Administration and Management of Water Supply Services (A)

Country Reports FY2023

Japan International Corporation of Welfare Services (JICWELS)

Table of Contents

1. ECUADOR	1
2. JORDAN	18
3. LAOS	25
4. MADAGASCAR	40
5. PALESTINE	47
6. PHILIPPINES	53
7. SAMOA	73
8. ZIMBABWE	

1. ECUADOR

Inception Report

Country: ECUADOR

Name: ROSALVA BEDON

1. Outline of Water Supply Services

1-1. Legal Basis of Water Supply Services

- Constitution of the Republic of Ecuador
- Municipal Code for the Metropolitan District of Quito
- Civil Code
- Comprehensive Criminal Organic Code
- Organic Code of Territorial Organization, Autonomy and Decentralization COOTAD
- Organic Code of Planning and Public Finance
- Work code
- General Organic Code of Processes
- Organic Law of Public Companies (LOEP)
- Organic Law on Transparency and Access to Public Information (LOTAIP)
- Organic Law of the State Comptroller General
- Organic Law of the Council for Citizen Participation and Social Control (CPCCS)
- Organic Law of Water Resources, uses and exploitation of water
- General Regulations to the Organic Law of Transparency and Access to Public Information
- General Regulations to the Organic Law of Consumer Defense
- Regulation of the Organic Law of the General Comptroller of the State
- Regulations to the Water Resources Law, uses and exploitation of water

1-2. Demarcation of Water Supply Services

Ministry of Environment, Water and Ecological Transition

1-3. Main Actor of Water Supply Utilities

Municipality of the metropolitan district of Quito

1-4. Mission/Vision of Water Supply Utilities

Misión: Provide drinking water and sanitation services with efficiency and corporate sustainability.

Vision: To be a sustainable and innovative management company, leader in public services in the region.

1-5. Your Mission/Vision in your organization

Implement management actions in order to maintain continuous improvement in water quality and service and business processes

2. Water Supply Service Levels

2-1. Main Performance Indicators (PI)

Coverage area	372 (sq. km)
Population Served	2.827.106
Collection ratio	98 (%)
Production capacity	1.379.469,355 (m3/day)
Supply duration	22,07 (hr/day)
Supply pressure	40 - 90 psi
Non-Revenue Water	28,9 (%)
Water quality	99,9%
Staff number	1.583
Number of connections	689.274
Staff/1,000 connections	2,3 (people/1,000connections)

2-2. Any Monitoring by Performance Indicators (PI)

	APRIL 2023			
MAIN MANAGEMENT INDICATORS	GOAL	ACHIEVEMENT	COMPLIANCE	ADERASA 2019*
Drinking Water Coverage in the DMQ	97,84%	97,68%	99,83%	91,16%
Sewerage Coverage in the DMQ	93,59%	93,38%	99,77%	82,15%
Service Continuity Index	23,62 h/day 98,40%	22,07 h/day 91,97%	93,47%	23,5 h/day**
Water Quality Index	99,84%	99,27%	99,43%	86,68%
Non - revenue water Index	29,57%	29,01%	101,88%	38,28%
Water consumption level per domestic connection in service (m3/connection/month)	19,50	19,03	102,41%	25,76
Total employees per thousand AP connections	2,35	2,40	98,07%	3,46
EBITDA	39,99%	50,47%	126,20%	Entre -49,3 y 67,9%
* Compared to companies between 100,000 and 1,000,000 conner	ections. ** Data	2014		

3. Management of Water Quality

3-1. Current Situation and Major Challenges/Problems

EPMAPS, cuenta con un índice de calidad del agua del superior al 99 porciento. Mantiene certificaciones nacionales e internacionales como Sello de Calidad INEN y Aquarating.

Its main challenges are to maintain and improve the water quality index. Create in the population the culture of caring for water

3-2. Current Actions against Those Challenges/Problems

- Maintain the INEN quality seal certification, as well as Aquarating.
- Maintain raw and treated water quality monitoring plans as well as water safety plans.
- Permanent training aimed at technical personnel and evaluating the impact of the knowledge acquired in the activities carried out.

3-3. Any Achievements

Exchange of knowledge of the experience of drinking water companies at a national and international level.

3-4. Water Quality Standards for Drinking Water

- Technical standard for quality control of water for human consumption ARCA
- Technical standard for management control the efficient use of drinking water
- NTE INEN 1108 Water for human consumption. requirements

3-5. Monitoring System or Plans for Safety of Drinking Water in Your Organization /Regulatory Body / Independent Institution /Others

The Company has approximately 33 drinking water supply systems which have water safety plans in accordance with WHO criteria.

Additionally, as a control, periodic monitoring of water quality is carried out. In the case of deviations, a non-conforming product is raised to analyze the root cause of the deviation and provide an immediate solution.

3-6. Implementation of Water Safety Plans* or Similar Efforts

Since 2013, the company began the implementation of water safety plans according to the criteria of the World Health Organization's Manual of Water Safety Plans, adapting to the EPMAPS scenarios.

4. Reduction of Non-Revenue Water

4-1. Current Situation and Major Challenges/Problems

Non-revenue water levels correspond to the difference between the quantity of water injected

into the system supply and amount of water actually charged to customers, which usually occurs due to leaks (real or physical losses), being the average in the region of 40.38%. The company has a Non-Revenue Water Management Committee, which is a technical team that makes decisions to improve water losses due to leaks or theft in order to be evaluated in the future.

There is a unit called the Non-Revenue Water Department and its main functions are:

- Prepare and supervise plans and programs in order to meet the objectives of reducing and controlling non-revenue water
- Implement technological improvements such as leak detection
- Supervise the execution of the sectorization and macro measurement plans in order to meet the objectives of control of unaccounted for water
- Process and analyze information on flow rates, levels and pressures corresponding to the distribution system in order to coordinate the preparation of pipe replacement plans in drinking water systems

The company has a strategic planning 2023 - 2026 which contains a plan to reduce unaccounted for water that is measured, through compliance with the indicator Unaccounted for water index that has 100% performance.

The company has the Aquarating certification, a recognition that evaluates eight areas, one of them being "Efficiency in Planning and Execution" which contains as a practice incorporating

specific proposals for the reduction of non-revenue water

The company has the Aquarating certification, a recognition that evaluates eight areas, one of them being "Efficiency in Planning and Execution" which contains as a practice incorporating

specific proposals for the reduction of non-revenue water. This practice is being managed with actions to be evaluated in the future.

The current challenges correspond to providing a timely solution to the theft of both raw and treated water and water leakage caused by broken pipes

4-2. Current Actions against Those Challenges/Problems

The actions that have been proposed for the issue of water leakage is to implement the remote detection of leaks that is currently in a pilot study.

4-3. Any Achievements

Currently, there is greater interaction between the units of the Department of Research, Development and Innovation and the Department of non-revenue water in order to establish joint proposals from the point of view of innovation.

4-4. Constitution of NRW (If you have the data, please fill in the table) The information detailed below is approximate:

Authorized Revenue water consumption	Revenue water	Billed authorized consumption	177.280.000(m3 /year) 70,64 (%)
	Unbilled authorized consumption (ex. fire fighting, cleaning)	73.584.477 (m3 /year) 29,36 (%)	
Water losses	Non-Revenue Water (NRW)	Apparent losses (Unauthorized consumption (i.e. Illegal use), Customer metering inaccuracies)	18.396.119 (m3 /year) 7,34 (%)
		Physical losses (Leakage)	55.188.358 (m3 /year) 22, 02 (%)

4-4. Situations about Leakage Detection Measures (DMA etc.)

- Development of the action plan for the materialization of the hydraulic sectorization of the drinking water distribution system of the Metropolitan District of Quito for the expansion of coverage.
- Pressure Management Control in the Chilibulo Bajo Sector.
- Evaluation of the management of pressures in the drinking water distribution system of the Metropolitan District of Quito and development of the action plan to reduce losses through pressure control and detection of invisible leaks and sectorization for the optimization of the water supply systems. La Merced, Alangasí and Pintag parishes.

5. Accounting system of Water Supply Service

5-1. Water Tariff in your Organization

- The EPMAPS rate for water consumption is on average USD 0,53

5-2. Balance Sheet of your Organization and 5-3. Profit and Loss Statement of your Organization

		FINANCIAL	SITUAT	ION
ð	There remains a company with an excellent financial	DE DE DE	147) 2021	ANI I asta
	surplus of USD 33 million for investment.	Operating Taccinie	342 668 453.75	100.016.439.00
•	AA+ risk rating, thanks to its sustainability and financial strength.	Ther ten-aperating income Ther ten-aperating income Ther ten-approximation income	130 17 215 13 (017 090) 17 (1.55)	A STE PIED
	Audit of financial statements for 2022 underway	Tetal labora	114.691.912,61	101-001.0
•	Assets for USD 1,239 million, with a growth of US. D 87 million in relation to 2021.	Costs and Expendes Scatt Materials Thirdcarts services	58 783 528 17 16 641 478 77 34 176 867 21	43.810 CH(_) 4.716.525,8 28.786.531,5
	There are 21 million dollars available for investment, not due to under-execution, but due to increased billing volume, loss reduction, improved collection,	Maintenance Depreciation and amonipation Financial Provisions	16 645 859 38 28 136 840 45 15 978 595,72 152 494 57	10 788,839 30 38 646 987 67 8 386 208 14 3 386 208 14 3 386 208 14
	recovery of old municipal debt, income from hydroelectricity, savings in contracting processes, etc.	ostrame Textel Conta	125.071.08	1.544.225 B
	Additional income of 7.5 million will be received due	Wer profit in andinary activities	29.174.227.88	15.385.574.14
	to the optimization of consumption ranges and a correct targeting of subsidies.	Other comprehencive income income from unusingl assumption_ Total other comprehension income	128 102 14	(2159)581.01 (2159)584.81
		Comprehensive results	23.482.597.01	16.524,405.5

6. Major Recent Achievements in Improvement of Water Supply Services/Management

The main achievements of EPMAPS are framed in the following lines of action: economic management, environmental management and social management. These efforts are measured through indicators at a strategic level.

	APRIL 2023			
MAIN MANAGEMENT INDICATORS	GOAL	ACHIEVEMENT	COMPLIANCE	ADERASA 2019*
Drinking Water Coverage in the DMQ	97,84%	97,68%	99,83%	91,16%
Sewerage Coverage in the DMQ	93,59%	93,38%	99,77%	82,15%
Service Continuity Index	23,62 h/day 98,40%	22,07 h/day	93,47%	23,5 h/day**
Water Quality Index	99,84%	99,27%	99,43%	86,68%
Non - revenue water Index	29,57%	29,01%	101,88%	38,28%
Water consumption level per domestic connection in service (m3/connection/month)	19,50	19,03	102,41%	25,76
Total employees per thousand AP connections	2,35	2,40	98,07%	3,46
EBITDA	39,99%	50,47%	126,20%	Entre -49,3 y 67,9%
* Compared to companies between 100,000 and 1,000,000 conn	ections. ** Data	2014		

Among the main achievements, there are the recognitions granted by national and

international organizations such as certifications and accreditations, which are the result of a permanent development process, comparing ourselves with the best companies in the sector, in order to identify shortcomings and opportunities for improvement. In addition, the AquaRating recertification, the reiteration of the leadership of SDG 6:

"Clean Water and Sanitation". Other important achievements are:

- Certificate of conformity "INEN Quality Seal".- We maintain the current INEN Quality Seal until December 1, 2024; and that it is ratified precisely in follow-up audits to Quality Management System and follow-up to the quality of the Drinking Water product in compliance with the 46 parameters of the Standard INEN 1108.
- Certification of the AQUARATING evaluation.- We were the first company worldwide to obtain this certificate after an evaluation and audit in 2016. The AquaRating System, Developed by the Inter-American Bank of Development (IDB) and International Water Association (IWA) evaluates 381 practices and 60 indicators.
- System Certifications Quality and Environmental Management.- We have the certificate until the year 2023 with follow-up audits, the same as demonstrate continuous improvement in management business, process efficiency and customer satisfaction.
 Quality Management System (ISO 9001:2015).
 Environmental Management System (ISO 14001:2015).
- Ecuadorian Model Recognition of Quality and Excellence (MECE).- in 2022, we received the Quality Recognition and Excellence in Public Management awarded by the Ministry of Work, MECE. Our commitment is to continue promoting innovative processes to improve the service to our customers and continue to deliver the better water quality to all citizens.
- Accreditations ISO 17025.- We maintain the accreditations under ISO 17025 with the Ecuadorian Accreditation Service (SAE) that demonstrates the technical competence of laboratories that verify the quality of the water, meters and the accuracy of the control equipment of the plants in the company laboratories.

7. Recent Challenges to Improve Water Supply Services

- Expand drinking water coverage in rural areas, through the generation of new projects that appear in the EPMAPS investment plan.
- mprove the continuity of the service, especially in rural areas and the sector of the valleys of the DMQ.

- Plan for renovation and repair of pipes in the drinking water distribution network, which will reduce the levels of leaks.

8. Expectations toward Japan

8-1. Expectations toward Japanese Government and JICA

- Know the experiences in the application of the guidelines related to the management of the supply system and what is the criterion that is applied to update or review.
- Know the actions and results taken on the issue of water stress.

8-2. Expectations toward Japanese Water Utilities

- Learn Japanese practices for the management and administration of drinking water service and new technologies used for process optimization.
- Learn about new successful practices that allow addressing non-revenue water issues efficiently, in order to adapt to the reality of Quito.
- Enhance knowledge of administration and management of supply systems based on the Japanese experience.

8-3. Expectations toward Japanese Private Companies

- Know the criteria to establish the administration and management of water to private companies.
- What are the benefits obtained from the management and administration of water from the private company.

9. Expectations toward the Program.

(Any comments and requests are appreciated.)

- My personal expectation of the course is to know how Japan links its culture to water care.

END.

Attachment 2 Water Supply Administration for Better Management of Water Supply Services (A) Inception Report Presentation

- 1. Country: Ecuador
- 2. Name: Rosalva Bedón
- **3. Position:** Jefe de Procesos y Calidad
- 4. Organization: Empresa Metropolitana de Agua Potable y Saneamiento

1. Outline of Water Supply Services of EPMAPS

EPMAPS has been providing drinking water and sanitation services in the Metropolitan District of Quito, province of Quito, for nearly 63 years.

For the provision of drinking water, we have seven collection systems: Papallacta, La Mica, Conducciones Orientales, Conducciones Western, Rural, Wells and Slopes. These are supplied from water sources located in the provinces of Pichincha and Napo. Furthermore, we have the operation of 23 drinking water treatment plants and 29 wastewater treatment plants.

EPMAPS has a water quality index of over 99 percent. It maintains national and international certifications such as INEN Quality Seal and Aquarating.

Its main challenges are to maintain and improve the water quality index. Create in the population the culture of caring for water.

We are active participants in the "LEADERS FOR THE SDG" program, of the United Nations Global Compact Ecuador Network.; We assume for the third time the leadership of the working group of Sustainable Development Goal (SDG) 6: "Clean Water and Sanitation".

Current Actions against Those Challenges/Problems

- Maintain the INEN quality seal certification, as well as Aquarating.
- Maintain raw and treated water quality monitoring plans as well as water safety plans.
- Permanent training aimed at technical personnel and evaluating the impact of the knowledge acquired in the activities carried out.



Challenges, objectives and goals for the next year and the following three to five years.

- Increase the percentage of treatment of sewage water}
- Urban drainage
- Decrease the physical losses of water so sustained
 Optimize the commercial management and clients

2



1. Outline of Water Supply Services of your Organization

Challenges, objectives and goals for the next year and the following three to five years

- Increase the percentage of treatment of sewage water}
- Urban drainage
- Decrease the physical losses of water so sustained
- Optimize the commercial management and clients



Whole Country:		
Area : 256.370 km ²		
Population 1 18,3 millions Habitants		
Coverage Water Supply: 79 %		
Your Water Supply System/City:		
Service Area : 4.196 km ²		
Population Served: 2.827.106 million		

3

4

1. Outline of Water Supply Services of your Organization

Please fill in variation of the indicators below based on your situation!

INDICATORS	2012	2017	2022
Staff/1,000 connections	4,39	3,27	2,3
Production capacity (m3/day)	653.184	689.472	619.064
Water quality	WHO Guidelines Norma INEN 1108	WHO Guidelines Norma INEN 1108	WHO Guidelines Norma INEN 1108
Coverage area	97,12	99,27	99,83
Supply duration (hr/day)	24	24	24
Supply pressure	2,8 – 6.2 bars	2,8 – 6.2 bars	2,8 – 6.2 bars
Number of connections	540.000	615.714	650.876
NRW	27,75	28,92	29,39
Collection ratio	90,41	90,91	98
Staff number	2.133	1.781	1.663

EPMAPS – WATER OF QUITO

MISSION, VISION Y PURPOSE



MISSION

Provide drinking water and sanitation services with efficiency and corporate sustainability.



VISION

To be a sustainable and innovative management company, leader in public services in the region.



PURPOSE

We contribute to the quality of life of the citizens of Quito, ensuring comprehensive water management.



6

2. Success Story of your Water Supply Services

WATER QUALITY

EPMAPS has a water quality index of over 99 %. It maintains national and international certifications such as INEN Quality Seal and Aquarating.

Its main challenges are to maintain and improve the water quality index. Create in the population the culture of caring for water.

CURRENT ACTIONS AGAINST THOSE CHALLENGES/PROBLEMS

- Maintain the INEN quality seal certification, as well as Aquarating.
- Maintain raw and treated water quality monitoring plans as well as water safety plans.
- Permanent training aimed at technical personnel and evaluating the impact of the knowledge acquired in the activities carried out.

ACHIEVEMENTS - EPMAPS

- Maintain the water quality index above 99%, using preventive control tools such as monitoring plans for treated and raw water. The analysis of the results obtained allows early warning actions to be taken.
- Exchange of knowledge of the experience of drinking water companies at a national and international level.
- Recognitions at national and international level such as Aquarating, INEN quality SEAL and Ecuadorian Model of Quality and Excellence.
- According to Aquarating (IDB Water and Sanitation Companies comprehensive evaluation system – IWA), EPMAPS is among the best in LAC.
- Be the pioneers in the application of water safety plans according to WHO guidelines.
- We have ISO 17025 certification since 2005, a recognition that demonstrates technical competence and the veracity of the results obtained from laboratory tests carried out on raw and treated water samples.

THE PARTY OF THE P
The second
ADDITIONAL OF A CONTRACTOR Office and the Contractor of the Contractor of Contractor of the Contractor of the Contractor of Contractor of Contractor of the Contractor
ACREMITICOVES
7

2. Success Story of your Water Supply Services

ACHIEVEMENTS - EPMAPS

We also maintain and periodically renew ISO 9001 (product quality), 14001 (environment), 37001 (anti-bribery) and 45001 (occupational health and safety) certification.

i denomina de la companya de la comp	CERTIFICACIÓN ISO	Constitution are and the supervised in the strength of a	Certificacionen de Ers Sietemas de Gestión
	37001:2016	Desperithency Social Communities.	de Calidad y Ambiental

Monitoring System or Plans for Safety of Drinking Water in EPMAPS

The Company has approximately 33 drinking water supply systems which have water safety plans in accordance with WHO criteria.

Additionally, as a control, periodic monitoring of water quality is carried out. In the case of deviations, a nonconforming product is raised to analyze the root cause of the deviation and provide an immediate solution.





Implementation of Water Safety Plans

Since 2013, the company began the implementation of water safety plans according to the criteria of the World Health Organization's Manual of Water Safety Plans, adapting to the EPMAPS scenarios.

These plans are evaluated for compliance every two years and are updated every 4 years. Their application focuses on mitigating the risk of water quality due to anthropogenic and natural factors.

9

2. Success Story of your Water Supply Services

Reduction of Non-Revenue Water

Non-revenue water levels correspond to the difference between the quantity of water injected into the system supply and amount of water actually charged to customers, which usually occurs due to leaks (real or physical losses), being the average in the region of 40.38%.

The company has a Non-Revenue Water Management Committee, which is a technical team that makes decisions to improve water losses due to leaks or theft in order to be evaluated in the future.

There is a unit called the Non-Revenue Water Department and its main functions are:

- Prepare and supervise plans and programs in order to meet the objectives of reducing and controlling non-revenue water
- Implement technological improvements such as leak detection
- Supervise the execution of the sectorization and macro measurement plans in order to meet the objectives of control of unaccounted for water
- Process and analyze information on flow rates, levels and pressures corresponding to the distribution system in order to coordinate the preparation of pipe replacement plans in drinking water systems

Reduction of Non-Revenue Water

The company has a strategic planning 2023 - 2026 which contains a plan to reduce unaccounted for water that is measured, through compliance with the indicator Unaccounted for water index that has 100% performance. The company has the Aquarating certification, a recognition that evaluates eight areas, one of them being "Efficiency in Planning and Execution" which contains as a practice incorporating specific proposals for the reduction of non-revenue water.

The company has the Aquarating certification, a recognition that evaluates eight areas, one of them being "Efficiency in Planning and Execution" which contains as a practice incorporating specific proposals for the reduction of non-revenue water. This practice is being managed with actions to be evaluated in the future.

The current challenges correspond to providing a timely solution to the theft of both raw and treated water and water leakage caused by broken pipes

11

12

2. Success Story of your Water Supply Services

Current Actions against Those Challenges/Problems

The actions that have been proposed for the issue of water leaks are to implement remote detection of leaks, which is currently in a pilot study called remote detection.

Achievements

- EPMAPS has the Non-Revenue Water Committee and a unit that addresses actions related to this issue and manages the "Non-Revenue Water Control and Reduction Program" and its main actions are:. Hydraulic modeling of distribution networks• Increased coverage of micrometers• Installation of macrometers• Hydraulic sectorization, telemetry and remote control, among othersDue to the economic relevance of having non-revenue water, EPMAPS has had as its strategic objective and indicator "Index of non-revenue water in the D.M.Q" since 2009.
- Currently, there is greater interaction between the units of the Department of Research, Development and Innovation and the Department of non-revenue water in order to establish joint proposals from the point of view of innovation.

Constitution of NRW

The information detailed below is approximate

Authorized consumption	Billed authorized Revenue water consumption		70,64 (%)
Authorized consumption		Unbilled authorized consumption (ex. fire fighting, cleaning)	73.584.477 (m3 /year) 29,36 (%)
Non- Water losses	Non-Revenue Water (NRW)	Apparent losses (Unauthorized consumption (i.e. Illegal use), Customer metering inaccuracies)	18.396.119 (m3 /year) 7,34 (%)
		Physical losses (Leakage)	55.188.358 (m3 /year) 22, 02 (%)

2. Success Story of your Water Supply Services

Situations about Leakage Detection Measures

- Development of the action plan for the materialization of the hydraulic sectorization of the drinking water distribution system of the Metropolitan District of Quito for the expansion of coverage.
- Evaluation of the management of pressures in the drinking water distribution system of the Metropolitan District of Quito and development of the action plan to reduce losses through pressure control and detection of invisible leaks and sectorization for the optimization of the water supply systems. La Merced, Alangasí and Pintag parishes.
- Implementation of the non-revenue water reduction plan. (Status:

is being studied for hiring).

13

3. Recent Challenges to Improvement of Water Supply Services

- Expand drinking water coverage in rural areas, through the generation of new projects that appear in the EPMAPS investment plan.
- Improve the continuity of the service, especially in rural areas and the sector of the valleys of the DMQ.
- Plan for renovation and repair of pipes in the drinking water distribution network, which will reduce the levels of leaks..







4. Expectations toward the Program

Your expectation toward this program

My personal expectation of the course is to know how Japan links its culture to water care and what are your keys to success.

Finally, know the methodology of creating business culture in the staff in order to achieve a purpose in a short time.

• Expectation of your superior toward this program.

Know and apply, according to the reality of EPMAPS, good improvement practices to water safety plans that include water quality and success factors on the issue of non-revenue water.



2. JORDAN

Inception Report

Country :jordan

Name: hamza khamis Mohammad Alrefa'i

1. Outline of Water Supply Services

1-1. Legal Basis of Water Supply Services

(What kind of laws and regulations are Water Supply Services based on?)

1-2. Demarcation of Water Supply Services

(Which ministry is in charge of what kind of field of water?)

1-3. Main Actor of Water Supply Utilities

(e.g. In Japan, most water utilities are public bureau under local government.)

- 1-4. Mission/Vision of Water Supply Utilities
- 1-5. Your Mission/Vision in your organization

2. Water Supply Service Levels

2-1. Main Performance Indicators (PI)

Coverage area	49.181(sq. km)
Population Served	7,131.100
Collection ratio	50(%)
Production capacity	1,200.000 (m3/day)
Supply duration	9 (hr/day)
Supply pressure	5 bar
Non-Revenue Water	49.5(%)
Water quality	good
Staff number	1050
Number of connections	1,412.103
Staff/1,000 connections	90 (people/1,000connections)

2-2. Any Monitoring by Performance Indicators (PI)

3. Management of Water Quality

- 3-1. Current Situation and Major Challenges/Problems
- 3-2. Current Actions against Those Challenges/Problems
- 3-3. Any Achievements
- 3-4. Water Quality Standards for Drinking Water
- 3-5. Monitoring System or Plans for Safety of Drinking Water in Your Organization / Regulatory Body / Independent Institution /Others
- 3-6. Implementation of Water Safety Plans* or Similar Efforts
 - (* Water Safety Plans: refer to the following URL and review before participating in the Course, the Chapter 4 "Water Safety Plans" of the "Guidelines for drinking-water quality, third edition"

URL: http://www.who.int/water sanitation health/dwg/gdwg3 4.pdf)

4. Reduction of Non-Revenue Water

- 4-1. Current Situation and Major Challenges/Problems
- 4-2. Current Actions against Those Challenges/Problems
- 4-3. Any Achievements
- 4-4. Constitution of NRW (If you have the data, please fill in the table)

Authorized	Revenue	Billed authorized	
consumption	water	consumption	(m3 /year)
			(%)
	Non-Revenue	Unbilled authorized	
	Water (NRW)	consumption	(m3 /year)
		(ex. fire fighting, cleaning)	(%)
Water losses		Apparent losses	
		(Unauthorized	(m3 /year)
		consumption (i.e. Illegal	(%)
		use), Customer metering	
		inaccuracies)	
		Physical losses	
		(Leakage)	(m3 /year)

|--|

4-4. Situations about Leakage Detection Measures (DMA etc.)

5. Accounting system of Water Supply Service

- 5-1. Water Tariff in your Organization
- 5-2. Balance Sheet of your Organization
- 5-3. Profit and Loss Statement of your Organization
 - (*[Public Utilities] (1) Profit and Loss Account
 - (2) Capital Income and Expenditures of your Organization)
 - (* You can check the case of Tokyo in the chapter 4 "Financial System and Future Financial Management" of this file.

URL: http://www.waterprofessionals.metro.tokyo.jp/pdf/wst_02.pdf)

Related to the financial department of WAJ.

- 6. Major Recent Achievements in Improvement of Water Supply
 - Services/Management
- implementation a comprehensive water lost reduction projects
- planning and execution works for Water harvesting projects

7. Recent Challenges to Improve Water Supply Services High financial costs of water treatment and projects

8. Expectations toward Japan

- 8-1. Expectations toward Japanese Government and JICA
- 8-2. Expectations toward Japanese Water Utilities
- 8-3. Expectations toward Japanese Private Companies

Gain exceptional knowledge and experience about the water management.

9. Expectations toward the Program.

(Any comments and requests are appreciated.)

Getting the sufficient skills and experience.

END.

Attachment 2 Water Supply Administration for Better Management of Water Supply Services (A) Inception Report Presentation

- 1. Country: jordan
- 2. Name: Hamza khamis mohammad alrefai
- 3. Position:projects supervision
- 4. Organization:water authority of jordan

Inception Report Presentation

Each applicant is kindly requested to make presentation of Inception Report (M/S Power Point file with **less than 15 slides**) which cover the following 7 topics about the individual water supply company/public water supply authority to which the participant belongs.

Presentation time: 15 minutes including Q/A

4 topics:

- 1. Outline of Water Supply Services of your Organization
- a 2. Success Story of your Water Supply Services
- 3. Recent Challenges to Improvement of Water Supply Services
- 4. Expectations toward the Program

2

1. Outline of Water Supply Services of your Organization

Whole Country: Area : 49,181 km² Population: 7 millions Coverage Water Supply: 70% Your Water Supply System/City: km² Service Area : 1,680 Population Served: 4 million/ thousand

1. Outline oter Supply Services of your Organization Please fill in variation of the indicators below based on your situation!

3

4

INDICATORS	2006 or 2007	2016 or 2017	Goals for 2025
Staff/1,000 connections	100	90	50
Production capacity	1,000.000	1,200.000	1,700.000
(m3/day)			
Water quality	good	good	good
Coverage area	50%	70%	90%
Supply duration (hr/day)	6	9	15
Supply pressure	2 bar	5 bars	5 bars
Number of connections	1,000000	1,412.103	2,000000
NRW	55%	49.5%	45%
Collection ratio	20%	50%	70%
Staff number	2000	1050	700

- implementation acomprehensive water lost reduction projects.
- planning and execution works for water harvesting projects.

3. Recent Challenges to Improvement of Water Supply Services

5

6

- High financial costs of water treatment and projects.

4. Expectations toward the Program

- Your expectation toward this program
- Getting the sufficient skills and experience.
- Expectation of your superior toward this program. (Please ask your superior their expectation.)
- Work to improve skills at work

3.LAOS

Inception Report

Country: Laos

Name: Mrs. Phaimany SENGPHOUVONG

Vice chief of Personnel unit, Personnel-administration sector, Vientiane Capital Water Supply State Enterprise (NPNL)

1-1. Legal Basis of Water Supply Services

(What kind of laws and regulations are Water Supply Services based on?)

The water supply law is water supply service based on, and it was approved by the National Assembly in July 2009, all most of stipulations are on water supply services, including 77 articles, namely Business operations, Rights and duties of service providers, users of services.

1-2. Demarcation of Water Supply Services

(Which ministry is in charge of what kind of field of water?)

The department of water resource, ministry of natural resource and environment is in charge.

1-3. Main Actor of Water Supply Utilities

- (e.g. In Japan, most water utilities are public bureau under local government.)
- Vientiane Capital Water Supply State Enterprise is under the direction of the

department of water supply, Ministry of Public Works and Transport.

1-4. Mission/Vision of Water Supply Utilities

Mission: Increase the water production, extend the pipeline, network system to

supply clean water for consumers, widely adequate and based on international standard.

- <u>Vision</u>: Being a state enterprise to supply quality water supply, widely adequate and stable in business operation.
- 1-5. Your Mission/Vision in your organization

Mission: The highly skilled workforce for exceptional services.

Vision: Good staff with good vision, good working and good planning.

2. Water Supply Service Levels

2-1. Main Performance Indicators (PI)

Table 1. Main	Performance	Indicators	on 2022
---------------	-------------	------------	---------

Coverage area	3,920 (sq. km)
Population Served	818,995 People
Collection ratio	95 (%)
Production capacity	284,710 (m3/day)
Supply duration	24 (hr/day)
Supply pressure	0.02 – 5.71 bar
Non-Revenue Water	28 (%)
Water quality	<5 NTU
Staff number	591
Number of connections	178,765
Staff/1,000 connections	3.3 (people/1,000connections)

2-2. Any Monitoring by Performance Indicators (PI)

Table 2. The result of Performance Indicator calculation (23PI) 2022

No.	Performance Indicator	Unit	Results
1. Safety			
1001	Violation ratio of water quality standard	%	-
1002	Direct supply from distribution main	%	85.51
2. Stability			
2001	(1) Population Served (Service area)	%	-
	(2) Population served (Service area + new development zone)	%	94.69
2002	Restricted water supply ratio	%	-
2003	Water supply pressure inadequacy ratio	%	14.29
2004	Hour of water interruption	Hours	No data
2005	Non-revenue water (NRW)	%	31.54
2006	Aging of water treatment plant facilities	%	0.00

2007	Aging of electric and mechanical & equipment (WTP)	%	18.63
2008	Aging of mains pipe	%	1.44
3. Sustainability			
3001	Billing issuance ratio	%	100.00
3002	Non-payment ratio (Number)	%	6.08
3003	Non-payment ratio (Amount)	%	9.85
3004	Water supply service complaints	%	1.43
3005	Resolved complaints ratio	%	99.71
3006	Cost of Water supply	USD/m3	0.17
3007	Unit tariff of water supply	USD/m3	0.12
3008	Rate to total returns	%	105.99
3009	Number of employee qualifications	Degree/person	1.82
3010	Training time	Hrs	15.10
3011	Year of experience for water supply service	Year/person	13.38
3012	Income per officer	USD/person	15,800.00
3013	Transmission input per employee	m3/person	179,873

3. Management of Water Quality

- 3-1. Current Situation and Major Challenges/Problems
 - ➢ High turbidity of raw water;
 - > The amount of water fluctuates according to the season;
 - Natural disaster.
 - > Technology and chemicals
- 3-2. Current Actions against Those Challenges/Problems
 - To monitor the water quality at water treatment plants, in the main pipeline network, inspection of five water treatment plants including 107 sample points.



- 3-3. Any Achievements
 - To create the manual for using water quality testers to detect various substances;
 - NPNL can check the various chemicals inspection for water quality which includes 23 parameters, according to water quality standard management for drinking and domestic use, ministry of health.
- 3-4. Water Quality Standards for Drinking Water (none)
 - > Not reach to water quality standards for drinking water or tap.

3-5. Monitoring System or Plans for Safety of Drinking Water in Your Organization / Regulatory Body / Independent Institution /Others

➢ Complying the data.

- 3-6. Implementation of Water Safety Plans* or Similar Efforts
 - (* Water Safety Plans: refer to the following URL and review before participating in the Course, the Chapter 4 "Water Safety Plans" of the "Guidelines for drinking-water quality, third edition"

URL: http://www.who.int/water sanitation health/dwq/gdwq3 4.pdf)

Complying the data.

4. Reduction of Non-Revenue Water

- 4-1. Current Situation and Major Challenges/Problems
 - ▶ Non-revenue water in Vientiane capital is estimated at 28 %;
 - Multiple network leaks
- 4-2. Current Actions against Those Challenges/Problems
 - Quick assessment and repair 24 hours
 - ➢ To replace old pipe
 - > To read water meters correctly
- 4-3. Any Achievements
 - > To reduce transmission and commercial losses
 - > To increase supply hours

4-4. Constitution of NRW (If you have the data, please fill in the table)

Authorized consumption	Revenue water	Billed authorized consumption	(m3 /year) 72 (%)
	Non- Revenue Water (NRW)	Unbilled authorized consumption (ex. fire fighting, cleaning)	(m3 /year) 1 (%)
Water losses		Apparent losses (Unauthorized consumption (i.e. Illegal use), Customer metering inaccuracies)	(m3 /year) 2 (%)
		Physical losses (Leakage)	(m3 /year) 25 (%)

4-4. Situations about Leakage Detection Measures (DMA etc.)

Total of water meters in Vientiane Capital, there are 178,765 meters, the DMA zone is covered 22 %, and can reduce non-revenue water.

5. Accounting system of Water Supply Service

5-1. Water Tariff in your Organization

NPNL has classified the consumer into 03 categories:

Category I: General People, employees, soldier, police, official staff and SME;

Category II: Government administration, hospitals-schools of government,

administrative offices, various ministries, headquarters, public

gardens, international organizations and various embassies;

Category III: Manufacturing, factory, companies, hotels, guest houses,

restaurants-entertainment, school and hospitals of private.

Table 3. Classified the consumer and tariff of NPNL (on 2016 – present)

Category	Name of category	Water volume	USD/m ³
Ι	Household	$1-10 \text{ m}^3/\text{month}$	0.07
		11-30 m ³ /month	0.10
		31-50 m ³ /month	0.13
		51 m^3 /month or more	0.16
II	Governmental	1 m^3 /month or more	0.13
III	Commercial	1 m^3 /month or more	0.16

5-2. Balance Sheet of your Organization

5-3. Profit and Loss Statement of your Organization

(*[Public Utilities] (1) Profit and Loss Account

(2) Capital Income and Expenditures of your Organization)

(* You can check the case of Tokyo in the chapter 4 "Financial System and Future Financial Management" of this file.

URL: <u>http://www.waterprofessionals.met/ro.tokyo.jp/pdf/wst_02.pdf</u>)

No	contents	USD
Ι	Operating income	13,504,753.39
	Water sold in come	9,338,443.94
	Construction income	36,246.48
	Other incomes	4,130,062.97
Π	Operating expenses	12,741,671.21
	salary	2,595,098.56
	Electricity	1,594,859.16
	chemical	531,309.23

Table 4. The operating income and expenses, net profit

	Operating and maintenane	2,778,208.28
	Contractor wage	24,218.84
	other expenses	1,674,334.73
	Payment for water purchase	1,326,305.71
	Depreciation and amortization	2,210,595.40
	Interest	6,741.29
	Other special damages	-
III	Net profit	763,082.18
	Profit tax (income)	152,616.44
	Tax (No-income)	-
	Dividend to government	366,279.45
IV	Total amount of tax	518,895.89
V	Net profit	244,186.30

6. Major Recent Achievements in Improvement of Water Supply Services/Management

Improved to organization roles clearer, work implementation to be smoother, faster service such as water bill payment developing to be more convenient, faster, and more ways like paying through phone applications, bank counters, and NPNL's counters in 9 districts, and also reducing the document traffic procedure to be more effective, at the same time to achieve the water supply development plan in the service area by 2025 and 2030, approximately 98–99%.

7. Recent Challenges to Improve Water Supply Services

8. Expectations toward Japan

- 8-1. Expectations toward Japanese Government and JICA
- 8-2. Expectations toward Japanese Water Utilities
- 8-3. Expectations toward Japanese Private Companies
 - Knowledge transfer on how they have managed to improve water supply services from administration, also management perspective.

9. Expectations toward the Program.

(Any comments and requests are appreciated.)
Knowledge Co-Creation Program (Group and Region Focus)

Inception Report

Administration and Management

of Water Supply Service (A)

Country:LAOSName:Phaimany SENGPHOUVONGPosition:Vice chief of Personnel unit,
Personnel administration sectorOrganization:Vientiane Capital Water Supply State
Enterprise (NPNL)Email:Kaiphaimany@gmail.com

November 28th , 2023

Table Of Contents

- 01 Outline of Water Supply Service;
- 02 Success story of Water Supply Services;
- **03** Recently challenges to Improvement;
- 04 Expectations toward the Program;





General Information

Whole Country:

Area: 236,800 Km² Provinces: 18 , District: 148 Population: 7,443,000 Habitants (2022) Water Supply Coverage: 76.05 %

Vientiane Capital

Area: 3,920 Km² District: 9, Villages: 481 Population: 891,841 Habitants Population served: 818,995 Water Supply Coverage: 95%



01 Outline of Water Supply Service

Vientiane Capital Water Supply State Enterprise (NPNL) is 100% of government investment, established in 1964, to meet the clean water supply for population in 09 districts

Mission

Increase the water production, extend the pipeline, network system to supply clean water for consumers, widely adequate and based on international standard.

Vision

Being a state enterprise to supply quality water supply, widely adequate and stable in business operation.





01 Outline of Water Supply Service (Cont.)



Water resource

- Water surface (Mekong river and Nam ngum river)
- Ground water

Water treatment plant

- Total Production capacity 334,710 m³/day (Present);
- 17 WTP (2 BOT WTP);
- Own production 87%, BOT 13%

01 Outline of Water Supply Service (Cont.)

Table 1. Main performance indicators and goal

Indicators	2017	2022	Goal for 2025
Staff/1,000 connections	4.8	3.3	2.4
Production capacity (m³/day)	303,470	329,310	450,000
Water quality	MOH Guideline	MOH Guideline	MOH Guideline
Coverage area (%)	72	95	96
Supply duration (hr./day)	24	24	24
Supply pressure (Bar)	1.5	1.5	2
Number of connections (Unit)	124,169	178,765	191,399
Non-Revenue water (%)	32	28	25
Collection Ratio (%)	86	90	95
Staff number	593	591	608



- Increased coverage area;
- Increased number of connections and Installed the new connections in urban areas and rural areas;
- Activities to share the knowledge of water supply to the public in villages and school;
- Expanded the production capacity of water treatment plants.









02 Success story of Water Supply Services (Cont.)

Water quality

23 Parameters, Ministry of Health, LAOS

I. Microorganisms	13. Nitrate (NO ₂ ⁻)
1. E.coli (E.coli)	14. Sodium (Na)
II. Chemicals	15. Sulphate
1. Aluminum (Al)	16. Sulphate ion (So.)
2. Arsenic (As)	$17.7 \operatorname{ring}(7n)$
5. Childriffe (CI) 4 CL (CL) (CL)	17. Zine (Zii)
4. Chlorine (Cl ₂)(Chlorine residues)	18. Taste
5. Copper (Cu)	III. Physical
6. Cyanide (Cn ⁻)	1. Color (Clr)
7. Fluoride (F)	2. Acid and bases (pH)
8. Iron (Fn)	3. Induce Electric (Conductivity)
9. Lead (Pb)	4. Turbidity (Turbidity)
10. Manganese (Mn)	5 Water hardness (Hardness) CaCO
11. Mercury (Hg)	5. water hardness (fractiless) $CaCO_3$
12. Nitrate (NO_3^-)	



NPNL Water quality Annual Report Book

02 Success story of Water Supply Services (Cont.); Water quality Map of 107 Example points of 5 WTPs 1. Turbidity 2. Color 3. Residual Chlorine 4. pH pH (6.5 - 8.5) Mountering water quality in the main pilpetine actions. • Climato WPT responsibility 20 points Comparished WTP responsibility 36 points Designatishin WTP 1 responsibility 15 points Designatishin WTP 1 responsibility 12 points Unignass WTP responsibility 12 points Unignass WTP responsibility 15 points

- On site checking 107 points (4 parameters)
- ✤ On 2022 Yr : Turbidity (< 5 NTU), Color (< 5 CU),</p> Residual Chlorine (0.2 mg/l - 0.1 mg/l),







Others

- Mid term and long term plan;
- Setting the service area on map plan up to 2030;
- Water demand estimation and population served plan up to 2030;

03 Recently challenges to Improvement;

- Water quality control, water safety plan and reduction nonrevenue water;
- To increase the production capacity to reached 450,000 m³/day by 2025.
- On 2025 2030 to increase the production capacity to reached 600,000 m³/day, expansion pipe network to town areas and ensure people be able to get water supply coverage 99%, controlling non-revenue water to be in a range 15–18%.

04 Expectations toward the Program

- More understanding on water supply administration, and management in Japan waterworks;
- Better management of water supply service through sharing information and issues;
- Sustainable waterworks management;
- Reduction Non-revenue water and water quality management





References

- Annual report 2021, 2022 of the technical section, NPNL
- Vientiane Capital Water Supply State Enterprise Annual Report 2018;
- Vientiane Capital Water Supply State Enterprise Annual Report 2021;
- Vientiane Capital Water Supply State Enterprise Annual Report 2022;
- Vientiane Capital Water Supply State Enterprise development strategy plan 2025 and vision up to 2030;
- Website of Lao Statistics Bureau, https://laosis.lsb.gov.la/

4. MADAGASCAR

Inception Report

Country: Madagascar Name: RAFARALAHY Zarasoa Malandy

1. Outline of Water Supply Services

1-1. Legal Basis of Water Supply Services

Water Supply Services based is based on Water Code via Law N 98-029

1-2. Demarcation of Water Supply Services

The ministry is in charge of potable water is the Ministry of Water, Sanitation and

Hygiene. The Ministry of Agriculture and livestock is responsible of water for irrigation, Finally,

the ministry of environment is responsible of natural resources

1-3. Main Actor of Water Supply Utilities

In my country, water utilities are a public bureau under local government which is called JIRAMA under the Ministry of Water, Sanitation and Hygiene.

1-4. Mission/Vision of Water Supply Utilities

Water utilities have the objective to connect to its network, as many water connections as possible

1-5. Your Mission/Vision in your organization

As Water Manager, my mission is to coordinate all projects related to water (especially safe water), sanitation and hygiene. We are responsible for the water sullied to the beneficiaries both in quantity and quality

2. Water Supply Service Levels

2-1. Main Performance Indicators (PI)

Coverage area	21 930 (sq. km)
Population Served	6900 people
Collection ratio	4 (%)
Production capacity	780 (m3/day)
Supply duration	23 (hr/day)
Supply pressure	0,6 bars
Non-Revenue Water	24 (%)
Water quality	Good
Staff number	30
Number of connections	670 customers
Staff/1,000 connections	30(people/1,000connections)

2-2. Any Monitoring by Performance Indicators (PI)

3. Management of Water Quality

3-1. Current Situation and Major Challenges/Problems

- Water facilities agent routine on purifying raw water
- Some of section receive brown and smelling water on their tap

3-2. Current Actions against Those Challenges/Problems

Follow-up on water purification processes carried out by the facilities under ministry of water, sanitation and hygiene guidance.

3-3. Any Achievements

Using the appropriate amount of water purification chemicals depending to the amount of water to be purified.

3-4. Water Quality Standards for Drinking Water OMS and Malagasy Standards.

3-5. Monitoring System or Plans for Safety of Drinking Water in Your Organization / Regulatory Body / Independent Institution /Others

In my organization, JIRAMA is the organization responsible of the safety of drinking water in urban areas as the district in the nation under the leadership of the Ministry of Water, Sanitation and Hygiene.

3-6. Implementation of Water Safety Plans* or Similar Efforts

(* Water Safety Plans: refer to the following URL and review before participating in the Course, the Chapter 4 "Water Safety Plans" of the "Guidelines for drinking-water quality, third edition"

URL: http://www.who.int/water_sanitation_health/dwg/gdwg3_4.pdf)

4. Reduction of Non-Revenue Water

- 4-1. Current Situation and Major Challenges/Problems
- NRW ratio is due to water theft and damages of pipes
- We have not achieved significant improvement of the situation because of many reasons

4-2. Current Actions against Those Challenges/Problems

- No current palpable actions yet
- Negociation in process with technical and financial partners in order to alleviate the problems

4-3. Any Achievements

Authorized consumption	Revenue water	Billed authorized consumption	(m3 /year) 76 (%)
	Non-Revenue Water (NRW)	Unbilled authorized consumption (ex. fire fighting, cleaning)	(m3 /year) 4 (%)
Water losses		Apparent losses (Unauthorized consumption (i.e., Illegal	(m3 /year) 9 (%)

4-4. Constitution of NRW (If you have the data, please fill in the table)

	use), Customer metering inaccuracies)	
	Physical losses	(m3 /vear)
	(Leakage)	13 (%)

4-4. Situations about Leakage Detection Measures (DMA etc.)

5. Accounting system of Water Supply Service

5-1. Water Tariff in your Organization 415 MGA /m3

5-2. Balance Sheet of your Organization Negative

5-3. Profit and Loss Statement of your Organization(1) Profit and Loss AccountYield : 68%

(2) Capital Income and Expenditures of your Organization Capital income : 15 000 000 MGA Expendituries :

(* You can check the case of Tokyo in the chapter 4" Financial System and Future Financial Management" of this file.

URL: http://www.waterprofessionals.metro.tokyo.jp/pdf/wst_02.pdf)

6. Major Recent Achievements in Improvement of Water Supply Services/Management Empowerment of the facilities about the appropriate amount of chemicals to use to purify the water properly

.

7. Recent Challenges to Improve Water Supply Services

Lack of budget for operating expenses

8. Expectations toward Japan

8-1. Expectations toward Japanese Government and JICA

Hoping for an effective support from Japanese government and JICA in order to strengthen the capacities of malagasy technicians working in the water sector.

8-2. Expectations toward Japanese Water Utilities

Acquisition of new knowledges and good experiences aiming on improving the current management system of the water utilities in Madagascar.

8-3. Expectations toward Japanese Private Companies

Receiving multiple experiences from private companies in Japan and having an overview of how develop countries manage their water utilities.

9. Expectations toward the Program.

A sharing session between the participants countries during the program will be a good idea





Water Supply Administration for Better Management of Water Supply Services (A) Inception Report Presentation

- 1. Country : Madagascar
- 2. Name : RAFARALAHY Zarasoa Malandy
- 3. Position : Regional Manager Analanjirofo
- 4. Organization : Ministry of Water, Sanitation and Hygiene





2

Outline of the Presentation

- I. Outline of Water Supply Services of your Organization
- 2. Success Story of your Water Supply Services
- 3. Recent Challenges to Improvement of Water Supply Services
- 4. Expectations toward the Program





1. Outline of Water Supply Services of your Organization

 Whole Country:

 Areal : 587 041 km²

 Population : 30 507 696 Habitants

 Coverage Water Supply:
 52.82 % (70% in urban area and 48% in rural area)

 Your Water Supply System/City

Service Area : 21 930 km²

Population Served: 12 316 Habitants





4

1. Outline of Water Supply Services of your Organization

The city's drinking water supply system was built in 1968 and is composed of:

- abstraction of underflow from the Maromandia basin;

- 100 m3 vertical flow static decanter and 2x27m3 single-layer twocompartment rapid sand filter;

- 400 m3 semi-underground tank;
- 6 water kioskes /12 functional and 691 private connections.





1. Outline of Water Supply Services of your Organization

INDICATORS	2012	2022	Goals for 2025
Staff/1,000 connections	13	7	36
Production capacity (m3/day)	400	460	1200
Water quality	WHO Guidelines	WHO Guidelines	WHO Guidelines
Coverage area (%)	35	40	100
Supply duration (hr/day)	24	16	24
Supply pressure (bars)	2,5	0,5 to 1,5	5
Number of connections	415	691	1300 but will depend on the availability of water produced
NRW (%/day)	10	27	5
Collection ratio (%/month)	50, 10	43, 45	98
Staff number	9	14	Respecting the norms per number of connections







2. Success Story of your Water Supply Services

- Partnership agreement between JIRAMA and the NGO Gret via SEDIF funding about the improvement of production and distribution network as well as the extension of the network
- Increase in the number of clients
- Multitude of people wishing to connect to the JIRAMA water supply network





3. Recent Challenges to Improvement of Water Supply Services

3.1. Technical challenges

- Low amount of water production compare to the water needs population
- Obsolescence of the existing system
- Low coverage of the distribution network

3.2. Social, economic and financial challenges

- Any autonomy of decision-making in the region
- Insufficient budget allocated to operating expenses
- Need for reform on system management



JICA

4. Expectations toward the Program

4.1. My expectation toward this program

- Strengthening my capacities in terms of water supply infrastructure especially administration and management
- Acquisition of new expertise from many participating countries and especially from Japan in order to enhance the development of our water supply management

4.2. Expectation of my superior toward this program

- Ensure and concretize the sustainability of the collaboration between
 Madagascar and Japan
- Establish forms of collaboration and partnership with Japan to improve our drinking water services

5. PALESTINE

Administration and Management of Water Supply Services (A)

Inception Report Presentation

- 1. Country: Palestine
- 2. Name: Husam Riyal
- 3. Position: Water Engineer / Studies and
- projects section & Non-revenue section
- 4. Organization: Jenin Municipality/ Water Department



Location

Introduction of Water Supply System of Jenin Municipality

•Jenin is currently supplied with water from 3 municipal wells, 13 private wells and 3 WBWD connections. There are 4 storage reservoirs with a total capacity of 5,720 m3. The total network length is about 160 km without the house connections. The total number of water meters is 10,200 and the approximate number of house connections about 7,000.



2. Water Supply Services Levels

INDICATORS	2023
Coverage area	89%
Population served	66,000
Collection ratio	61%
Production capacity	11,600 m3/day
Supply duration	Intermittent supply
Non-Revenue water	56%
Water quality	From guideline
Staff number	50 person
No. of connection	10,200
Staff/1000 connection	4.9

3

4

3. Success Story of your Water Supply Services

1. Increasing the amount of supplied water.

2. Increasing the bill collection ratio in some areas from an average of 30% to 70%.

3. Adopting prepaid water meter in order to increase bill collection ratio and reduce NRW ratio. "I approximately 50% of water connection became PPWM

4. Rehabilitating some sections in the network to reduce the losses.

5. Capacity building for Water and wastewater department staff, including on job training for the technicians.

6. Implementing advanced technology in Leak detection.

4.Non-Revenue water

The current NRW on entire city

* NRW for (Jun&july-2023)

NRW (% of SIV)	NRW (m3/month)	PPWM cons	Billed Vol (m3/month)	SIV (m3/month)
56.82%	329,136	123,468	126,620	579,224

The problem in my city that the age of pipe

is too old Approx. More than (50 year) , to overcome this problem we replace some part

of water network as possible we can in-addition

to Doing countermeasures activity for Non-revenue water



5



6.Major recent achievement in improvement of water supply services

Before starting improving water some area suffering that the water did not reach to there house, but we working on it by deal with new privet wells distributed on area that have problem, after we deal with privet wells some are started feed water 24 hr



7.Challenges

Sustainability of organizing the NRW teams.

Increase the water supply hours

Stop the depts and increase the collection ratio

Secure the fund for infrastructure project for rehabilitating the water NW

8. Expectation

* Expectation toward Japanese government and JICA

Continuing support water sector at developing country especially at Palestine

* Expectation toward Japanese utility

Gain knowledge from their experience on water management

to try apply it in our country

*Expectation toward Japanese privet company

Gain knowledge from their field experience on field management and how to work technically on field



6. PHILIPPINES

Inception Report

Country: Philippines Name: Enrique P. Reyes Metropolitan Cebu Water District

1. Outline of Water Supply Services

1-1. Legal Basis of Water Supply Services

(What kind of laws and regulations are Water Supply Services based on?) MCWD's water service is mandated by Presidential Decree (PD) 198 of the Republic of the Philippines. A law promulgated by then President Ferdinand Marcos in 1973.

1-2. Demarcation of Water Supply Services

(Which ministry is in charge of what kind of field of water?)

MCWD is serving the following cities and municipalities:

- 1. Cebu City This is where the main office MCWD is situated.
- Talisay City Situated approximately 8 km. (approximately 12 km. driving route) to the south of Cebu City.
- Mandaue City Situated to the north of Cebu City at approximately
 13 km. (20 km. driving route)
- Lapu-Lapu City Located in another island called Mactan. It is 22 km. to the east of Cebu City (approximately 35 km. driving route).
- 5. Municipality of Cordova A municipality in Mactan, situated approximately 23 km. to the west of Cebu City (approximately 41 km. driving route).
- Municipality of Consolacion Approximately 28 km. north of Cebu City (approximately 29 km. driving route).
- Muncipality of Liloan Approximately 29 km. north of Cebu City (approximately 40 km driving route).
- Municipality of Compostela Approximately 38 km. north of Cebu City (approximately 53 km. driving route).

1-3. Main Actor of Water Supply Utilities

(e.g. In Japan, most water utilities are public bureau under local government.) MCWD is a Government Owned and Controlled Corporation. It is within the regulatory power of the government agency called Local Water Utilities Administration (LWUA) in terms of water tariff. It is also regulated by a government agency called National Water Resources Board (NWRB) in terms of securing water rights and water drilling permits.

1-4. Mission/Vision of Water Supply Utilities

Mission:

We are committed to undertake continuing exploration and development activities, aimed at the preservation and sustainability of our water resources. We must always adhere to sound practices in preserving our natural environment.

Our capability to provide proper services must continuously improve by designing and managing the growth of infrastructure in an innovative, timely, safe and costeffective manner and conforming to internationally accepted standards.

We shall operate and maintain our facilities in an optimal manner, making total quality an integral part of our performance.

It is then indispensable to nurture a highly-motivated workforce, with a strong spirit of collaboration, deeply committed to professionalism, and firmly focused on productivity.

The workforce shall be upheld and inspired by a competent management team dedicated to the common good of MCWD.

All these tasks must be accompanied by sound and prudent financial management with the overriding goal of providing better services to the people of Metro Cebu.

Vision:

MCWD envisions itself to be a progressive and economically viable utility firm that provides adequate, safe, potable and affordable water and an effective sewerage system for Metro Cebu.

1-5. Your Mission/Vision in your organization

We are committed to maintain MCWD pipelines such as raw water, transmission, distribution and service connection lines and restore road pavements affected by

54

maintenance works and projects in a prompt and efficient manner to minimize water system loss, prevent and arrest water contamination in order to provide customer satisfaction.

2. Water Supply Service Levels

2-1. Main Performance Indicators (PI)

Coverage area	697 (sq. km)
Population Served	914,735
Collection ratio	79.9(%)
Production capacity	7,926,100 (m3/day)
Supply duration	21.94 (hr./day)
Supply pressure	13psi
Non-Revenue Water	32.67 (%)
Water quality	Philippine National Standards for Drinking Water
	(PNSDW)
Staff number	846
Number of connections	204,109
Staff/1,000 connections	0.846 (people/1,000connections)

2-2. Any Monitoring by Performance Indicators (PI)

- 1. Water sampling monitoring
- 2. Water distribution
- 3. Efficient and on time water meter installation
- 4. Timely water meter reading on consumption per concessionaires

3. Management of Water Quality

3-1. Current Situation and Major Challenges/Problems

Salt water intrusions of the water source (aquifer) due to over extractions of water by other entities and Nitrate contamination due to some bottomless septic tanks from residential houses which were not totally monitored.

3-2. Current Actions against Those Challenges/Problems

MCWD limits its abstraction of water from the aquifer. Reported to NWRB of the situation that resulted in the issuance of a moratorium against further water extraction. MCWD shifts its sourcing to surface water and desalination in partnership with the private sectors.

3-3. Any Achievements

While moratorium is in place, MCWD continues to monitor the water quality in order to ensure that the water distributed to the consumers, passes the quality standard and at the same time determine the state of water quality of the source so as to implement appropriate actions should problems occur.

3-4. Water Quality Standards for Drinking Water

MCWD uses the Philippines National Standards for Drinking Water (PNSDW). 3-5. Monitoring System or Plans for Safety of Drinking Water in Your Organization / Regulatory Body / Independent Institution /Others

MCWD is operating its own water quality laboratory to conduct testing of water. The laboratory also coordinates with a government agency called Department of Health (DOH). Our MCWD laboratory is applying for an ISO 17025:2017 accreditation, which will certify that it has the technical competency to conduct water quality test and that can produce valid and reliable result.

3-6. Implementation of Water Safety Plans* or Similar Efforts

(* Water Safety Plans: refer to the following URL and review before participating in the Course, the Chapter 4 "Water Safety Plans" of the "Guidelines for drinking-water quality, third edition"

URL: <u>http://www.who.int/water_sanitation_health/dwg/gdwg3_4.pdf</u>) MCWD currently has its Water Safety Plan manual which we use to consistently ensure the safety and acceptability of a drinking water supply.

4. Reduction of Non-Revenue Water

4-1. Current Situation and Major Challenges/Problems

MCWD is experiencing above target NRW. While the Local Water Utilities Administration (LWUA) is mandating to reduce the NRW to 20%, the district's NRW is at 32.67% as of July 2023. The following are the challenges of NRW:

- 1. Pipeline configuration is looping. So it is challenging to isolate a system for monitoring and control.
- 2. There are pipelines that were as old as the water district. So it needs rehabilitation.

- 3. Rehabilitation requires huge Capital Expenditures (CAPEX).
- 4. Several valves and appurtenances are difficult to locate since in the early years of operation, there was no documentation of its location.
- 5. Local Government Unit (LGU) requirements: permits, licenses, traffic
- 6. Telecommunication companies horizontal directional drilling (HDD) causes damages to our pipelines.
- 4-2. Current Actions against Those Challenges/Problems
 - 1. The Pipelines and Appurtenances Maintenance Department (PAMD) is requesting for budget for rehabilitation of pipes.
 - 2. Implementation of District Metering Area (DMAs) projects
 - 3. Employment of GIS tools to locate the assets of the water district
 - 4. Proper coordination with LGUs
 - 5. For every pipeline damages caused by Telco's, mcwd bills them based on the cost of labor, material replacement used and water losses.
- 4-3. Any Achievement
 - 1. Partial LGU negotiation on permits and other requirements
 - 2. Bill contractors on damaged pipes of MCWD, based on labor, materials and water loss
 - 3. Revival of previous DMA's which was damaged
- 4-4. Constitution of NRW (If you have the data, please fill in the table)

Authorized	Revenue	Billed authorized	60,769,728.16 (m3 /year)
consumption	water	consumption	67.33(%)
	Non-Revenue	Unbilled authorized	
	Water (NRW)	consumption	68,682.40(m3 /year)
		(ex. firefighting,	0.08(%)
		cleaning)	
Water losses		Apparent losses	
		(Unauthorized	1,892,856.15(m3 /year)
		consumption (i.e.	2.10(%)
		Illegal use), Customer	
		metering inaccuracies)	
		Physical losses	27,519,645.26(m3 /year)
		(Leakage)	30.49(%)

- 4-4. Situations about Leakage Detection Measures (DMA etc.)
- 1. Ongoing sweeping of our pipelines (daily at approximately 2.8KMS)
- 2. Preparation of new DMA to be implemented within the next 3 years
- 3. Installation of flowmeters in all raw water mains and from reservoir going to the main lines
- 4. Coordination with Telco contractors during their HDD activity

5. Accounting system of Water Supply Service

5-1. Water Tariff in your Organization

Per LWUA Resolution No. 94 Series of 2014, the following composes the water tariff of MCWD:

Meter Size	Minimum Charge of all types of connections
1/2"	152.00
3/4"	243.00
1"	486.40
1 ½"	1,216.00
2"	3,040.00
3"	5,472.00
4"	10,944.00
6"	18,240.00
8"	29,184.00
10"	41,952.00

Commodity Charges for all types of Connections

cu.m.	charge
11 – 20	18.60
21 – 30	19.77
Over 30	48.40

5-2. Balance Sheet of your Organization

Please see attached file.

5-3. Profit and Loss Statement of your Organization

(*[Public Utilities] (1) Profit and Loss Account

Please see attached file.

(2) Capital Income and Expenditures of your Organization)

Please see attached file.

(* You can check the case of Tokyo in the chapter 4 "Financial System and Future Financial Management" of this file.

URL: http://www.waterprofessionals.metro.tokyo.jp/pdf/wst_02.pdf)

6. Major Recent Achievements in Improvement of Water Supply Services/Management

The water supply is continuously augmented through in-house development and through partnership with private sectors under bulk water supply contracts. These are some of the biggest purchased water in terms of volume:

- 1. Surface Water from Luyang River in Carmen, Cebu This produces 35,000 cu.m. per day. The supply started in 2015.
- 2. Brackish Water in Mactan Supply to MCWD is 12,000 cum. per day. It's a contract renewal with a private supplier in December of 2020.
- 3. Surface Water in Compostela, Cebu This is 10,000 cu.m. per day surface water from the river of Compostela.
- 4. Surface Water from Lusaran This supplies 15,000 cu.m. from an upstream river of Lusaran, Cebu.

- 1. Political
- 2. Financial
- 3. LGU and other Government agency

^{7.} Recent Challenges to Improve Water Supply Services

8. Expectations toward Japan

8-1. Expectations toward Japanese Government and JICA

To visit any Japanese Government office and a discussion on the history of Japan, its kind of government, culture, traditions and to see how clean and beautiful Japan is. I heard Japanese people are very courteous and disciplined.

8-2. Expectations toward Japanese Water Utilities

To learn their best practices and the technology to use in lowering the NRW through site visits in Japan Water Utilities.

8-3. Expectations toward Japanese Private Companies

To be able to tour also in any Japanese Private Companies in order to learn their working standards and ethics.

9. Expectations toward the Program.

(Any comments and requests are appreciated.)

The learning experience with other participants from all over the world and knowing the culture and traditions of the Japanese people.

END.

METROPOLITAN CEBU WATER DISTRICT STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2022

.

ASSETS AND OTHER DEBITS		NOVEMBER 2022		CURRENT MONTH	% to Total
Utility Plant in Service Utility Plant In Service Less: Accumulated Prov. For Depreciation Total Utility Plant in Service		6,027,092,188 (4,033,380,330) 1,993,711,857		6,033,580,946 (4,065,048,515) 1,968,532,431	115.16 (77.59) 37.57
Land					
Turned Over from OWS	14,794,450		14,794,450		
Acquired	880,585,831	895,381,281	880,586,831	895,381,281	17.09
Construction Work in Progress	the second second second second second	230,760,871		257,652,145	4.92
Net Utility Plant		3,119,854,010		3,121,565,856	22.01
Current Assets					
Cash on Hand		13,241,358		7.526,685	0.14
Cash in Bank		180,973,615		188.667.568	3.60
Temporary Investment		1,026,860,479		1,027,313,193	19.61
Other Cash Items		850,000		850,000	0.02
Accounts Receivable - Customers		397,924,703		407,143,177	7.77
Allowance for Bad Debts		(14,526,509)		(14,850,259)	(0.28)
Suspense Account		(92,682)		(286.763)	(0.01)
Materials and Supplies Inventory		233,290,967		227,623,638	4.34
Interest Receivable		1,816,307		2,042,537	0.04
Accrued Income				*	
Total		1,840,336,238		1,846,029,775	35.23
Other Assets					
Sinking Fund		and the second		Same and the	
Investment Property - net		25,140,833		25,000,611	0.48
Investment - PLDT		86,530		86,530	0.00
Special Deposits		24,044,121		24,156,631	0.46
Advances to Officers and Employees		508,230		451,784	0.01
Accounts Receivable - Others		127,053,141		158,467,203	3.02
Prepayments		50,942,021		46,669,141	0.89
Other Current Assets and Deferred Debits		13,251,313		13,251,313	0.25
Other Deferred Debits		2,959,774		2,278,930	D.04
Unamortized Portion of Pension Benefits		1,455,060		1,368,175	0.03
Input Tax (12%)		(4,326)		(20,420)	(0.00)
Total	3	245,436,697		271,709,898	5.19
Total Assets and Other Debits		5,205,628,945		5,239,305,529	100.00

METROPOLITAN CEBU WATER DISTRICT STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2022

LIABILITIES AND OTHER CREDITS	NOVEMBER 2022	CURRENT	% to Total
Capital			
Donated Capital	12,388,650	12,688,650	0.25
Retained Earnings	3 173,191,560	3.214 749,303	61 36
Reveluation Increment in Property	818,465,618	818,465,818	15,62
Total	4,004,546,047	4,046,103,770	77.23
Long - Term Debt	100 March 100		
Longis Payable - DEP	177,261,799	158,269,463	3 02
Loans Payable - LWUA	14,245,000	13,585,000	0.26
Total	101 508,799	171,854,463	3.28
Current and Accrued Liabilities			
Vouchers Payable	25,435,073	37,557,932	0.72
Accrued Light and Power	72,607.727	44,752,085	0.85
Accrued Purchased Water	81,597,575	13,876,324	0.26
Current Portion of Long Term Debt	1,837,895	19,652,338	0.38
GSIS Accounts Payable	3,796,209	3,627,926	0.07
Pag-big Contribution Payable	46,291	45 995	0.00
Customers Deposil	476,808,898	427,084,057	8.15
Medicare Payable	2 252 199	2,517,624	0.05
Willholding Tax Payable	27 317 265	21,455,784	0.41
Creditable Withholding lax	(5,636,004)	(6,153,380)	(0.12)
Retention Payable	31.934,708	34,694,149	0.66
Other Commit and Accrued Liaphilies	69,866,083	143,225,479	2.73
Total	731,593,700	742,536,529	14 17
Other Credits			
Other Deferred Credits	22,809,452	22,809,452	0.44
Other Operating Reserves	3,404,935	3,404,935	0.06
Accounts Payable - Others.	102.075.297	103,481,290	1.98
Income Tax Payable	3,603,051	3,603,051	0.07
Deferred Income	33,821,748	52,387,684	1.00
Provisions	112,167,909	93, 124, 355	1.70
Total	277,982,390	278,810,767	6.32
Total Liabilities and Other Credits	5,205,528,945	5,239,305,529	100.00

Prevented by Glecked by Verlad by Negaboo A

METROPOLITAN CEBU WATER DISTRICT STATEMENTS OF COMPREHENSIVE INCOME FOR THE CURRENT MONTH AND YEAR TO DATE ENDING DECEMBER 31, 2022

Preparellay

				URRENT	MONTH			E C	TEAR TO DATE					
DECEMBER	NOVEMBER	ACTUAL	% NO TOTAL	BUDGET	TA IN TOTAL	OVER	BUDGET	ITEMS	ACTUAL	N IN TOTAL	BUDGET	S to TOTAL	OVER	BUDGET
2021	2022	ANDUNT	Attust	AMOUNT	(Bodget)	UNDER	*.		AMOUNT	(Artist)	AMDUNT	(Hanget)	UNDER	-
135,278,183	1\$0,542,578	196,525,142	17	187,911,015	50	(21,376,473)	100	Operating Revenue	1,807,046,467		2,030,841,928		(223,618,461)	177
143,885,484	114,449,285	37.210,821	25	106,300.003	105	(118,179,862)	(50)	Operation	1.437.300,401	17	1 004 054 922	78	(227, 194, 521)	114
10.515.710	17,800,168	0.054:300	72	10,082,724	10	051,576		Mainsmanica	201.004.721	112	237 221,448		(28.629,729)	112
15.423.832	15.525.425	18,848,138	12	20.784.365		(938,22m)		Depletistice:	190 804,140	0	249 A12,341	81	(68.613,241)	127
177,475,167	147,674,878	126,093,257	74	148.157.592	(26	(119,264,336)	(43)	Total Operating Expenses	1,828,854,283		2,151,188,751	101	(324,334,488)	. /18
142,154,9241	12,867,700	10.541,886	22 .	158,346,977	(20)	97.587.861	(1000)	utility Operating Income	(19,818,796	01	(120,326,822)	(15)	100,518,027	184
								Critrer Income						
							#CLV/0	Diversing Revenue						80/40
6892.0192	696,688	711,672	18	101,150	6	F10,822	19	interast Revenue	11 583,920	- T.	7 213,799		4,363,321	#1
1,259.201	2,012,918	3,624,163	1	7,186,154	A .	10,102,051)	100	Masc Non-Operating Newsman	12,582,400	- T	¥3,433,847		(80.841,447)	107
[396,735]	50,±17	152,936		(424,411		579,317	1000	Historice (Loss) fr Ners-Ulliny Operations	11.504,907	(9)	(5,092,932)	108	3,499,552	(84
1 717,083	465,407	2,292,827	· 1.			2 782 127	etvie:	Wearse from Granis and Denillina	14,044,621	2 83			24,044,021	83400
7,273,825	3,176,191	4,782,408	3.	7,952,853	4	(3,180,485)	1900	Total Other Income	\$4,616,960	3	\$5,554.714	· •.	(38,918,554)	181
(34,881,399)	16,042,851	44,334,293	18	(60,383,084	(20)	\$4,707,377	1997	income Before Other Deductions	36,827,268	. E.	274.772.108	L 10-	51,509,373	1248
								Macalandous income Deduction						
954,084	970.376	062,387	1.1	1 774,683	0	(812,200)	7403	Local Government Revenue Sharp	10,446,559		12,002.718	1	(1.017.560)	177
(41.227)	154,998	86.21+	0			88.214	#D VID	Alerealized Take or Loss on F.G.	(607.529	190			(097.529)	#CTV/C
							#12.V0%	Extraord/waty charm Loss						FU-UP
							401/HE	Volue Added Taxes						(III.VW
					4 . A			Firmanial Experimen	164,003					
313,437	1,186,074	7,090,612	1.1.	1,774,683	- T_	(724,382)	1813	Tatim	3,912,122	. t.	17,042,718	2 E.	(2,314,689)	(12
(35,794,836)	14,877.776	43,273,691	128	(62,167,767	1202	\$5,431,459	[182]	Net income Before Interest Charges	26,9(5,142	1	(\$5,654,827)	(2)	81,740,969	(172
969,078	341,525	993,165	1.11	687,087	0_	316,109	54	Interest on Long Term Debts	11,522,670	- t.	7,489,740		4,032,937	
[36,793,912]	13,936,247	42,370,617	10	(82,744,824)	(ET)	86,115,361	(190)	Net income Bafore income Tax	15,332,488	1	(44,324,696)	(2)	58,717,032	1135
	107,261		1.1.1.1.	14,748	9	(14,743)	(100)	income Tax for Other Income	197,281		176,982	0	(49,721)	(3)
[31,792,912]	13,828,885	42.5/0.521		02.759,373	(27)	96,130,110	(786)	NetIncome Alter Income Tax from Eliter Inc	15,285,295	. I.	(44,501,545)	100	59,786,783	134

63

Voilled by

Nington /

Checkbergy

NETROPOLITAN CEBU WATER DISTRICT DETAILED STATEMENTS OF REVENUES AND EXPENSES FOR THE CURRENT MONTH AND YEAR TO DATE ENDING DECEMBER 31, 2022

.

_				CURRENT	MONTH					YEAR TO DATE					
DECEMBER	NOVEMBER	ACTUAL	% to TOTAL	BUDGET	% to TOTAL	OVER	BUDGET	ITEMS	ACTUAL	S to TOTAL	BUDGET	h to TOTAL	OVER	BUDGET	
2021	2022	AMOUNT	(Actual)	ABOUNT	(Dudget)	(UNDER)			AMOUNT	(Actual)	AMOUNT	(Budget)	(UNDER)	*	
								COMMERCIAL DIVISION	1,521,576,954	_					
								Operation revenue							
Low the low	Charles and V	CIER Sectors				Casharan		Water Sales	100000000000000000000000000000000000000			 (a) 	TIMES NOT CARD	11 11-2	
127,812,153	152.001.009	150,618,021	90	170,522,320		119,964,299)	(12)	Motored Sales to General Customers	1.705.003.465	94	1.825,210,936		(120.207.471)	9	
							#CIT/YO!	Private five Protection Service				1.11		NDIVO	
	100 004 000			270 500 500	-	-	MONUT	Public Fre Protection		-		- 15-		#DI/WOI	
127,812,158	152.001,808	190,618,021		1/10,562,320	81	110.844,2090	(12)	Total Water Seats	1,705,003,465		1,82% 210,908	90	120,207,471	E (9	
		a aut					#CIVID!	Less Decourt on Water Serve	160 800		Case Sec.		(Lenier)	ADIVIDE	
3.710	0,743	6,015		12.440		(6,421)	(52)	Senior Citaten Discount	78,792	0	133,213	0	(54,431)	(21)	
	-		- 2-				#01/101	Calentity Raket Discours	354	. 0		6	354	WO/VO	
127,908,443	151,994,808	190.6/2,005	- w-	1/0,509,8/4	- 91	(19.837,868)	(12)	Net water sales	1,704,904,319	94	1,628,077,723	90	1120 153,403	- 0	
1 001 575	1.589.502	1,171,401	1.0	5.201,475		14.099.9945	178	Environmental Fee	13 628 679		51 949 625		149 320 3465	1200	
794.672	307.579	985, 154		369.774	0	(224,620)	250	Deskutons Fee	4/000 1/58		4.677 298	1	1544 1291	194	
463.500	1.580.725	3,726,475		917.055	n	850.416	64	Tubono Fee	14 458 475	1	11.004.708	- G	3 493 707	35	
	-					-	(DVD)	internal on Materials	602			3 16	612	attruits	
1 004 914	2 045 505	1,554,503		1,737,362		1182 8596	(11)	Penalty Charges	23 321 365		18 999 758		4321630	23	
10000	Contraction of the	Consideration of the second		C. S. S. S. S. S.		1	#DIVIOI	Wildow Lawy			10.000,000	2	140.000	4DIVIO	
1 925 354	420.405	7.312.063		2,809,683	1	4.522.280	161	Other Water Revenues	+2 554 329		33 716 190	2	(21 SRE 401)	0770	
1.579.725	2,656,113	3,862,561	2	6,286,388	3	(2.423.827)	(30)	Miscellareous Service Revenues	34 104 305		75 400 030		(41 330 351)	1951	
7 361 740	8.547,709	15,863,137	10	17,401,741		(1 538 604)	69	Total	102121149	6	205 764 205	10	(103 (963 058)	cim	
135,270,183	160,542,578	166,835,142	100	187,911,615	100	(21,376,473)	(11)	Total Operating Revenue	1,807,045,467	100	3,430,661,978	100	(223.816.461)		
succubative very	Anno-surfaces	servedonations		Contrast Contrast Contrast		and a standard stand	184	CUSTOMER ACCOUNTS EXPENSE	santasot mortune				- Area Constant	es 200	
								Operation							
4,047,584	4 (339,664	4,068,621	6	6,128,808	3	(1.962,277)	(19)	New Service Connection Expenses	53,470,190		62,464,384	3	(8.994 102)	(14)	
4,060,966	3,107,218	4,916,295		5,330,912	7	(414(616)	(8)	Motor Reading and Customer Records Exponses	44,941,431		49,646,394	3	(4,704,963)	. (9)	
898.340	825,242	1,165,116		1,354,500	1	(168,472)	(12)	Treasury Expenses	11,625,631	2 1	13,282,325	1	(1.055.494)	(12)	
938,575		323,750	0	\$37,500	0	196,250	135	Uncollectible Accounts Provision	328,750	0	1,850,000	0	(1.326,250)	(80)	
1,283,396	1960, 173	1,340,494	1	1,548,820		(296.320)	(13)	Custome Care Expenses	12,771,564	1.1	14,309,540	1.1	(1.537,977)	(11)	
459,604	383,709	\$30,236	0	638,128	0	(117,002)	(17)	Public Information Expenses	6,382,208	0	6,179,646	0	(797,437)	(13)	
11,655,168	9,245,208	13,263,514	12	15,138,847	· 7.	(1,876,313)	(12)	Total Customer Accounts Expenses	128,514,976		547,532,299		(19,017,312)	(13)	
								PRODUCTION DIVISION							
	C+ 300 001			AN 1811 1990				Source of Supply Expenses							
64,009,007	24,000,009	pr. vecume	940	30,706,750	-	1107.002 4220	(41)	Purchased mater	(40,790,730	AD.	654/823,784	-	fun ccap/cach	(11)	
-	0.000 000			1.000.000			inter .	Pumping Lapenses		train the		1.1.1.1	1.000-0.00	0.00	
3 657 638	2,271,324	3,153,405	-	4,318,730	-	(1,196)2430	(27)	Production Expertise	33,334,228	2	34,005,314		(1.531.086)	(4)	
5,524,922	3,422,193	3,479,889	1.	14 003 361	-	12.007 (211)	(347)	Eventual Expense	40.953,506	2	59,567,763	3	(18,614,256)	4341	
6,650,006	10.614,661	20,782,143	1140	14,008,851		154,800,064)	(248)	Fuel or hower hurbhased for humbrid	63,365,284		95 703 512	·	12 338 2241	(13)	
17.812.798	16,367,1/4	[14,198,757]	1.01	20,162,491		158,084,248)	(150)	tool Pumping and Distribution Expension	197,053,019	10	190,136,589	10_	132.483(571)	(11)	
1 800 124	1,413,730	1,009,710		122 765 000		(78 408 507)	(24)	Water Treatmost Expenses	20,306,770	S	21,579,965		[1,274,195]	(1)	
\$7,717,809	82,021,764	66,628,708	42 -	123,785,206	- M_	1.8, 118, 6633	(64)	Total Production Expenses	924,747,523	- 26	1,046,540,339	20	(121,792,816)	(12)	
METROPOLITAN CEBU WATER DISTRICT DETAILED STATEMENTS OF REVENUES AND EXPENSES FOR THE CURRENT MONTH AND YEAR TO DATE ENDING DECEMBER 31, 2022

2021	NOVEMBER 2022	ACTUAL	N to TOTAL	BUDGET	In an annual	-				a constant of the				
2021 2.606.136	2022	AMOUNT			19 00 LO LO LO	OVER	BUDGET	ITEMS	ACTUAL	N to TOTAL	BUDGET	N to TOTAL	OVER	BUDGET
2,656,136		ALCO DE LE D	(Actual)	AMOUNT	(Budget)	(UNDER)	5		ANDUNT	(Actual)	AMOUNT	(fludget)	(UNDER)	*
2,666,126								Sectace Management Service						
	1.017.515	1.774.421	12	2.575 669	1.40	(602.248)	(31)	Saptage Treatment Expenses	20 082 853	1 B.	28 128 229	8 - 19 S	15 648 158	1 29
								MAINTENANCE DIVISION						
							1.141	Montenance of						
1,748.984	2,729,128	2,294,713	2	(1,150,622)	(1)	3,445,574	(299)	Power, Production and Equipment	28,352,930	2	34,035.630	ž	(8,482,700	(19)
-						-	#04/40)	Frankmasken and Distribution - South		(e)			11.19	ADIVIO
Same	Tri	Sugar		second.	. 353	in the second	#Dfv/0*	Transmission and Distribution - North		1. 121				#01V(0)
4,107,087	4,278,967	2.695.124	3	5.904,849	3	(3,239,725)	(54)	Mener Maintenance	43,448,207	3	51,451,393	1	(\$1003.096	1 (17)
8,282,997	7,002,218	9,900,610		12,705,109	15	(2,804.558)	(22)	Pipeline and Leakage Control Area	92,757,021	6	97,971,033	1	(5,214,013)	(5)
067,231	737.031	1,271,893	4	1,638,463		(366, 570)	(22)	Non-Revenue Weter Management	11,775,001		14,654,028	1	(2,870,027)	(20)
1,076,090	958,310	1,559,175	3	1,014,435		(55,251)	(II)	General Part	14,542,590	5 1	15,505,195	E (1	(2.363.600	(14)
2,133,421	1.895.310	2,212.746		(1.029.370)	(1)	3,842,110	(230)	Motorpati	58,716,880	1	21:403.168	1. A.L.	(2684,285	(12)
18,315,710	17,600,168	19,814,300	· ¹⁹	19,082,724		851,678	4	Total Naintenance Expenses	208,594,721	13	237,221,448	- 12 -	(28.626,726)	(12)
								TECHNICAL SERVICES EXPENSE						
2,953,609	2,963,052	3,127,549		2,617,891		509,718	10	Engineering Experiment	32,762,374	2	37,709,413		(4 927.043)	(12)
2,389,708	1,620,447	1,834,237	-	2,692,759		(858,522)	(34)	Contribuction Supervision	24,968,093	2	26,675,722	S	(1.907.628	0
1,498,942	845,301	1,436,400		2,109,923		(735,517)	(34)	water sourcing and Environmental Expenses	14,362,298	- N-	17,713,390		(2.351,091	L (19)
6,840,255	4,878,800	8,396,992	· · · ·	7,488,617	· 3	(1,084,320)	04	Total Technical Services Expenses	72,412,733	· *-	82,298,495		(92,185,762)	(a)
								ADMINISTRATIVE DIVISION						
								Operatoria						
1,671,682	1,762.278	1,636,499		2,374,902		(838,493)	(36)	Management Information System Expenses	18,514,636	3. 10	24,553,058	(1)	(5,018,222)	(20)
1,408,967	1,285,448	9,733,876	2	2,074,136		(3403,460)	2581	Legal Expenses	14,358,631	+	10,085,629		(2.726.999)	(14)
3,857,334	1,786,597	2,735,860	3	5,732,463	3	(2,996,602)	(52)	Procurement Expenses	20,138,448	÷ •	23,785,800	1	(3.647.357)	(15)
4,183,834	4,080,851	4,017,421	4	5 583 723	2	(1,568,313)	(78)	Administrative and General Solaries	45,685,217	3	17,312,400	3	(7,427,183)	(13)
15,296	13.528			171,016	D	(175,618)	(100)	Overtime and Holday Pay	508,519	0	1,957,687	0	(1.329.168)	(69)
491.005	495,007	+60,070	a	677,791	D	(100,010)	(28)	GSIS Premium and ECC	0,100,154	0	7,341,199	0	(1.205.035)	(10)
49,200	73,635	72,973	0	111,168	0	(98,786)	(96)	GSIS Medicere	783,760	0	1,311,553	0	(527,703)	(40)
8,200	8,300	B,100	0	16,350	0	(8,250)	(50)	Pag-big Contributions	162,200	0	191,700	0	(89,500)	(47)
(2,753,476)	3,998,608	(2,977,120)	(0)	8,419,145	3	(6,396,263)	(148)	Employees Pensions and Benefits	56,079,358	3	48,994 701	3	7,064,462	. 14
1222.000							#DEVIO:	Medical Plan						40100
(1,098,589)	202,280	(1,199,771)	(1)	750,650		(1,949,421)	(290)	Retrement Banefits	1,026,317	0	6,090,112	0	(5.063 800)	(83)
210,000	145,000	100000		70.000	0	(70.000)	(100)	Professional Fees	700,000	0	840,001	0	(140.001)	(17)
5.120,068	2,426,619	960,104	-t	5,238,822	2	(4.258 718)	(81)	Other Dutside Services Employed	51,417,670	3	05.619.920		(15,202,257)	(23)
212,263	252,958	220,063	0	227,756	0	42,328	19	Insurance Expenses	0,065,695	0	3,033,066	D	52,625	2
151,728	125,635	38,550	0	145,790	0	(107,240)	(74)	Office Supplies	1,144,557	0	1,706,774	0	(562.217)	(33)
490,660	133,172	104,588	ġ.	(96,311)	(0)	171,199	(258)	Construnctions	1,440.725	0	1,496,221	0	(49,496)	(0)
117.821	100.980	306.760	.0	1,214,000		(907,817)	1761	Training	2,131,696	0	5 272,753	0	(3,090,664)	(50)
1.0	+	1.	1	1.1.1.2	-		10/1/01	Gender and Development Program						-001/10
1.963.828	(1.091.901)	3,054.661		1.481.237	1	1.573,424	109	Light. Power and Water	17.649.125	. t.	17.000,487		646,659	

NETROPOLITAN CEBU WATER DISTANCT DETAILED STATEMENTS OF REVENUES AND EXPENSES FOR THE GURRENT MONTH AND YEAR TO DATE ENDING DECEMBER \$1, 2022

		CURRENT WONTH						YEAR TO DATE						
DECEMBER 2021	MOVE MILER 2025	ACTUAL AMOUNT	Actual)	ANOUNT	in TOTAL (Budget)	OVER	BUIGET	ITEMS	ACTUAL	K to TOTAL (Actual)	BUDGET AMOUNT	6 to TOTAL (Budget)	QVER (UNDER)	BODGET
221,420	150,574	125,290	6	596 177	п	(451,664)	0791	Einsteyees Physical Development Expection	1,850,491	л	3,959 300		(2),25(4),16(7)	
18 723	39.4	200	- X-	25,062	0	(34,666)	1991	Corporate Social Responsibility	121,79e	30.	301,106		(179308)	100
514,020	105.548	110 720	4 3	521.170	0	(350, 390)	(07)	Directors Free and Expertees	1,107,517	90	5,362 14		10.1010.0761	inc)
323 690	2402 051	107.528	6	845.578	ń.,	(788.246)	(87)	Paiel Grand Latincarter	2 132 716		5,400 528	C	(1.297.813)	(20)
24,872		10.00					(Divide)	Capturing Altonomore	4.594,908	- C -	5 480 800		(805,396)	101
4 201 348	541 558	2,780,565	1	4.181.353	2.	(2.105,000)	(49)	Ministerio Administrative and General Department	18.236.379		29.000 641	- 4	111101.251	(20)
				(80,540)	101	89,340	(100)	Traveling Expense	45,660	0	195.602	1.1.1	(150,000)	1771
17,564,552		T 187,477	· · · ·	10 120,354	- T	(8'943,657)	(55)	CNA treattive - Civilian	7.101,497		10.175.254	K	18943 857	(40)
				146.664		(146,600)	11140	Taxets, University and Propatization Page	1.635,518		1,758,702	1.0	(120,164)	101
600.000				3.305 500	0.	(\$335.600)	(100)	Printing and Publication Expenses	2 (907 (000	2	1.452 810		(106.800)	(11)
737		23,754	 III 			20,714	MO1/10	Subscription Experises	30,407	- 0-			30.407	#DOWN
100.028	2814 323	87.500		328,687	0 -	(293, 387)	(72)	Advertising, Womation & Marketing Capeman	2.045.205	.6	3,545 158	7	LT 097.904)	(64)
R 600					-		TOWNER	Hazant Pay						#DTW/C
103,000	219.002						#DIV/DF	Department	Fatt, SOL			2 C. L.	740,105	#DIV/O
366,830,64	17.335.775	21,145,991	21	85,403,269		(37.259.276)	(84)	Total Administrative and General Expenses	291,003,116	11	360,065,561	- 14	(68,182,445)	(19)

Sensi Caporte Accounters A

Crimen Manager Service According

Acting Depilitrah Manager + 7 MCI

Acting Act. Carsens Manager - Francis

23

л

METROPOLITAN CEBU WATER DISTRICT STATEMENTS OF COMPREHENSIVE INCOME FOR THE CURRENT MONTH AND YEAR TO DATE ENDING DECEMBER 31, 2022

Preparellay:

		CURRENT MONTH						TEAR TO				DATE		
DECEMBER	NOVEMBER	ACTUAL	16 No TOTAL	BUDGET	TA IN TOTAL	OVER	BUDGET	ITEMS	ACTUAL	N IN TOTAL	BUDGET	IS to TOTAL	OVER	BUDGET
2021	2022	ANOLINT	Attant	AMOUNT	(Bodget)	UNDER	\$.		AMOUNT	(Artist)	AMDUNT	(Harged)	UNDER	
135,278,165	1\$0,542,578	196,525,142	17	187,911,015	90	(21,376,473)	100	Operating Revenue	1,807,046,467	. 9	2,030,861,938		(223,618,461)	1775
147,885,484	114,449,285	37.210,821	31	106,500,503	105	(118,179,862)	(50)	Operation	1.437.300,401	17	1 064 554,922	78	(227, 194, 521)	(14)
10.515.710	17,800,168	0.054:300	72	10,082,724	10	051,576		Mainsmanica	201.004.721	112	237 221,448		(28.629,729)	(12)
15.423.832	15.525.425	18,848,138	12	20.784.365		(y38,22m)		Depletistor	190,804,140	0	249 A12,541	11	(68.613,241)	1277
177,475,167	147,674,878	126,093,257	74	148.157.592	(26	(119,264,336)	(43)	Total Operating Expenses	1,828,854,263	1.1.1	2,151,168,751	101	(324,334,488)	/185
142,154,9241	12,867,700	10,541,886		158,346,977	(20)	97.587,363	(1039)	utility Operating Income	(19,818,796	2 01	(120,326,822)	(14)	100,518,027	(84)
								Critrer Internal						
							10.40	Divezional Revenue	-					BOWD
6892.0792	696,688	7.11.672	1.8	101,150	6	+10,823	19	interast Revenue	11 583,920	. T.	7 213,799		4,360,121	#1
1,259.287	2,012,918	3,624,163	1	7,186,154	- A-	18,182,991)	100	Masc Non-Operating Revenue	12,582,400		¥3,433,847		(B0.841,447)	(87)
1396,7351	50,±17	153,900		(A2A,411	00	579,317	1000	House (Less) & Non-Utility Operation	11.504,907	(9)	(5,092,932)	1288	3,499,552	(84)
1 717,083	465,407	2,292,827	· 1.		-	2 789 127	#DVIII	Vicone from Granis and Denilli Via	14,044,422	2 k.			24,044,021	83100
7,273,525	3,176,131	4,782,408	1.2.	7,952,853	4	(3,180,485)	1400	Total Other Income	\$4,616,960	. 3.	\$5,554,714	. ÷.	(38,918,654)	1833
(34,881,399)	16,042,851	44,324,293	18	(80,383,084	(20)	\$4,707,377	30	Income Before Other Deductions	36.827,268	L 11	274.772.108	L 10.	51,509,373	(248)
								Miscallandous income Deduction						
954,084	1/70.376	062,387	1.11	1 774,683	0	(812,200)	years	Local Government Revenue Sharp	10,440,559		12.092.718	1	(1.017,569)	(77)
(4).227)	154,998	85.21+	0			66.214	#0 V/7	Alereatized Call or Loss on F.C.	(697.529	1 190			(097.529)	#CTV/C
							ALC: VOID	Extraord/waty charming on a						PU-VD
							#01/vill	Volue Added Taxes						00 VIII
					6 L			Firmania/Experian	184,003	-		-		
313,437	1,186,074	7,050,612	1.1.	1,774,683	- T_	(724/382)	1813	Taties	5,912,122	. t.	17,042,718	- 1a	(2,314,889)	(1)的
(35,794,836)	14,877.776	43,273,691	126	(\$2,157,767	1302	\$5,431,459	[153]	Net income Before Interest Charges	26.9(5,112	1	(\$5,634,827)	121	81,740,969	(1)(2)
969,079	341,525	993,165	- Pa	687,087	0_	316,109	54	Interest on Long Term Debts	11,522,670	- t.	7,489,740	9_	4,032,937	- 24
[36,793,912]	13,936,247	42,370,627	.10	(82.744,524)	IET?	86,115,361	(196)	Net income Before income Tax	15,392,468	1	(44,324,666)	(2)	\$8,717,032	(135)
	107,261		1.1.1.1.1.1	14,748	9	(14,743)	(100)	income Tax for Dither Income	197,261		176,982	0	(49,721)	(39)
[36,792,912]	33,828,885	42.370.521	- ×,	02.759.373	127)	96,130,199	(1963)	NetIncome Alter Income Tax from Elinerini	16,285,295	- L	(44,501,548)		\$9,786,783	1341

Checkberry

Voilled by

Ningston /

INCEPTION REPORT

ENRIQUE P. REYES

Pipelines and Appurtenances Maintenance Department Head Metropolitan Cebu Water District Philippines

Metropolitan Cebu Water District (MCWD)



Was mandated by Presidential Decree (PD 198) in 1973



Government Owned and Controlled Corporation (GOCC)



Water tariff is controlled by Local Water Utilities Administration (LWUA)



Water rights and water drilling permits is regulated by National Water Resources Board (NWRB)

MISSION

We are committed to undertake continuing exploration and development activities, aimed at the preservation and sustainability of our water resources. We must always adhere to sound practices in preserving our natural environment.

VISION

MCWD envisions itself to be a progressive and economically viable utility firm that provides adequate, safe, potable and affordable water and an effective sewerage system for Metro Cebu.

Municipalities and Cities



1. Cebu City – This is where the main office MCWD is situated.

2. Talisay City – Situated approximately 8 km. (approximately 12 km. driving route) to the south of Cebu City.

3. Mandaue City – Situated to the north of Cebu City at approximately 13 km. (20 km. driving route)

4. Lapu-Lapu City – Located in another island called Mactan. It is 22 km. to the east of Cebu City (approximately 35 km. driving route).

5. Municipality of Cordova – A municipality in Mactan, situated approximately 23 km. to the west of Cebu City (approximately 41 km. driving route).

6. Municipality of Consolacion – Approximately 28 km. north of Cebu City (approximately 29 km. driving route).

7. Muncipality of Liloan – Approximately 29 km. north of Cebu City (approximately 40 km driving route).

8. Municipality of Compostela – Approximately 38 km. north of Cebu City (approximately 53 km. driving route).

Water Supply Service Levels

Coverage area	697 (sq. km)
Population Served	914,735
Collection ratio	79.9(%)
Production capacity	7,926,100 (m3/day)
Supply duration	21.94 (hr./day)
Supply pressure	13psi
Non-Revenue Water	32.67 (%)
Water quality	Philippine National Standards for Drinking Water (PNSDW)
Staff number	846
Number of connections	204,109
Staff/1,000 connections	4.14 (people/1,000connections)

Improvement of Water Supply Service



IN-HOUSE DEVELOPMENT



PRIVATE SECTORS

Improvement of Water Supply Service



Surface Water from Luyang River in Carmen, Cebu – This produces 35,000 cu.m. per day. The supply started in 2015.



Brackish Water in Mactan – Supply to MCWD is 12,000 cum. per day. It's a contract renewal with a private supplier in December of 2020.



Surface Water in Compostela, Cebu – This is 10,000 cu.m. per day surface water from the river of Compostela.



Surface Water from Lusaran – This supplies 15,000 cu.m. from an upstream river of Lusaran, Cebu.

Recent Challenges to Improvement of Water Supply Services



POLITICAL

FINANCIAL

71



GOV'T AGENCIES

Expectations



To adapt and learn new strategies from other participants.



To learn best practices and the technology to use in lowering the NRW.



Site Visits that are relevant and to experience the culture and tradition in Japan

THANK YOU!

7. SAMOA

Inception Report

Country: Samoa

Name: Kalelaina Green

1. Outline of Water Supply Services

- 1-1. Legal Basis of Water Supply Services
 - 1. Samoa Water Authority Act 2003
 - 2. Samoa Water Authority (Sewerage and Wastewater) Regulations 2009
 - 3. Public Bodies (Performance & Accountability) Act 2001
 - 4. Public Finance Management Act 2001
 - 5. Cabinet Directives
 - 6. Samoa National Drinking Water Standards 2016
 - 7. SWA Engineering Standards 2014
 - 8. National Water Services Policy 2010
- 1-2. Demarcation of Water Supply Services
- Sanitary Water –Samoa Water Authority (important to note that this process is purely from water intakes until final consumption)
- Sanitary & Wastewater sewer Samoa Water Authority
- 1-3. Main Actor of Water Supply Utilities
- Samoa Water Authority is the major water and wastewater service provider under the SWA Act 2003.
- 1-4. Mission / Vision of Water Supply Utilities
- To provide efficient, effective, reliable and sustainable safe and clean water and wastewater services to ensure timely responsiveness to customer needs.
 5.
- 1-5. Your Mission/Vision in your organization

Mission: To effectively manage the provision of safe, reliable and sustainable water service.

Vision: To be a sustainable water and wastewater utility provider founded on excellence

2. Water Supply Service Levels

2-1. Main Performance Indicators (PI)

Coverage area	800 (sq. km)
Population Served	210,000 people
Collection ratio	107 (%)
Production capacity	(m3/day)
Supply duration	24 (hr/day)
Supply pressure	0.1 MPa (water pressure at tap)
Non-Revenue Water	47.0 (%)
Water quality	100%
Staff number	275
Number of connections	34, 650
Staff/1,000 connections	8.6 (people/1,000connections)

2-2 Any Monitoring by Performance Indicators (PI)

• Installation of new connections within 10working days from date of payment

- Untreated to treated water supply.
- Network upgrades
- Borehole Upgrades and relocate and River intake refurbishment

3. Management of Water Quality

3-1. Current Situation and Major Challenges/Problems

- Chlorination levels are sometimes too low or high due to the amount of dosage being used.
- The changing rainfall patterns have brought about turbidity problems from the

main rivers causing issues to the Authority's operations from the Treatment Plants.

- Not enough personnel given the coverage areas Upolu and Savaii.
- Climate change and its adverse effects on our water resources and infrastructure.

3-2. Current Actions against Those Challenges/Problems

- The establishment of the Water Quality working group that involves all personnels that deal with water quality has provided further awareness and training on chlorination levels and other important information regarding water quality.
- Recruit staff for key vacant positions and strengthen collaborations with stakeholders such as JICA to assist with capacity building of current staff.
- Increased maintenance of the Treatment plants enables continuous supply to our customers.

3-3. Any Achievements

- Water quality targets for micro compliance was achieved for all urban and rural areas in Upolu and Savaii water supply water systems. The Urban areas chlorinated water supply systems achieved micro compliance of 99.5% for all 5 Slow Sand Filter ("SSF") distribution system. Micro compliance target achieved, 99.3% for 2 Rapid Sand Filter ("RSF") distribution system. A continual 100% micro compliance for Falelauniu chlorinated borehole distribution system.
- The rural areas chlorinated water supply systems, a continual 100% micro compliance was recorded for the SSF Treatment plant distribution system. Total
- 3-4. Water Quality Standards for Drinking Water
- With most of its chlorination facilities constructed and commissioned, SWA has significantly improved its Drinking Water results in the report period. Water Treatment filters underwent overhauls and replacements, and boreholes were installed with chlorination facilities for the effective and efficient treatment of water from sources. Efforts by Operations teams in monitoring of residual chlorine assisted in ensuring water quality is achieved and complied with National Drinking Water Systems.

3-5. Monitoring System or Plans for Safety of Drinking Water in Your Organization / Regulatory Body / Independent Institution /Others

• Our water quality team has implemented on-going water monitoring program both for the Savaii and Upolu areas to ensure quality compliance against water quality standards at all times. The Authority also in all its effort ensures chlorination facilities are in place and are upgraded in anticipation of improved water quality

3-6. Implementation of Water Safety Plans* or Similar Efforts

• Currently reviewing our Water Safety Plan.

4. Reduction of Non-Revenue Water

4-1. Current Situation and Major Challenges/Problems

- Workforce capabilities.
- Resources constraints
- Major leakages

4-2. Current Actions against Those Challenges/Problems

- Strengthen capacity building of the workforce though the many training avenues available.
- Strengthened networking and partnership with training providers.
- Recruiting specific team and expanding workforce number to deal with leakage detection and non-revenue water reduction.
- Procurement of high-tech tools & equipment
- On going operations and maintenance work to replace damaged sub mains and major burst.

4-3. Any Achievements

- Reduced percentage of non-revenue water percentage in the rural coverage areas.
- Non-revenue water percentage on a steadily decreasing basis.

Authorized	Revenue	Billed authorized	79.0
consumption	water	consumption	(m3 /year)
			(%)
	Non-Revenue	Unbilled authorized	0.5
	Water (NRW)	consumption	(m3 /year)
		(ex. fire fighting, cleaning)	(%)
Water losses		Apparent losses	10.0
		(Unauthorized	(m3 /year)
		consumption (i.e. Illegal	(%)
		use), Customer metering	
		inaccuracies)	
		Physical losses	10.5
		(Leakage)	(m3 /year)
			(%)

4-4. Constitution of NRW (If you have the data, please fill in the table)

4-4. Situations about Leakage Detection Measures (DMA etc.)

- Consistent daily monitoring by our committed NRW teams not just within the CEPSO targeted areas, but also across all other water supply systems overseen by the Samoa Water Authority.
- On going monitoring work of both the Rural and Urban teams contributing to reduced non-revenue water ratio.

5. Accounting system of Water Supply Service

5-1. Water Tariff in your Organization

• Refer to Water Supply Service Information Sheet.

5-2. Balance Sheet of your Organization

• Refer to attachment 1.

5-3. Profit and Loss Statement of your Organization

• Refer to Attachment 1.

6. Major Recent Achievements in Improvement of Water Supply

Services/Management

- Continuous expansion of service coverage areas.
- Non-revenue water percentage on a steadily decreasing basis.
- Additional chlorination facilities for three rural boreholes.
- Improved governance and support from the Water Sector and established policies and legislations.

7. Recent Challenges to Improve Water Supply Services

- Resource constraints staff, vehicles, tools, equipment, computers, excavators, asset replacement, offices.
- Skilled staff turnover due to opportunities made available through the Recognized Seasonal Employment Scheme in New Zealand and Australia.
- Aging water infrastructure.
- Shortage in labour market supply for technical expertise, particularly of water engineer.

8. Expectations toward Japan

- 8-1. Expectations toward Japanese Government and JICA
- Capacity building / scholarship opportunities
- Support Funding facilities and resources
- Strengthened international relations.

8-2. Expectations toward Japanese Water Utilities

- □ Twinning program / Work exchange program with SWA
- □ Strengthened networking
- □ Information and knowledge sharing
- 8-3. Expectations toward Japanese Private Companies

- Funding facilities and resources
- Twinning programme / Work exchange program with SWA

9. Expectations toward the Program.

- New knowledge
- New initiatives
- Strategic focus

Inception

Country: Samoa Name: Kalelaina Green

Contents

- 1. Outline of Water Supply Services
- 2. Water Supply Services Levels
- 3. Management of Water Quality
- 4. Reduction of Non-Revenue Water
- 5. Accounting System of Water Supply Services
- 6. Major Recent Achievements in Improvement of Water Supply Services/Management
- 7. Recent Challenges to Improve Water Supply Services
- 8. Expectations toward Japan
- 9. Expectations toward the Program.





1 Outline of Water Supply Services

1.1 Outline of Water Supply Services

- Legal Basis of Water Supply Services
- Samoa Water Authority Act 2003
- Samoa Water Authority (Sewerage and Wastewater) Regulations 2009
- Public Bodies (Performance & Accountability) Act 2001
- Public Finance Management Act 2001
- Cabinet Directives
- Samoa National Drinking Water Standards 2016
- SWA Engineering Standards 2014
- National Water Services Policy 2010

1-2. Demarcation of Water Supply Services

- Sanitary Water –Samoa Water Authority (important to note that this process is purely from water intakes until final consumption)
- Sanitary & Wastewater sewer Samoa Water Authority

1-3. Main Actor of Water Supply Utilities

• Samoa Water Authority is the major water and wastewater service provider under the SWA Act 2003.

1-4. Mission / Vision of Water Supply Utilities

• To provide efficient, effective, reliable and sustainable safe and clean water and wastewater services to ensure timely responsiveness to customer needs.

1-5.Your Mission/Vision in your organization

- Mission: To effectively manage the provision of safe, reliable and sustainable water service.
- Vision: To be a sustainable water and wastewater utility provider founded on excellence





2 Water Supply Service Levels

2-1. Main Performance Indicators (PI)

Coverage area	800 (sq. km)
Population Served	210,000 people
Collection ratio	107 (%)
Production capacity	(m3/day)
Supply duration	24 (hr./day)
Supply pressure	0.1 MPa (water pressure at tap)
Non-Revenue Water	47.0 (%)
Water quality	100%
Staff number	275
Number of connections	34, 650
Staff/1,000 connections	8.6 (people/1,000connections)

2-2 Any Monitoring by Performance Indicators (PI)

- Installation of new connections within 10working days from date of payment
- Untreated to treated water supply.
- Network upgrades
- Borehole Upgrades and relocate and River intake refurbishment

3 Management of Water Quality

3-1. Current Situation and Major Challenges/Problems

- Chlorination levels are sometimes too low or high due to the amount of dosage being used.
- The changing rainfall patterns have brought about turbidity problems from the main rivers causing issues to the Authority's operations from the Treatment Plants.
- Not enough personnel given the coverage areas Upolu and Savaii.
- Climate change and its adverse effects on our water resources and infrastructure.

3-2. Current Actions against Those Challenges/Problems

- The establishment of the Water Quality working group that involves all personnel that deal with water quality has provided further awareness and training on chlorination levels and other important information regarding water quality.
- Recruit staff for key vacant positions and strengthen collaborations with stakeholders such as JICA to assist with capacity building of current staff.
- Increased maintenance of the Treatment plants enables continuous supply to our customers.

3-3. Any Achievements

- Water quality targets for micro compliance was achieved for all urban and rural areas in Upolu and Savaii water supply water systems. The Urban areas chlorinated water supply systems achieved micro compliance of 99.5% for all 5 Slow Sand Filter ("SSF") distribution system. Micro compliance target achieved, 99.3% for 2 Rapid Sand Filter ("RSF") distribution system. A continual 100% micro compliance for Falelauniu chlorinated borehole distribution system.
- The rural areas chlorinated water supply systems a continual 100% micro compliance was recorded for the SSF Treatment plant distribution system.







3-4. Water Quality Standards for Drinking Water

With most of its chlorination facilities constructed and commissioned, SWA has significantly
improved its Drinking Water results in the report period. Water Treatment filters underwent
overhauls and replacements, and boreholes were installed with chlorination facilities for the
effective and efficient treatment of water from sources. Efforts by Operations teams in
monitoring of residual chlorine assisted in ensuring water quality is achieved and complied with



3-5. Monitoring System or Plans for Safety of Drinking Water in Your Organization / Regulatory Body / Independent Institution /Others

 Our water quality team has implemented on-going water monitoring program both for the Savaii and Upolu areas to always ensure quality compliance against water quality standards. The Authority also in all its effort ensures chlorination facilities are in place and are upgraded in anticipation of improved water quality

3-6. Implementation of Water Safety Plans* or Similar Efforts

• Currently reviewing our Water Safety Plan.

National Drinking Water Systems.

4 Reduction of Non-Revenue Water

4-1. Current Situation and Major Challenges/Problems

- . Workforce capabilities.
- . Resources constraints
- . Major leakages

4-2. Current Actions against Those Challenges/Problems

- . Strengthen capacity building of the workforce though the many training avenues available.
- . Strengthened networking and partnership with training providers.
- . Recruiting specific team and expanding workforce number to deal with leakage detection and non-revenue water reduction.
- . Procurement of high-tech tools & equipment
- . On going operations and maintenance work to replace damaged sub mains and major burst.

4-3. Any Achievements

- . Reduced percentage of non-revenue water percentage in the rural coverage areas.
- . Non-revenue water percentage on a steadily decreasing basis.



4-4. Constitution of NRW (If you have the data, please fill in the table)



Authorized consumption	Revenue water	Billed authorized consumption	79.0 (m3 /year) (%)
	Non-Revenue Water (NRW)	Unbilled authorized consumption (ex. fire fighting, cleaning)	0.5 (m3 /year) (%)
Water losses		Apparent losses (Unauthorized consumption (i.e. Illegal use), Customer metering inaccuracies)	10.0 (m3 /year) (%)
		Physical losses (Leakage)	10.5 (m3 /year) (%)

4-5. Situations about Leakage Detection Measures (DMA etc.)

. Consistent daily monitoring by our committed NRW teams not just within the CEPSO targeted areas, but also across all other water supply systems overseen by the Samoa Water Authority.

. On going monitoring work of both the Rural and Urban teams contributing to reduced non-revenue water ratio.

5 Accounting system of Water Supply Service



5-1. Water Tariff in your Organization Refer to Water Supply Service Information Sheet

- 5-2. Balance Sheet of your Organization Befer to attachment 1
- 5-3. Profit and Loss Statement of your Organization Refer to Attachment 1.

6 Major Recent Achievements in Improvement of Water Supply Services/Management



- . Non-revenue water percentage on a steadily decreasing basis.
- . Additional chlorination facilities for three rural boreholes.
- . Improved governance and support from the Water Sector and established policies and legislations.

7 Recent Challenges to Improve Water Supply Services

. Resource constraints – staff, vehicles, tools, equipment, computers, excavators, asset replacement, offices.

. Skilled staff turnover due to opportunities made available through the Recognized Seasonal Employment Scheme in New Zealand and Australia.

. Aging water infrastructure.

. Shortage in labour market supply for technical expertise, particularly of water engineer.



8 Expectations toward Japan

8-1. Expectations toward Japanese Government and JICA

- . Capacity building / scholarship opportunities
- . Support Funding facilities and resources
- . Strengthened international relations.

8-2. Expectations toward Japanese Water Utilities

- . Twinning program / Work exchange program with SWA
- . Strengthened networking
- . Information and knowledge sharing

8-3. Expectations toward Japanese Private Companies

- . Funding facilities and resources
- . Twinning programme / Work exchange program with SWA

9 Expectations toward the Program



- . New initiatives
- . Strategic focus







THANK YOU

8. ZIMBABWE

INCEPTION REPORT

COUNTRY : ZIMBABWE

NAME : Talent Mashinga

1. Outline of Water supply services

Water supply services are regulated by the Water act *(Chapter 20:24)* and Zimbabwe National water authority act *(Chapter 20:25)* of the Zimbabwean constitution which provides for the development and utilisation of water resources of Zimbabwe, powers and procedures of catchment councils and sub catchments councils to provide for the control of the use of water .

Demarcation of Water supply services.

Chitungwiza Municipality is not a water authority and receives potable from Harare. Water falls under Ministry of Lands, agriculture, fisheries, water, climate and rural resettlements and Ministry of local government.

Main actor of water supply utilities in Zimbabwe is the Ministry of Local government in urban councils and Ministry of Lands, agriculture, fisheries, water, climate and rural resettlements for rural Councils.

The vision of Water supply utilities in Chitungwiza is the same as that of the Municipality, which is Smart heritage city by the year 2030.

2. Water supply service level

The coverage area for the water performance indicators is 78 %. The population served is 400000 and according to the 2012 population census, the figure stood at 370000. The collection ration is currently at 25 %. Our water daily demand is 70 000 cubic meters but because we are not a water authority, we get all our treated water from Harare at a rate of 20 000 cubic meters daily and giving us a daily deficit of 50 000 cubic meters. We do not have a water treatment plant in Chitungwiza.

Our water supply pressure is at 0.1 bar and is usually available for two hours per day.

Non-revenue water is at 56 % with 40% being real losses and 16% being apparent losses.

Water quality is above average and at the furthest point , we measure the residual chlorine and it is at 0.2 mg/litre minimum and maximum is 5mg/litre.

Chitungwiza municipality is manned by 1300 employees and water section has a total of 60 employees.

We have 48 000 water connections and our staff connection ratio is at 1.15/1000 connections.

Monitoring of water network is done to ensure good quality of water as per world health organisation standards and to reduce leakages along the way.

3. Management of Water quality

Currently we are facing challenges including the following

- Illegal water connections
- Water meter thefts
- Vandalism
- Aged water infrastructure
- Low water pressure from Harare
- Low collection ratio.

Action against challenges

- Increased monitoring and enforcement of Council by laws on those found tempering with council infrastructure and illegal connections
- Increase payment amount to Harare city for us to receive adequate water.
- Come up with a replacement plan for the rehabilitation of water network.

We have managed to drill 175 community boreholes to alternate the erratic water supplies. Our water quality is routinely checked and corrected by our Health department to ensure continuous good quality water but we also send the samples to government laboritories.

4. Reduction of Non-revenue water

Currently our Non-revenue water is at 56% and this is mainly caused by illegal water connections, inaccurate billing and only 16% are real losses which are found in the reticulation network.

We are currently planning the replacement of all aged pipes and infrastructure to ensure that there are no losses in the network. We are also installing district meters or zone meters to determine water consumption for each respective district.

We have managed to replace 4500 water meters on properties that did not have water meters or have non-functional water meters and we are changing from brass cased water meters to plastic water meters.

We do not have leak detectors and this can affect our efforts to get rid of any leakages as some of the leakages can occur in the places that are difficult to access.

5. Accounting system of water supply services

Our water tarrif is as follows					
Residential - US Dollars	3-84				
Commercial	4-00				
Industrial	6-00				
Institutional					

These tariffs are billed in United States Dollars but are payable using our local currency at the prevailing bank rate.

6. Major recent achievements in improvement of water supply service management
 We have drilled 170 community boreholes and motorized 10 with better yields.
 We replaced 4500 domestic water meters.
 We extended our reticulation network with 10 km x 200mm diameter pvc pipe

7. Recent challenges to improve water supply services

Payments to Harare City for the supplied water due to low revenue collection.

Repairs in Harare can affect water supply in Chitungwiza.

Underutilised reservoirs due to erratic supply for Harare.

8. Expectations towards Japan

To learn techniques on how to properly plan and effect replacement of the reticulation network and increase on revenue collection.

To learn how the Japanese water system is run and do the same in Chitungwiza To understand how to continuously supply the customers and other ways to augment the water supplied from Harare.

Japanese private companies can also assist us as we want to learn the business side of water supply so as to avoid making losses when it comes to water supply.

9. Expectations toward the program

To have proper administration and management qualities of Water supply services. To improve water reticulation network.

Our existing distribution water network is summarized as follows:

Illustrated in the pdf



Water Transmission and Distribution System of the Municipality

TALENT MASHINGA Chitungwiza Municipality Zimbabwe

> (ADMINSRATION AND MANAGEMENT OF WATER SUPPLY SERVICES)(A)(202208470J01)

> > 1



Zimbabwe Map



Chitungwiza Background

Located 25km south of Zimbabwe's capital city (Harare). It was established as a separate entity on January 1 1978. It is rated third largest urban settlement after Harare and Bulawayo. It has a population of around 400 000 and 90 000 houses. It is divided into four administrative district which are

- 1. Seke North
- 2. Seke South
- 3. St,Mary's
- 4. Zengeza.

It has an industrial area, Sewage • treatment plant and water reservoirs but is not a water authority, it relies on Harare for potable water.

Chitungwiza is further divided into 25 wards headed by ward councillors. The ceremonial Mayor works with the Town Clerk who runs day to day business of the Municipality and assisted by Directors (Heads of Departments)



WATER SUPPLY SERVICES

- Regulated by the Water act (*Chapter 20:24*) and Zimbabwe National water authority act (*Chapter 20:25*) of the Zimbabwean constitution which provides for the development and utilisation of water resources of Zimbabwe, powers and procedures of catchment councils and sub catchments councils to provide for the control of the use of water .
- Main actor of water supply utilities in Zimbabwe is the Ministry of Local government in urban councils and Ministry of Lands, agriculture, fisheries, water, climate and rural resettlements for rural Councils.
- The coverage area for the water performance indicators is 78 %. The population served is 400000 and according to the 2012 population census, the figure stood at 370000. The collection ration is currently at 25 %. Our water daily demand is 70 000 cubic meters but because we are not a water authority, we get all our treated water from Harare at a rate of 20 000 cubic meters daily and giving us a daily deficit of 50 000 cubic meters.
- Our water supply pressure is at 0.1 bar and is usually available for two hours per day. Non-revenue water is at 56 % with 40% being real losses and 16% being apparent losses. Water quality is above average and at the furthest point , we measure the residual chlorine and it is at 0.2 mg/litre minimum and maximum is 5mg/litre.
- Chitungwiza municipality is manned by 1300 employees and water section has a total of 60 employees. We have 48 000 water connections and our staff connection ratio is at 1.15/1000 connections.

CHALLENGES IN WATER SUPPLY

- Illegal/Unauthorised water connections
- Water meter thefts
- Vandalism of water infrastructure
- Aged water infrastructure
- Low water pressure from Harare
- Low collection ratio.

Action against challenges

- Increased monitoring and enforcement of Council by laws on those found tempering with council infrastructure and illegal connections
- Increase payment amount to Harare city for us to receive adequate water.
- Come up with a replacement plan for the rehabilitation of water network.



Burst water pipe

- Pipe bursts due to aged pipes.
- Huge amounts of treated water being lost daily.
- Due to pipe bursts, small solid particles can enter and damage the water meters through sedimentation. When debris is in the meter, it causes the meter to be stuck and this affect the reading pattern thereby increasing the un accounted for water.







Aged infrastructure causing leakages





Vandalised water meter



- 1. Old 45 degrees junction with leaking couplings
- 2. Water leaking from underground
- 3. 15mm vandalized and unreadable meter.

Water meters are being stolen daily.

- Below is a case of water theft
- Water meter was stolen and the customers continuously is using water without a water meter
- A horse pipe is directly connected to the stand pipe where the meter was supposed to be.



 below is an ideal connection with a water meter in tact



Leaking chambers

- One of the 6 off take chambers filled with water.
- Water meter and pipes within the chamber are vulnerable to corrosion and the water meter unreadable.







Unmetered connections using water illegally







Non Revenue water management leakage control

• Pumps inside the pumping station at Seke reservoirs leaking continuously as the pump runs.








Section of Ham	Velocity (min)	Readices (milm)	Longth (m)
CONTRI O BLOG PE WYAS	6.51	97.M	2,553
SIS nen Bla Hakori RES	3.70	37.34	925
Still new Bio Guete Touristip	3,85	83.78	230
225 mm Bile Gueria Towneng	2.14	37.30	1,238
300 mm Øle St Ver/sklanjana	3.85	\$3.76	230
STS ett Dollais on Magaza Road	2.83	93.19	2,994
Stilms Bio Unit Dataset K	2.98	517	520
Al Minnet Milo Zergeza 4	242	14511	315
300 has Difton Parquel main from Valent Reserves	3.37	64	92





- Table at the top show velocity table and head losses
- Leaking air valve on the transmission line
- 1 of 4 X11000mega litres ground reservoir.



Water meter testing bench



Pipe Material	Length (m)	Material	Age (years)	Area
50mm	-	A/C HDPE	38	Zengeza
63mm		PVC	15	
75mm		PVC	13	St Mary's (Manyame Park)
75mm		PVG	<10years	New Development and Infil's
75mm		AC	35	Unit K
100mm	-	AC	35	Unit K, N; Poor pressure rated, pipe bursts
125mm	1	AC	33	Unit N Poor pressure rated, pipe bursts
150mm		AC	33	Unit N Poor pressure rated, pipe bursts
200mm		AC	33	
225mm	-	AC	40	Unit C
250mm		AC	42	

Non-Revenue Water Management (Leakage Control)(A)(J1804401)

THANK YOU

NON-REVENUE WATER MANAGEMENT : WATER SECTION

- Typical work flow of leak age detection: Leak detection is by physical examination of the pipe or sighting of the wet ground in absents of any reasonable water source.
- General public plays a major role of bringing in the reports of leaks by either visits, phone calls or mail to the water section personnel or Public relations personnel.
- Typical work flow of leak age repair: Leaking pipe is exposed, removed and replaced with a new one from our stock.
- Leakage detection instruments: No instrument are being used, for Leak detection, we rely on information from our personnel or reports from the residents.
- Counter measures for illegal use: Random checks on water connections to confirm payment of new connections.
- Metering system: Each premise is connected individually and has a water meter that reads the supplied water at that premises.15mm water meters for domestic connections and up to 100mm for industrial connections.

PROBLEMS CURRENTLY FACED:

- Domestic Water Meters being stolen(average of 200 per month)
- Increasing illegal water connections.
- Aged infrastructure causing leakages to the network.
- Water theft by residents through by-passing the water meter so as to increase the water pressure at their households.
- Distorted database for customers.
- Static or non-functional water meters
- Huge numbers of residents fetching water at public places like schools and council premises.
- Unavailability of spare and kits to repair malfunctioning water meters.
- Inadequate water supply from Harare

ONGOING COUNTERMEASURES OR PROJECTS ON NON-REVENUE WATER MANAGEMENT:

- Using the newly acquired water meter testing bench for meter calibration.
- Incorporating GIS System to capture water meter readings and pipeline.
- Procurement of standard plastic domestic water meters to replace old nonfunctional meters (4500 first batch procured under Zimfund phase 2(project for urgent water supply and sanitation improved administered by African development Bank AfDB)
- Proffering amnesty to illegally connected clients and properly register their connections in the council database.
- Monitoring pressure gauge to determine any loss in pressure then communicate with personnel at the treatment plant.

GOOD EXAMPLES TO BE SHARED AMONG PARTICIPANT:

- Offering amnesty to illegally connected clients.
- Using the water meter testing bench for meter calibration.
- Routinely follow the transmission line on daily basis to trace for leaks.

STRATEGY AND FUTURE PLAN OF MY ORGANIZATION:

- Formulation of a revolving fund to replace all malfunctioning water meters at the user pays principle.
- Procurement and installation of smart water meter(prepaid meters)
- Procure a leak dictator.
- Establish a 24 hour call center for water related issues thereby reducing the reaction time to water pipe burst.
- Replace all district meters and off take flow meters.
- Rehabilitate network in old suburbs.

22

21

THANK YOU

Japan International Corporation of Welfare Services (JICWELS) was established with the sanction of the Minister for Health, Labour and Welfare in July 1983 and implements international technical cooperation programmes with purpose of contributing to the promotion of health and social welfare activities in the friendly nations.

Japan International Corporation of Welfare Services (JICWELS) Matsuoka Ginnana BLDG. 3F 7-17-14 Ginza Chuo-ku, Tokyo 104-0061 JAPAN Tel: +81-(0)3-6206-1137 Fax: +81-(0)3-6206-1164 https://jicwels.or.jp

公益社団法人国際厚生事業団(JICWELS)は、国際的な保健・福祉分野の国際協力に貢献 することを目的として、1983年(昭和58年)7月7日に厚生省(現厚生労働省)から社団 法人の認可を受け設立されました。開発途上国の行政官研修やWHOフェローの受け入れ、調 査企画や研究開発並びに情報の交換及び広報活動など、海外諸国との国際交流活動を推進し ています。

発行日 2024年3月1日



〒104-0061 東京都中央区銀座7丁目17-14松岡銀七ビル3階 電話03-6206-1137(国際協力チーム) Fax 03-6206-1164 https://jicwels.or.jp