

**S13.3-2 DEBRIEFING SESSION OF THE 1<sup>ST</sup> CP**  
**TRAINING IN JAPAN**



# Solomon Water Participants NRW Management Training Presentation

Solomon Water Conference Room  
Friday 31<sup>st</sup> May 2013

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## Presentation Outline

- Introduction participants
- Acknowledgement
- Lessons learnt
- Issues identified/suggestion activities for future improvement
- Recommendations
- Comments & questions

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## Participants Introduction

- Ellen Inahia – Service Delivery & Communication Manager
- Benjy Billy – Team Leader (operations & network & NRW Coordinator)
- Daisy Manega – Team Leader Meter Reading
- Austin Ata – Coordinator Connection Services

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## Acknowledgement

- Solomon Water Management
  - Confidence & trust in us
  - Capacity building – Managing NRW activities
- JICA representatives
  - Efforts and commitments of all acknowledged
  - Equipped & prepared to take up the challenge – betterment of our service
- Our partners in Japan
  - Yokohama Water Works Bureau
  - Yokohama Water
  - Naha Prefecture & Municipal/Naha City – Okinawa
  - Miyakojima Municipal

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## Training Focus

- Gain knowledge on countermeasures on NRW rate reduction in Yokohama & Okinawa from the perspective of Water Supply Management.
- To deepen our understanding on the management advantage of investment planning for NRW reduction, and to utilise it in the future's water supply management of Solomon Water (SW).

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## Topics Covered -

- Water Supply Designing & Management
- Reduction of NRW
- Replacement of aged pipes & leak prevention
- Water Purification
- Mapping System
- Repairment (practical)
- Delivery of Water Supply class (simulation)
- Meter Reading Management
- Charge/Tariff collection
- Water Resources Development

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## Focus

- Management of NRW activities thru tasks implemented by key relevant departments & NRW team members (SW)
  - Current situation we experiences
  - Recommendations
  - Proposed activities

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## Topics Covered -

- Ecological Purification System/Slow Sand filtration
- Measures against Leakage ( Leak Management)
- Water Quality (Bacteria, Hardness and Chlorine practical test)
- Culture, Hospitality and the beauty makes the difference!

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Situation Analysis		
CURRENT SITUATION	RECOMMENDATIONS	PROPOSED ACTIVITIES
<b>Connection Services</b> ❖ Lack of guidelines & processes to guide the facilitation of connection services.	i. Formulation of policies, processes and procedures. ii. Formulation of standard design and practices for field workers.	- Currently on progress – SDCD - Liaise with procurement office & other relevant unit to develop a standard & practices for field workers. - Standard installation of meter box.
<b>Meter Management</b> <input type="checkbox"/> Inconsistency of customer consumption rates due to meter/faulty/stop/meter duration <input type="checkbox"/> Inconsistency of readings (new meters/meter replacement/metering of direct line)	i. In place a system – to monitor meter life span. ii. Possibility for purchasing of new hand-held device used in Japan Water Bureau iii. Revisit re-checking processes. iv. Clear demarcation by responsible officers & flow of information	- Expand on what the unit currently developed on day to day schedules of tasks/target per day. - Documentation process to be filled & kept/linkages with CC customer abnormality in readings. - Monitoring - Remodel of system used by MR (consistent with

Situation Analysis		
CURRENT SITUATION	RECOMMENDATIONS	PROPOSED ACTIVITIES
<b>Billing Processes</b> <input type="checkbox"/> Tariff charges <input type="checkbox"/> Turbidity of water <input type="checkbox"/> Categories of customers <input type="checkbox"/> High ranges – customer charges	i. Essential for Review of our Tariff charge. ii. Increase customer base – manageable iii. Clear basis for tariff changes to be established. iv. Stabilization of fuel – Gov't intention v. Introduce new billing system	- Redefine the charges for connection charges and avoid reconnection fees. - Clear define guidelines on the processes – reflect finance and operations (linkages within the GIS) - Consumption rates etc.
<b>Revenue collection</b> <input type="checkbox"/> Collection	i. Improve our current revenue collection system.	- Establish <b>pay centres</b> – banks transactions, convenient shops. - Cashier must ne connected with Revenue unit

CURRENT SITUATION	RECOMMENDATIONS	PROPOSED ACTIVITIES
<b>Leakages</b> <input type="checkbox"/> Human Resource of SW – existing resources who are trained in leakages (not fully utilized) <input type="checkbox"/> Turbidity of water <input type="checkbox"/> Categories of customers <input type="checkbox"/> High ranges – customer charges	i. Identify and upgrade of technical officers. ii. Job specification - Need to redefine current officers with leakage skills	- Training - Creating and managing of leak control zones (LCZ) - Acquiring of leak detection equipment's/detections/f unctions & demand management.
<b>Pressure management</b> <input type="checkbox"/> High leakage – create meter damage & damage to household damages	i. Manage the pressure at the acceptable level	- Create pressure management zones (PMZ) - Installation of pressure reducing valves (PRV) - Installation of break-pressure tank (BPT).

CURRENT SITUATION	RECOMMENDATIONS	PROPOSED ACTIVITIES
<b>Mapping</b> <input type="checkbox"/> Data on main distribution and network/appliances and customer meter not updated.	i. To improve the capacity and quality of this service. ii. Outsourcing	- Collection of field datas - Update of drawings (create map/drafts man) - Reintroduce new mappings for new lines - Hard copies into soft copies.
<b>Water Resource</b> <input type="checkbox"/> Catchment areas not defined or protected. <input type="checkbox"/> Quality issue <input type="checkbox"/> Land ownership	i. Central Gov't to take up the water source works, establishment of dumps, acquiring of water catchment areas & regulatory	- Liaise with relevant stake holders secure (compulsory/lease arrangements). - Management of water source facilities. - Develop treatment plants ..environmental friendly system for filtering.

### Lessons learnt

- Outsourcing
  - Meter reading, connection services, and leakages activities.
- Immediate Activities
  - Orientation program – SD&CD

### Solomon Water

#### Lesson learnt

- Customers Service & Communication
  - Approach in Targeting schools.
  - Service Check
  - Public relations
  - Polices & Guidelines
  - Proper Documentation

### Lessons Learnt

- Revenue & Disconnection
  - Monitoring of payment
  - Payment system
  - Reminders to customers
  - Disconnection process

### Lesson Learnt

- Leak Management
  - Creation of Blocks
  - Pressure Management
  - Leak Detection Techniques & Devices
  - Guideline for carryout leakage process.
  - Repair Techniques
  - Connection Standards
  - Mapping – very important .

## Lessons Learnt

- ❑ Water Resource Management
  - ❑ Management of Catchment area
  - ❑ Prefectural Gov't- look after treatment
  - ❑ Water Rights
  - ❑ Water Quality STD(Japan WHO)
- ❑ Outsourcing
  - ❑ Meter reading, connection services & leakages

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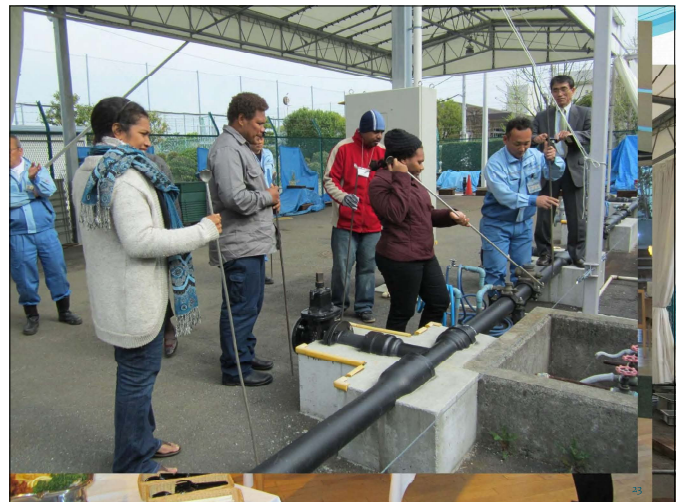
## Lessons Learnt

- ❑ Culture, Hospitality and the Beauty makes the Difference!
  - ❑ Respect and Honesty
  - ❑ Friendliness
  - ❑ Attitude ( Positive Mindset)
  - ❑ Very Alert to Details
  - ❑ Initiative and Innovative
  - ❑ Preservation of Cultural Heritage and History.
  - ❑ Time Management

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Flashback!



ARIGATO-GOZAIMASU

Flashback!



**S13.3-3 REVIEW ON ANALYSIS OF**  
**IWA WATER BALANCE**





# The Project for Improvement of Non-Revenue Water Reduction Capacity for SIWA in Solomon Islands

## REVIEW ON ANALYSIS OF IWA WATER BALANCE

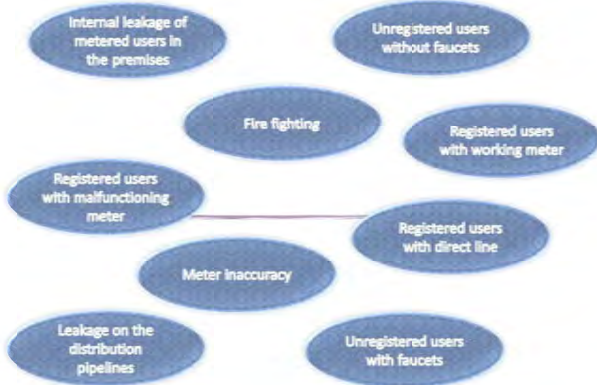
June 2013

### Project Team

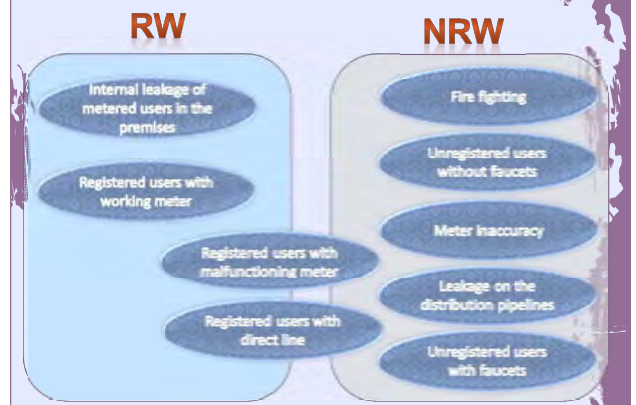
### Contents

- ◆ Which Categories between RW and NRW?
- ◆ Revenue Water & Non-Revenue Water
- ◆ Types of Current Service Connection
- ◆ Demarcation of responsibility
- ◆ How to estimate meter error?
- ◆ Identify causes of NRW
- ◆ IWA Water Balance before countermeasure at Namo Ruka, White River)
- ◆ Data of MNF Measure
- ◆ Data of MNF Measure for Report
- ◆ Relation among Water Flow Rate, Leakage Rate and Water Pressure

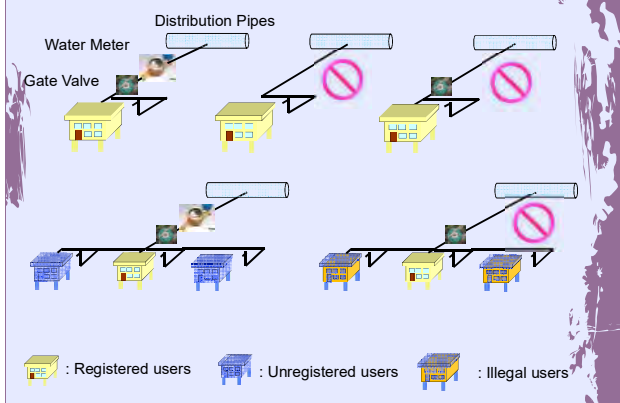
### Which Categories between RW and NRW?



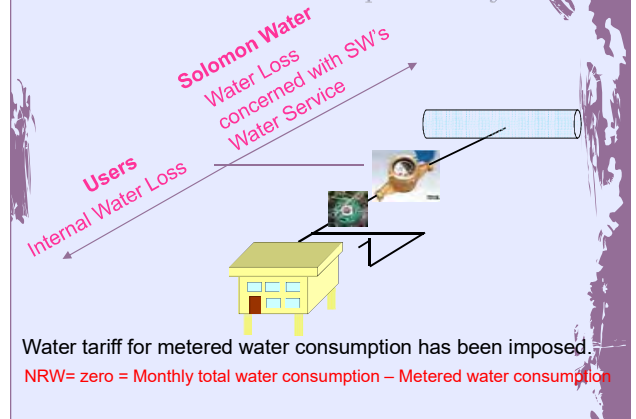
### Revenue Water & Non-Revenue Water



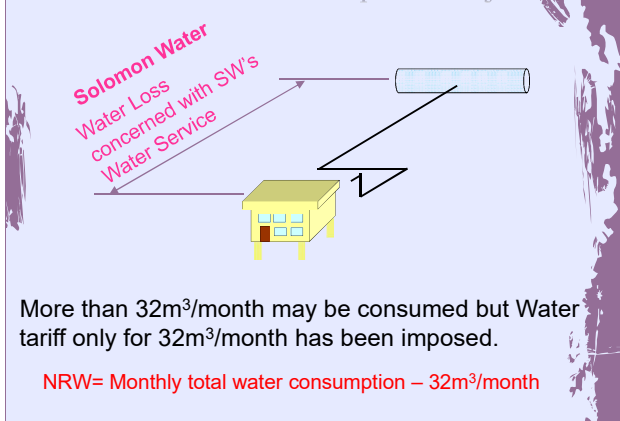
### Types of Current Service Connection



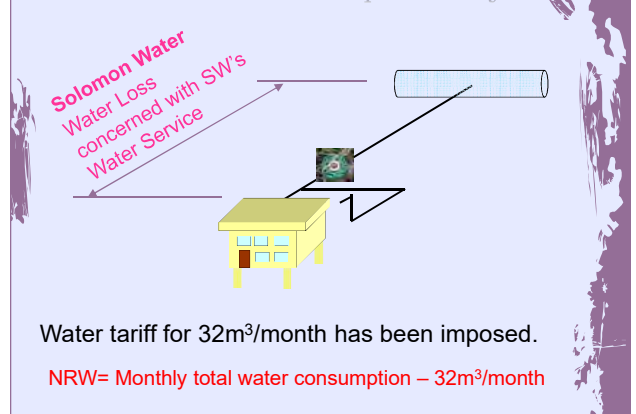
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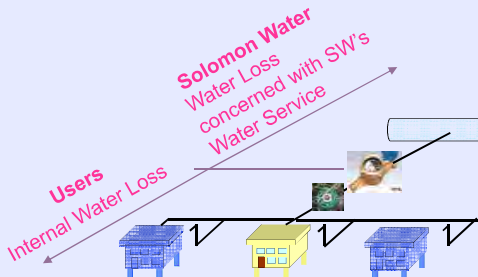
### Demarcation of responsibility-2



### Demarcation of responsibility-3

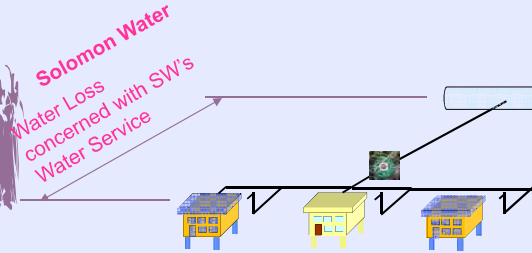


### Demarcation of responsibility-4



Water tariff for metered water consumption has been imposed.  
 NRW= zero = Monthly total water consumption – Metered water consumption

### Demarcation of responsibility-5



Water tariff for 32m<sup>3</sup>/month has been imposed.  
 NRW= Monthly total water consumption – 32m<sup>3</sup>/month

### How to estimate meter error?

No.	BID	Account No.	Name	Location	Meter ID	Time (hrs)	Tested Meter (L)	TR-III (L)	Difference	Error (%)
1	1803		ELMA LAURICI	INDEPENDENCE VALLEY	10A05383	6	891	899	100.5	0.7
2	01003		JOHN BENJON	INDEPENDENCE VALLEY	10A05470	6	2381	241	100.5	0.1
3	T98-034	1005	BARBARA WARD	INDEPENDENCE VALLEY	H062044	84			100.5	0.9
4	T98-035	01000	NEW TAPAKAWA ROAD	INDEPENDENCE VALLEY	10A05252	84			100.5	0.1
5	T98-035	01005	GRACE MOSES	WHITE RIVER (NDFP)	10A05075	101			100.5	0.5
6	1008		Robert Lane	INDEPENDENCE VALLEY	10A05040				100.5	0.1
7	01003		EMMA THINGS	INDEPENDENCE VALLEY	10A05076				100.4	0.6
8	01003		EDNA & STEVEN BERRY	INDEPENDENCE VALLEY	10A05082				100.4	0.6
9	01003		MOODY PETERDA	INDEPENDENCE VALLEY	10A05072				100.4	0.6
10	WD-000	1017	PATRICIA TOM CRISTALLA	INDEPENDENCE VALLEY	10A05020				100.3	-0.7
11	WD-000	1018	GEORGE ERRI	INDEPENDENCE VALLEY	10A05097				100.3	-0.5
12	WD-000	1020	BENJAMIN ONIA	INDEPENDENCE VALLEY	10A05054				100.3	-0.2
13	WD-000	1024	JANE TODD	INDEPENDENCE VALLEY	10A05051				100.3	-0.1
14	WD-000	1025	GRACIE TOSHA	INDEPENDENCE VALLEY	10A05052				100.3	-0.1
15	WD-000	1029	MICHAEL TELLIA	INDEPENDENCE VALLEY	10A05142				100.3	0.7
16	WD-040	01002	RAUL RODRIGUEZ	INDEPENDENCE VALLEY	10A05069				100.3	0.8
17	WD-040	1028	TOMMY ALBERTA	INDEPENDENCE VALLEY	10A05061				100.4	-0.4
18	WD-040	1029	TAMARA WILSON	INDEPENDENCE VALLEY	10A05061				100.3	0.8
19	WD-050	1033	GEORGINA MORGAN	INDEPENDENCE VALLEY	10A05072				100.3	-0.1
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