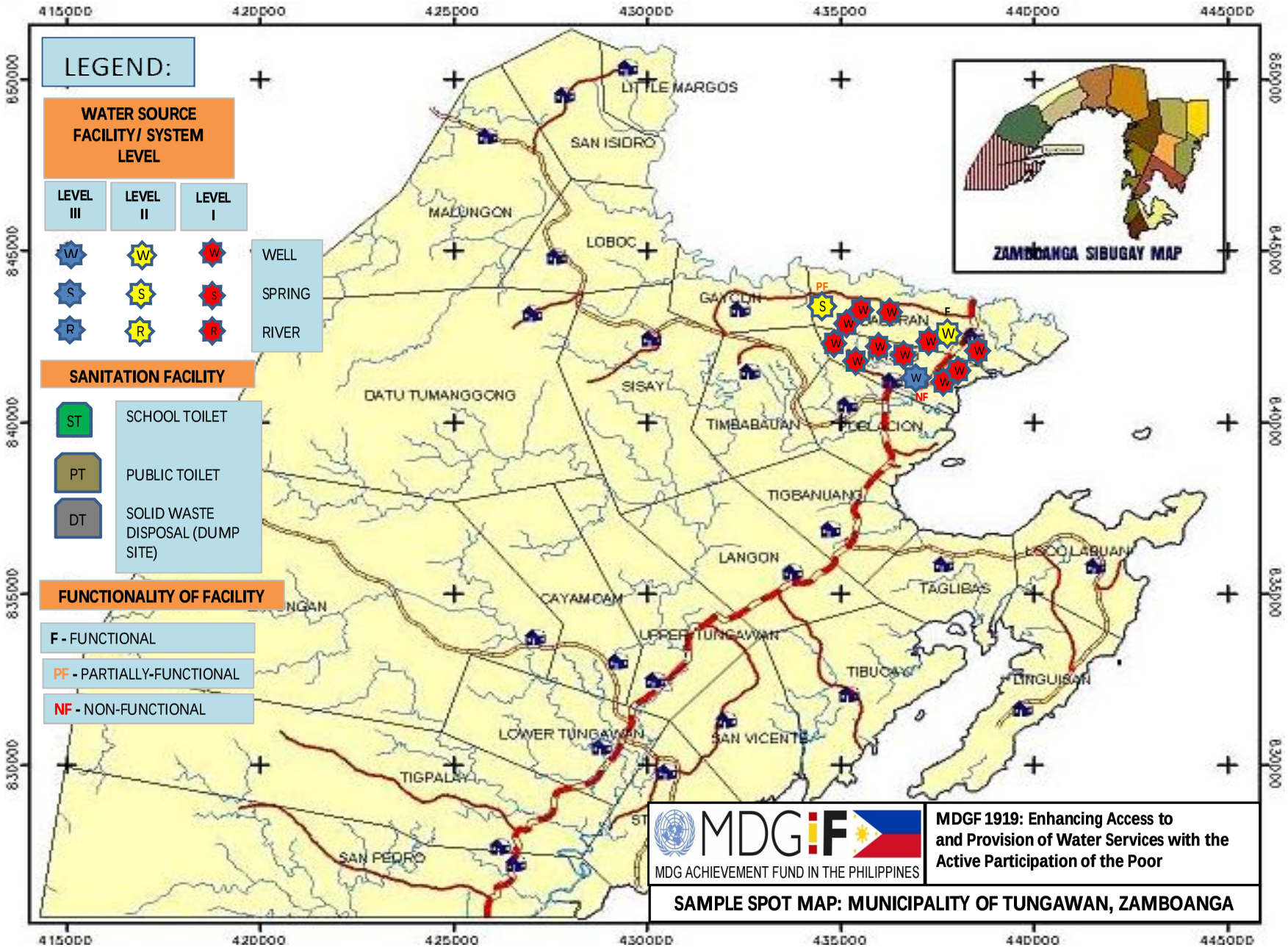
Solid Waste Disposal (Dumpsite)

Functionality

F Functional Facility

PF Partially-functional facility

NF Non-functional facility


LEGEND:
WATER SOURCE FACILITY/ SYSTEM LEVEL
LEVEL III
LEVEL II
LEVEL I
WELL
SPRING
RIVER
SANITATION FACILITY
ST
SCHOOL TOILET
PT
PUBLIC TOILET
DT
SOLID WASTE DISPOSAL (DUMP SITE)
FUNCTIONALITY OF FACILITY
F - FUNCTIONAL
PF - PARTIALLY-FUNCTIONAL
NF - NON-FUNCTIONAL
ZAMBOANGA SIBUGAY MAP
LITTLE MARGOS
SAN ISIDRO
MALUNGON
LOBOC
DATU TUMANGGONG
SISAY
TIMBABAUAN
TIGBANUANG
LANGON
CAYAMDAM
UPPER TUNGAWAN
LOWER TUNGAWAN
TIGPALAY
SAN PEDRO
SAN VICENTE
TIBUCAY
TAGLIBAS
LINGUISAN
MDG ACHIEVEMENT FUND IN THE PHILIPPINES
MDGF 1919: Enhancing Access to and Provision of Water Services with the Active Participation of the Poor
SAMPLE SPOT MAP: MUNICIPALITY OF TUNGAWAN, ZAMBOANGA

MDGF-BS-TGL

Guidelines for Technical Inventory and Assessment of Water Supply and Sanitation Facilities

The conduct of baseline survey and assessment - technical aspect, is sub-divided into:

Water Supply

General Information on Water Supply Facility

Technical Information on Level I Water Supply Facility

Technical Information on Level II Water Supply Facility

Technical Information on Level III Water Supply Facility

Sanitation

General Information on Sanitation Facility

Technical Information on Sanitation Facility

ABBREVIATIONS AND DEFINITION OF TERMS:

Coordinate System - a system for specifying precise location of a particular point in space, determined in terms of its latitude (Northing) and longitude (Easting) measurement through the use of Global Positioning System (GPS) instrument.

Discharge – measured volume of water extracted from a source at a specified unit of time

Fully-functional Facility – facility is considered as fully-functional if it is operating at its design capacity, yield and operating time. Disruption in the normal operation may occur but is attributed to unforeseen events like power failure, pump breakdown and leakage in distribution/transmission pipes.

Partially-functional Facility – facility is operational, but less than its design capacity, yield and operating time.

Non-functional Facility – facility is totally not operational.

Level I System – point-source system, water is usually sourced from a manually-operated hand-pump type drilled or dug well, serving an average of 15 HHs.

Level II System - Communal faucets serve as main source for this system level, composed of an average of 60 HHs clustered in an area. Moderate yielding wells and/or springs are the common source/s of water.

Level III System - This system level is characterized by individual Household faucets usually composed of adjacent barangays or the whole municipality, if the water source is sufficient. Water is derived from high yielding groundwater, spring and/or surface water sources.

PNSDW – Philippine National Standards for Drinking Water

PWD – person with disability

Seasonal Change - variation in weather condition, i.e. rainy and dry seasons.

Static Water Level – depth of water at its undisturbed state, measured from ground level.

Well Depth - distance from ground level to bottom of well, usually measured in terms of number of pipes installed multiplied by the length of each pipe.

Well Diameter – measured in terms of the pipe diameter installed.

WSP – Water Service Provider

General Information on Water Supply Facility

1. **Location of facility**. Specify province, municipality, barangay and purok.

2. **Level of service of the facility**.

   Level I: This is characterized as a point-source system serving an average of 15 HHs. Water source is usually manually-operated hand pump type or dug well.

   Level II: Communal faucets serve as main source for this system level. Service areas are composed of an average of 60 HHs clustered in an area. Moderate yielding wells and/or springs are the common sources of water.

   Level III: This system level is characterized by individual HH faucets usually composed of adjacent barangays or the whole municipality, if the water source is sufficient. Water is derived from high yielding groundwater, spring and/or surface water sources.

3. **Status of construction.** This may either be already completed and operational, or construction is still on-going during the time of the survey. If on-going, specify the target date of completion.

4. **Ownership.** The WSP (water service provider) is usually named after the Barangay/Municipality where the facility is located. The manager is the appropriate contact person.

5. **Management.** This may be by the LGUs or WSPs (water district, cooperative, BWASA, and others). If by the WSPs, specify if it is duly government-registered, and if not, state reason for non-registration.

6. **Total project cost and source of funding**. Total project cost is the total amount spent to complete the facility. Funds for such can come from various sources: through grant and/or loan (state the specific source agency like UNDP, JICA, World Bank, etc), donation, IRA-funded, own fund by the WSP, and others. Specify also the cost-sharing arrangement, if applicable. ***State also project title: P3W, Kalahi-CIDSS, etc.***

7. **Construction and operation.** This pertains to dates of start and end of construction and start of operation (in mm/yyyy). If construction period is by phase (not completed in a single continuous period), specify such dates of completion by phase.

8. **Potential areas for expansion of water supply.** As initial input to the conduct of sector planning, candidate barangays shall be identified for

possible expansion likewise specifying their potential water source/s (wells, springs or surface water).

Technical Information on Level I Water Supply Facility

1. **Water source**. For springs, specify barangay location, determine coordinates (Northing and Easting measurement using GPS instrument) and spring discharge. If actual discharge measurement is possible, this can be done by the volumetric method wherein the time (in seconds) is determined to fill a container of known volume (liters). The calculated discharge is in the unit liters per second (lps).

   Likewise for well sources, location, coordinates and discharge are determined. Other technical data are: well depth (in terms of number of pipes installed x the commercial length of each pipe), well diameter (measured diameter of pipe installed) and static water level (depth of water at its undisturbed state measured from ground level).

   Other sources of water for level I may also be available like rain water collector and the like.

2. **Water permit:** This permit is issued by the National Water Resources Board (NWRB) that allows for legal extraction of water from a source. If permit is not available during the survey, specify the reason for such.

3. **Barangay/s served.** Information required for this category comprises of the following: name of barangay/s served, total population (with Male and Female distinction) and number of households (HHs) of the served barangay/s.

4. **Operating Time:** this pertains to the number of hours per day that the facility is used by the HHs served.

5. **Assessment of Functionality.** This falls under three categories, fully functional, partially functional and non-functional. Facility is considered as fully-functional if it is operating at its design capacity, yield and operating time. Facility is deemed as partially-functional if it is operational but less than its design capacity, yield and operating time. Non-functional facilities are completely non-operational.

   Related causes of a facility being partially-functional or non-functional are as follows:

   i. Physical defects that occurred during the normal course of wear and tear: damaged intake structure for spring, and missing/damaged

parts of a well source like pump handle, gaskets, fittings and riser pipes.

ii. Improper design of facility: for spring, distribution is normally by gravity such that it is imperative that the spring source should be at higher elevation than the service area; for wells, common design lapses are: inadequate length of riser pipe and/or pipe submergence, wrong type of pump installed (shallow or deep well pump type). Shallow well pump types are applicable for static water levels below 6m measured from the ground. Deeper water level requires deep well pump types like Malawi, Afridev and the like.

iii. Poor construction of facility: leakage in spring box, sub-standard pipe and pump material that leads to early wearing-out and inadequate actual well depth (less than the designed depth).

iv. Supply becomes insufficient during seasonal change: adverse effects on water supply due to longer than normal dry season, also known as El Niño phenomenon **(and other possible effects of climate change).**

v. Deteriorating water quality: factors that lead to poor water quality are mining and rampant cutting of trees in the area, rapid industrialization that abets water pollution, poor waste disposal, and the like.

6. **Accessibility to water source**. For some time, access to water source may be impaired due to deteriorating peace and order, natural calamities like **flooding and landslide** and other unavoidable circumstances. Determine also if other construction remedies like ramps and railings are available so that the water source is accessible to Persons With Disabilities (PWDs).

7. **Water quality tests.** If previous tests were conducted, determine from available records if the parameters are within standards set by the Philippine National Standards for Drinking Water (PNSDW) for physical, chemical and bacteriological aspects.

8. **Other water quality problems encountered and/or reported.** During the actual survey, gather information from the residents for other water quality problems like salty and metallic taste, turbid or muddy water and bad smell and verify by physical inspection using the sense of smell, taste and sight.

   Salty water is usually located in coastal areas and has been a perennial problem in water supply development.

Metallic taste affects the aesthetic value of water related to its taste and also rustiness of materials and clothing.

Turbid or unclear water has several causes: poor construction and material quality leading to contamination and seepage in the piping system, inadequate well head protection, and natural groundwater quality.

Preparing the List of Target Respondents for Household Survey

Identify samples of Level 1 Facilities in each barangay. The samples must be representative of functional and partially functional facilities and must be geographically distributed within the barangay. The number of samples shall correspond to 30 % of Level 1 Facility users.

Identify/provide a list of potential/target respondents for the Household Survey using the prescribed form.

- Indicate facility code, name of owner or operator, number of users
- The owner/operator is the main target for survey
- Remarks – indicate if the owner/operator has already signified willingness for interview in the near future
- Attach the list to the corresponding Level 1 Technical Inventory Sheet

Technical Information on Level II Water Supply Facility

1. **Water source.** For springs, specify barangay location, determine coordinates (Northing and Easting measurement using GPS instrument) and spring discharge. If actual discharge measurement is possible, this can be done by the volumetric method wherein the time (in seconds) is determined to fill a container of known volume (liters). The calculated discharge is in the unit liters per second (lps).

   Likewise for well sources, location, coordinates and discharge are determined. Other technical data are: well depth (in terms of number of pipes installed x the commercial length of each pipe), well diameter (measured diameter of pipe installed) and static water level (depth of water at its undisturbed state measured from ground level). Type of pump can be submersible, centrifugal or turbine. Capacity is rated in terms of Horsepower (HP).

   For river source, determine the location and coordinate of its tapping point (point where water is extracted, usually by infiltration galleries and/or construction of a dam). River discharge measurement is done using a flow meter instrument and manually through the flotation method.

2. **Water permit.** This permit is issued by the National Water Resources Board (NWRB) that allows for legal extraction of water from a source. If permit is not available during the survey, specify the reason for such.

3. **Barangay/s served.** Information required for this category comprises of the following: name of barangay/s served, total population (with Male and Female distinction) and number of households (HHs) of the served barangay/s. The number of tap stands are likewise determined.

4. **Supply Information.** Data for this category includes operating time (the number of hours per day that the facility is operational), distribution time (number of hours per day that water is made available to the HH users), total length in meters of distribution and transmission lines (can be derived from the as-built plans), type of reservoir (ground, elevated, concrete, steel) and number and total capacity of reservoir/s.

5. **Assessment of Functionality.** This falls under three categories, fully functional, partially functional and non-functional. Facility is considered as fully-functional if it is operating at its design capacity, yield and operating time. Disruption in the normal operation may occur but is attributed to unforeseen events like power failure, pump breakdown and leakage in distribution/transmission pipes. Facility is deemed as partially-functional if it is operational but less than its design capacity, yield and operating time. Non-functional facilities are completely non-operational.

   Related causes of a facility being partially-functional or non-functional are as follows:

   i. Physical defects on source facility that occurred during the normal course of wear and tear: damaged intake structure for spring and river, and defective pump and cut riser pipes for wells.

   ii. Physical defects on system facility that happens during the normal course of wear and tear: leakage in transmission/distribution lines, damaged gate valves, leakage in reservoir and others.

   iii. Improper design of facility: for spring and river, distribution is normally by gravity such that it is imperative that the source should be at higher elevation than the service area; for wells, common design lapses are: inadequate length of riser pipe and/or pump setting, wrong capacity of pump installed, and others.

   iv. Poor construction of facility: leakage in intake structure, sub-standard pipe and pump material that leads to early wearing-out and inadequate actual well depth (less than the designed depth).

v. Supply becomes insufficient during seasonal change: adverse effects on water supply due to longer than normal dry season (possible effects of climate change).

vi. Deteriorating water quality: factors that lead to poor water quality are mining and rampant cutting of trees in the area, rapid industrialization that abets water pollution, poor waste disposal, and the like.

6. **Accessibility to water source.** For some time, access to water source tap stand may be impaired due to deteriorating peace and order, natural calamities like flooding and landslide and other unavoidable circumstances. Determine also if other construction remedies like ramps and railings are available so that the water source is accessible to Persons With Disabilities (PWDs).

7. **Water quality tests:** if previous tests were conducted, determine from available records if the parameters are within standards set by the Philippine National Standards for Drinking Water (PNSDW) for physical, chemical and bacteriological aspects.

8. **Other water quality problems encountered and/or reported.** during the actual survey, gather information from the residents for other water quality problems like salty and metallic taste, turbid or muddy water and bad smell and verify by physical inspection using the sense of smell, taste and sight.

   Salty water is usually located in coastal areas and has been a perennial problem in water supply development.

   Metallic taste affects the aesthetic value of water related to its taste and also rustiness of materials and clothing.

   Turbid or unclear water has several causes: poor construction and material quality leading to contamination and seepage in the piping system, inadequate well head protection, and natural groundwater quality.

Preparing the List of Target Respondents for Household Survey

Prepare a list of potential/target respondents for the Household Survey using the prescribed form.

- Per tapstand, list down number of users, name of tapstand leader, and names of potential/target respondents.
- Select 30 % sample for household survey. The samples must be distributed according to distance from tapstand, that is, closest, midway or farthest, and with more or less equal interval

- Where there are Indigenous Peoples covered by facilities, include the chieftain in the target for household survey
- Attach the list to the corresponding Level 2 Technical Inventory Sheet

Technical Information on Level III Water Supply Facility

1. **Water source.** For springs, specify barangay location, determine coordinates (Northing and Easting measurement using GPS instrument) and spring discharge. If actual discharge measurement is possible, this can be done by the volumetric method wherein the time (in seconds) is determined to fill a container of known volume (liters). The calculated discharge is in the unit liters per second (lps).

   Likewise for well sources, location, coordinates and discharge are determined. Other technical data are: well depth (in terms of number of pipes installed x the commercial length of each pipe), well diameter (measured diameter of pipe installed) and static water level (depth of water at its undisturbed state measured from ground level). Type of pump can be submersible, centrifugal or turbine. Capacity is rated in terms of Horsepower (HP).

   For river source, determine the location and coordinate of its tapping point (point where water is extracted, usually by infiltration galleries and/or construction of a dam). River discharge measurement is done using a flow meter instrument and manually through the flotation method.

2. **Water permit.** This permit is issued by the National Water Resources Board (NWRB) that allows for legal extraction of water from a source. If permit is not available during the survey, specify the reason for such.

3. **Barangay/s served.** Information required for this category comprises of the following: name of barangay/s served, total population (with Male and Female distinction) and number of household connections of the served barangay/s.

4. **Supply Information.** Data for this category includes operating time (the number of hours per day that the facility is operational), distribution time (number of hours per day that water is made available to the HH users), total length in meters of distribution and transmission lines (can be derived from the as-built plans), type of reservoir (ground, elevated, concrete, steel) and number and total capacity of reservoir/s.

5. **Assessment of Functionality**. This falls under three categories, fully functional, partially functional and non-functional. Facility is considered as fully-functional if it is operating at its design capacity, yield and operating

time. Disruption in the normal operation may occur but is attributed to unforeseen events like power failure, pump breakdown and leakage in distribution/transmission pipes. Facility is deemed as partially-functional if it is operational but less than its design capacity, yield and operating time. Non-functional facilities are completely non-operational.

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i. Physical defects on source facility that occurred during the normal course of wear and tear: damaged intake structure for spring and river, and defective pump and cut riser pipes for wells.

ii. Physical defects on system facility that happens during the normal course of wear and tear: leakage in transmission/distribution lines, damaged gate valves, leakage in reservoir and others.

iii. Improper design of facility: for spring and river, distribution is normally by gravity such that it is imperative that the source should be at higher elevation than the service area; for wells, common design lapses are: inadequate length of riser pipe and/or pump setting, wrong capacity of pump installed, and others.

iv. Poor construction of facility: leakage in intake structure, sub-standard pipe and pump material that leads to early wearing-out and inadequate actual well depth (less than the designed depth).

v. Supply becomes insufficient during seasonal change: adverse effects on water supply due to longer than normal dry season (possible effects of climate change).

vi. Deteriorating water quality: factors that lead to poor water quality are mining and rampant cutting of trees in the area, rapid industrialization that abets water pollution, poor waste disposal, and the like.

6. **Accessibility to water source.** For some time, access to water source tap stand may be impaired due to deteriorating peace and order, natural calamities like flooding and landslide and other unavoidable circumstances. Determine also if other construction remedies like ramps and railings are available so that the water source is accessible to Persons With Disabilities (PWDs).

7. **Water quality tests**. If previous tests were conducted, determine from available records if the parameters are within standards set by the

Philippine National Standards for Drinking Water (PNSDW) for physical, chemical and bacteriological aspects.

8. **Other water quality problems encountered and/or reported.** During the actual survey, gather information from the residents for other water quality problems like salty and metallic taste, turbid or muddy water and bad smell and verify by physical inspection using the sense of smell, taste and sight.

   Salty water is usually located in coastal areas and has been a perennial problem in water supply development.

   Metallic taste affects the aesthetic value of water related to its taste and also rustiness of materials and clothing.

   Turbid or unclear water has several causes: poor construction and material quality leading to contamination and seepage in the piping system, inadequate well head protection, and natural groundwater quality.

Preparing the List of Target Respondents for Household Survey

Prepare a list of potential/target respondents for the Household Survey using the prescribed form.

- List down names of potential/target respondents according to distance from main source of Level III water supply, that is, closest, midway or farthest (or Head, Middle, Tail-end).
- Number of target respondents must be more or less evenly distributed, and shall represent 30 % of households covered by Level III Facilities
- Where there are Indigenous Peoples covered by facilities, include the chieftain in the target for household survey
- Attach the list to the corresponding Level III Technical Inventory Sheet

General Information on Sanitation Facility

1. **Location of facility:** specify province, municipality, barangay and purok.

2. **Type of facility:**

   School Toilet: Constructed in public schools.

   Public Toilet: Public toilets are located in populated areas like market area, public transportation terminals and parks and playgrounds.

   Solid Waste Disposal facility: Commonly known as dump sites.

3. **Status of construction:** facility can either be already completed and operational, or construction is still on-going during the time of the survey. If on-going, specify the target date of completion.

4. **Ownership and Management:** Ownership and management is consigned to those using the facility: school and Parents-Teachers Association (PTA) officials for school toilets and cooperatives and associations for public toilets. Waste disposal facilities are usually owned by the LGU. If management is by cooperative or association, specify if it is duly government-registered, and if not, state reason for non-registration.

5. **Total project cost and source of funding**: total project cost is the total amount spent to complete the facility. Funds for such can come from various sources: through grant and/or loan (state the specific source agency like UNDP, JICA, World Bank, etc), donation, IRA-funded, owner's fund and others. Specify also the cost-sharing arrangement, if applicable.

7. **Construction and operation:** this pertains to dates of start and end of construction and start of operation (in mm/yyyy). If construction period is by phase (not completed in a single continuous period), specify such dates of completion by phase.

Technical Information on Sanitation Facility

1. **Type of toilet facility:**

   With water-sealed toilet bowl: is the type of toilet facility where, after water is flushed or poured into the bowl, a small amount of water is left in the bowl and seals the bottom from the pipe leading to the depository.

   Closed-pit, without water-sealed bowl: as the name implies, this type of toilet has no bowl and the depository is constructed usually of large circular tubes made of concrete or clay, covered on top and has a small opening.

   Open-pit: is the same as closed pit, but without covering.

   Others: includes pail system wherein fecal matter is accumulated in a pail or any kind of container, to be disposed from time to time.

2. **Manner of waste disposal:**

   Septic tank: a tank in which the solid waste or sewage is accumulated to be disintegrated by bacteria. This ids commonly called "poso negro".

Direct to drainage canal: there is no depository for solid waste, waste is directly discharged to canal.

Usage of septic tank: usage can be exclusively by one household or shared with the other households.

3. **Water supply availability for flushing and cleaning:**

Can be by faucet, well, rain water or none at all.

4. **Surrounding area:**

Gather information from residents if the toilet surrounding area gets flooded during heavy rain.

5. **Gender consideration:**

Verify if there is a separate booth for Male and Female users of the toilet.

6. **Accessibility to all users:**

Verify if it is accessible to Persons with Disabilities (PWDs) and the aged through constructed ramps and railings.

7. **Functionality:**

This is with similarity to the definitions of fully-functional, partially-functional and non-functional facilities for water supply.

Cause/s of partial and/or non-functionality of sanitary facilities are caused by several factors: physical defects that render it unusable, poor designing and workmanship during construction and inadequate water source.

GENERAL INFORMATION ON WATER SUPPLY FACILITY

Province	***Municipality***
Barangay	***Purok***

Service Level (check appropriate box):

Level I ❒	Level II ❒	Level III ❒
Combination of Levels ❒ (specify) _____		

Status of Construction:

Completed ❒ On-going ❒	
If on-going construction, specify target date of completion _____	

Ownership :

Name of WSP	
Contact Person	Position
Address	Contact No.

Managed by (check appropriate box):

LGU

Municipality ❒ Barangay ❒

WSP	Registered?		If No, state reason
	Y	N	
Water district ❒			
Cooperative ❒			
BWASA ❒			
Others, *specify* ❒			

Total Project Cost (PHP): _____

Source of Funding for Construction of Facility: (*check appropriate box and specify cost-sharing arrangement)*

Financing Type	Cost sharing (%)			Donor/Fund Source	Remarks
	Donor	LGU	HHs		
Grant					
Loan					
Donation					
IRA-funded					
WSP-funded					
others, specify					

Construction and Operation

	If construction is by Phase		
	Phase 1	Phase II	Phase III
Start of Construction *(mm/yy)*			
End of Construction *(mm/yy)*			
Start of Operation *(mm/yy)*			

If there is considerable gap between End of Construction and Start of Operation, state reason:

Potential Area/s for Expansion of Water Supply

Location/Name of Barangay	Potential Source (specify if well, spring or river)
1	
2	
3	
4	

Provide additional sheet, or write at the back, if necessary.

Prepared by :	Noted by:	Date: