

S-4-4-2 Province (Noro, Auki, Tulagi)

Refer to C.1.1.(3) Noro

Refer to C.2.1.(3) Auki

Refer to C.3.1.(3) Tulagi

Water quality Analysis Sample: NORO

Sample Point Ziata River Intake
 Sample Date 09.06.2005



Sample Point Tap of SIWA Office
 Sample Date 09.06.2005



Sample Point Existing Bore(NORO TAIYO)
 Sample Date 09.06.2005



Water quality Analysis Sample: NORO/TULAGI

Sample Point	NORO; Tap of the Filtration Plant
Sample Date	09.06.2005



Sample Point	Existing Water Source(Maliali River Intake)
Sample Date	08.06.2005



Sample Point	Existing Bore(Back yard of school)
Sample Date	08.06.2005



Water quality Analysis Sample:AUKI

Sample Point	Gallery Source
Sample Date	23.06.2005



Sample Point	SIWA Tap Water in Auki City
Sample Date	23.06.2005



Sample Point	Existing Water Source(Kawaibala Spring)
Sample Date	23.06.2005



Water quality Anaiysis Sample:AUKI

Sample Point | Kilfi Hospital Tap water
Sample Date | 23.06.2005



Sample Point | Aligegeo School Tap water
Sample Date | 23.06.2005



**SUPPORTING
REPORT S-5** **SOCIO-ECONOMIC SURVEY**

The Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage Systems in Solomon Islands

SOCIO-ECONOMIC SURVEY

REPORT



JANUARY 2006

YACHIYO ENGINEERING CO., LTD.

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INTRODUCTION

Background

Phase I of the Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage Systems in Solomon Islands was conducted from May to August 2005. Objectives of the Study are 1) to formulate an urgent rehabilitation plan for Honiara and urgent restoration plan for Auki or Tulagi, 2) to formulate a facility improvement plan for the water supply and sewerage systems of Honiara, Tulagi, Auki and Noro for the target year 2010, and 3) to formulate an action plan for supporting capacity development of SIWA to strengthen its management.

Prior to formulation of the plans, current socio-economic conditions of beneficiaries should be surveyed and taken into account. Therefore two types of survey were selected by JICA Study Team. The first one is "*Interview survey*" to grasp the current socio-economic conditions of the residents in the target areas by visiting sample households, collecting answers from each household, and analysing the quantitative data collected. The other one is "Community workshop" in order to complement the results of interview survey by obtaining qualitative data from discussion among community members.

Objective

The objectives of socio-economic survey are 1) to grasp the current socio-economic conditions of beneficiaries in target areas, and 2) to analyse the collected data for formulating the facility improvement plan and action plans for Honiara, Tulagi, Auki and Noro.

Target Area

Target areas of socio-economic survey are as follows:

- 1) Honiara Town (Guadalcanal Province)
- 2) Auki Town (Malaita Province)
- 3) Noro Town (Western Province)
- 4) Tulagi Town (Central Province)

Interview survey was carried out in all the target areas abovementioned, while community workshop was held in Honiara only.

PART I INTERVIEW SURVEY



1 SURVEY METHOD

1.1 Sampling

The sample size is calculated based on the number of households in the target area. The number of sample households was divided to each target area in proportion to the population size of each area as follows:

Honiara:	344 households
Auki:	30 households
Noro:	30 households
<u>Tulagi:</u>	<u>10 households</u>
Total	414 households

List of households for sampling, such as the name of household head, address, or phone number, is not available in Solomon Islands. Therefore, JICA Study Team requested government statisticians of the Statistic Office to do sampling because they had census data such as maps of enumeration areas and houses. They suggested two (2) options for sampling to the JICA Study Team. The first one is to select some intermediate units which are more stable over time and do a first stage listing to get the current status of ultimate sampling unit. But this option seemed to be expensive and take more time. The other one is to do cluster sampling treating an area as a sampling unit, which considers an area as representative of all areas within the target area because certain variables such as for housing tend to cluster around a certain neighbourhood. Hence JICA Study Team and the statistic office made a decision that cluster sampling was more appropriate for this survey. As a result, eight (8) clusters for Honiara, one (1) cluster for Noro, Auki and Tulagi respectively were selected. As for sampling for Honiara, JICA Study Team requested them to categorise those clusters into two groups; high and low income groups. The clusters were selected with probability proportional to the size measure being the 1999 census household counts.

1.2 Staffing

Selection of interviewers is very important to make the survey successful. Those who have experiences of social survey or community programme are suitable for this survey. There is a programme executing body funded by AusAID in Honiara, named Community Sector Program (CSP). CSP has many experiences of community programmes and network with USP (University of South Pacific) Centre in Honiara. Therefore, JICA Study Team appointed one (1) supervisor and eleven (11) interviewers for this survey in cooperation with CSP.

The distribution of interviewers is as follows:

Honiara:	Eight (8) persons (14 days)
Auki:	One (1) person (8 days)
Noro:	One (1) person (8 days)
Tulagi:	One (1) person (6 days)

1.3 Questionnaire

Questionnaire is prepared to grasp the current socio-economic conditions of the residents and willingness to pay for water supply and sewerage services in the target areas. It is composed of 7 sections, 1) identification of respondent, 2) dwelling, 3) household, 4) community activities, 5) water supply, 6) sanitation, and 7) opinion or request to water supply and sewerage services (see Appendix 2).

Part I Interview Survey

1.4 Publicity

Implementation of the survey was announced to the public by newspaper (Solomon Star) and radio (Solomon Islands Broadcasting Corporation) to help to understand why and how the interview survey would be conducted (see Appendix 2).

1.5 Training

Prior to visiting the sample households, training of supervisor and interviewers were carried out. The supervisor training took two days to instruct his tasks of publicity, planning and organizing transport for interviewers, sample households visit, questionnaire checks, and reporting. The interviewers training took three days to instruct their tasks of visiting sample households, explaining the objectives of the survey, asking questionnaire, and reporting the answers under guidance of supervisor. At the beginning of the training, they received the materials for the survey, including the manual, stationery, questionnaire sheet, appointment letter, map of survey area, name tag for identification, and format for compiling answers.

1.6 Field Work

The interviewers visited all the sample households and ask household members about dwelling, income, water supply, sanitation, etc. in line with the questionnaire sheet. Field work was also carried out in cooperation with the government statisticians of statistics office.

2 SURVEY RESULTS (1) - HONIARA -

2.1 Socio-Economic Aspects

(1) General Information

60% of the respondents were male and 40% were female in Honiara. Average age of the respondents was 33.3 years old.

Figure 2-1 shows the percentage distribution of respondents' occupation. 28% of the respondents were employed, 29% were self-employed. Others include employers, priests, retired, students, etc. The percentage of unemployment is only 5% in this survey.

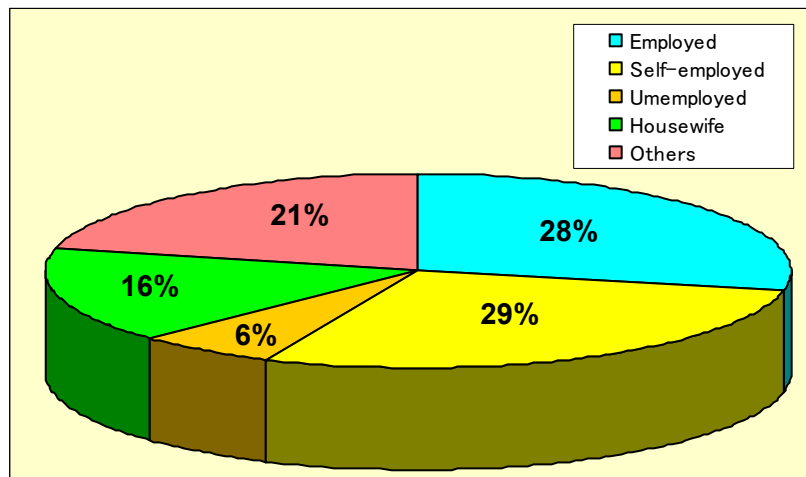


Figure 2-1 Occupation of the Respondents

By income level, the percentage of self-employed is larger in the low income area than in the high income area, while that of employed is almost same in both areas (see Figure 2-2).

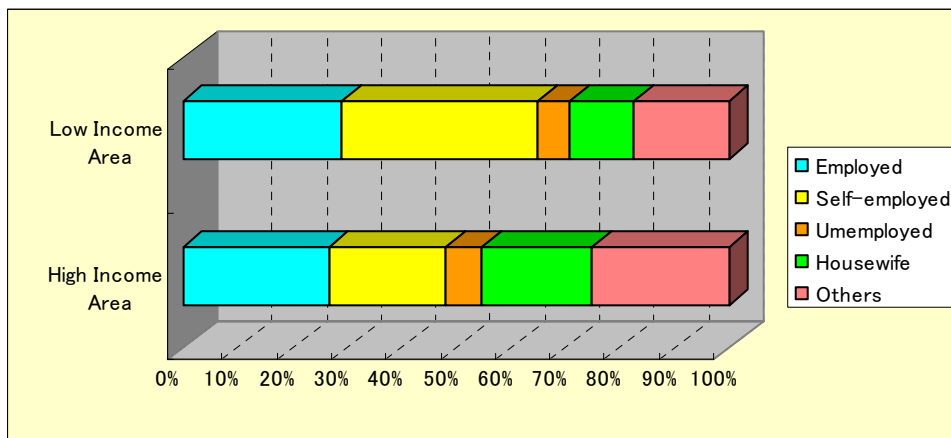


Figure 2-2 Respondents' Occupation in Honiara

(2) Housing

As shown in Figure 2-3, 67% of the respondents lived in owned dwellings, followed by rented (23%) and rent free (8%). The 1999 census noted that 43% of dwellings in the urban areas were owner-occupied followed by rented (34%) and rent-free (20%).

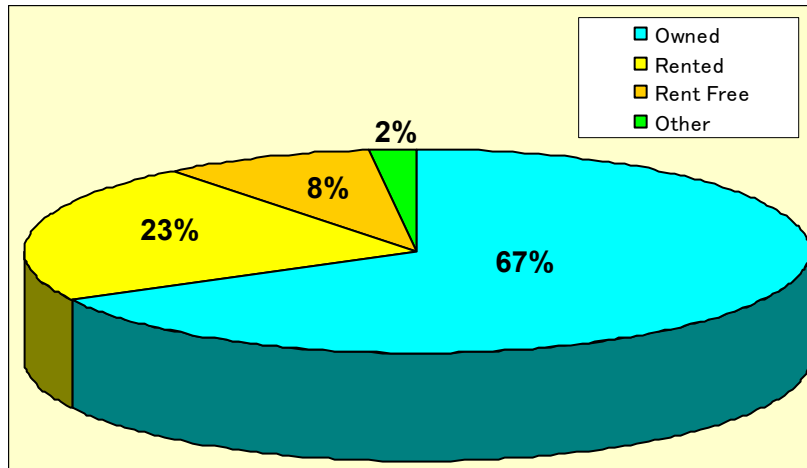


Figure 2-3 Tenure Structure of Dwellings

In the low income area 78% of the respondents live in owned dwellings. The percentage for the high income area is only 55% (see Figure 2-4).

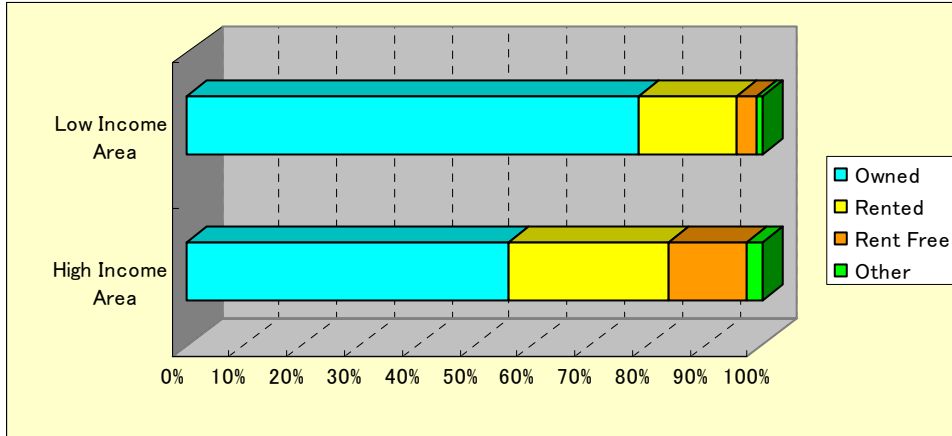


Figure 2-4 Percentage Distribution of Dwelling Types in Honiara

One-third of the respondents noted that they had lived in the area for less than 5 years as shown in Figure 2-5. In the high income area, the percentage of less than 5 years accounts for 49%, while that of over 20 years is only 10% (see Figure 2-6).

It means that half of the high income households moved recently and community of the high income area is not well-organised. On the other hand, 50% of the low income households have lived in the area for over 20 years. The community of the low income area is well-organised under leadership of community chief.

Part I Interview Survey

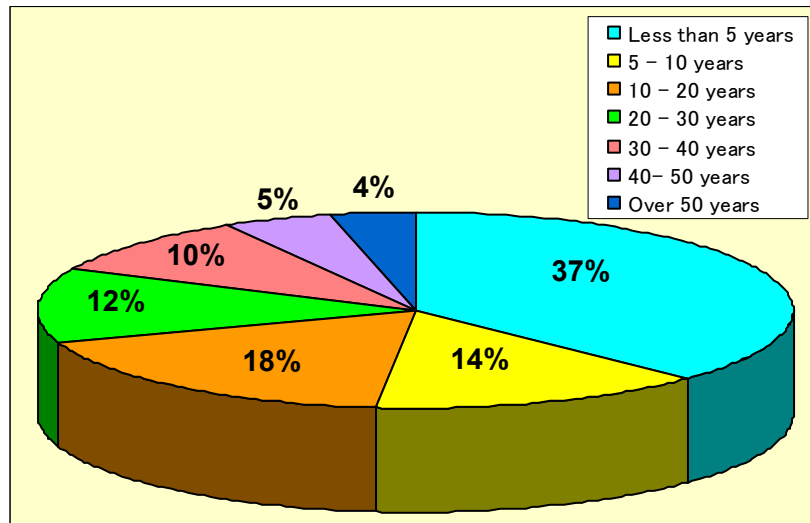


Figure 2-5 Length of Dwelling

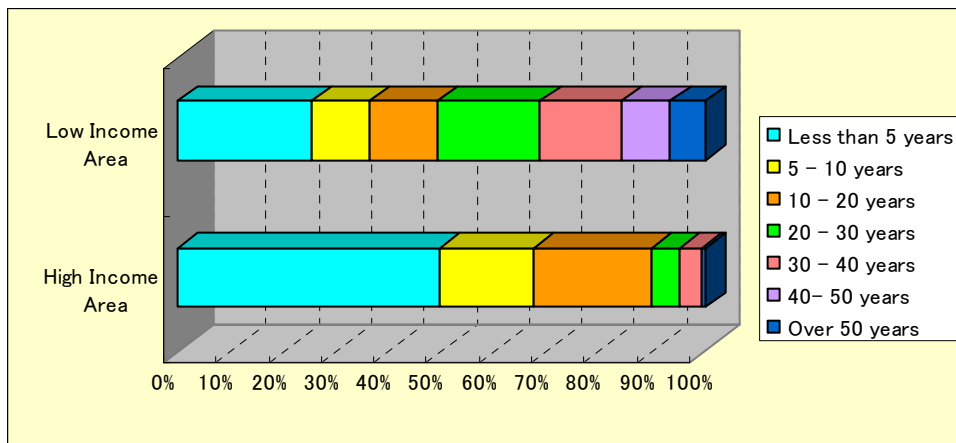


Figure 2-6 Length of Dwelling by Income Level in Honiara

1999 census report noted that households with 4-6 persons were most common in Solomon Islands and they represent over one quarter of all households. The average household size of Honiara was 7.1 in 1999 census. However, the survey result shows it is 8.6 persons. Average number of rooms is 3.9 in Honiara.

Percentage of households with kitchen accounts 59% for inside dwelling and 41% for outside. By income level, 86% of the respondents have kitchen in the dwelling in the high income area, while two-thirds of respondents use kitchen outside dwellings in the low income area. Kitchen is most used in the mornings and evenings.

56% of the respondents have shower in the dwellings. 42% use shower outside dwelling. Of the households with shower outside, 40% shared with the other households. By income level, 90% of the respondents have shower in the dwellings in the high income area, while 74% use shower outside in the low income area. Of the households with shower outside dwellings, almost half of them shared showers with neighbors.

Part I Interview Survey

According to the 1999 census, toilet is separated to modern type or not. Modern type is defined as any installation constructed to dispose of human excreta. The definition of each type is as follows:

- ◆ Flush toilet: an installation that has its own cleaning-water system, which washes away the wastes
- ◆ Pour toilet: an installation where the toilet is cleaned after use by pouring water from a bucket
- ◆ Pit toilet: a (covered) hole in the ground used as a toilet
- ◆ Ventilated improved pit toilet: a modernized pit-type toilet
- ◆ Other: any type of toilet that does not fit any of the above description

(Source: Report on 1999 Population & housing Census, Statistics Office)

This survey follows the classification and definition of 1999 census.

Major type of toilet is flush toilet. It accounts for 68%, followed by pour type (16%) and latrine (8%). By income level, the percentage is 94% for the high income area and 43% for the low income area. 31% of the low income households use pour type toilets. The percentage distribution by type of toilet facility in Honiara is almost same as 1999 census report (flush: 71% and pour: 15%). In the low income area, 76% of the toilets are located outside the dwellings (private use 45%, shared use 31%), while the percentage in the high income is only 13%.

(3) Income

The number of paid workers per household is 2.1 persons in Honiara. The number is same both income areas. The average monthly income per household is 3,553 Solomon Islands Dollars (SIS) in Honiara. By income level, it is SI\$4,456 for the high income area and SI\$2,007 for the low income area.

As shown in Figure 2-7, SI\$1,001 to SI\$2,000 group accounts 31%, followed by less than SI\$1,000 group (27%) and SI\$2,001-3,000 group (13%).

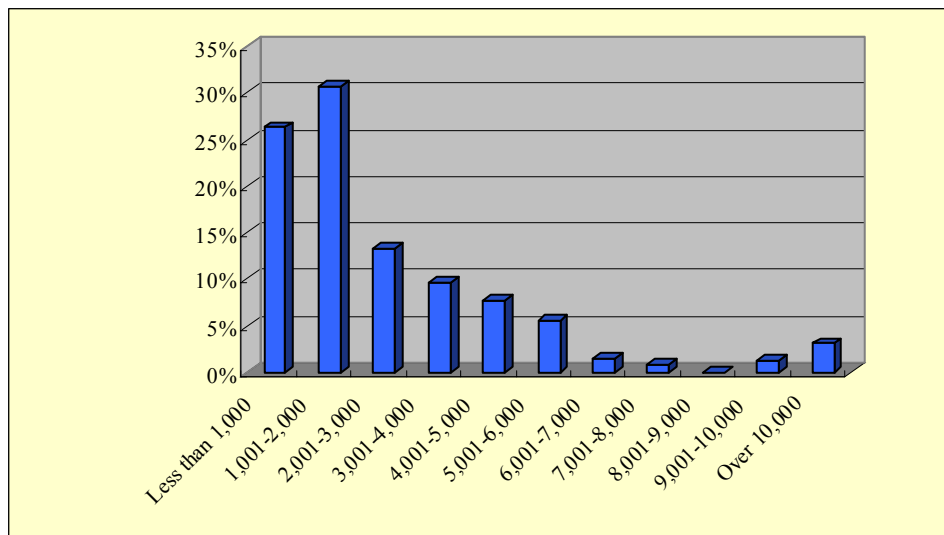


Figure 2-7 Income Level of Honiara

80% of the households have savings. The percentage is bigger in the high income areas. The percentage of households owing money is 27%. The percentage is smaller in the high income areas.

2.2 Social Activities

There are community and religious-basis activities in Honiara. The followings are major activities in Honiara:

<Community-basis>

- ◆ Awareness Talk (Crime, Health,)
- ◆ Sport (Soccer, Basket ball, Volley ball and Rugby)
- ◆ Fundraisings
- ◆ Cultural Activities (Custom dance)
- ◆ Gardening
- ◆ Community work (Logging, Piggery, Shell money making)

<Religious-basis>

- ◆ Fundraisings
- ◆ Music
- ◆ Sports
- ◆ Pathfinder
- ◆ Youth, Men's, Women's group

2.3 Water Supply

(1) Sources of Water Supply

There are four major types of access to water in Solomon Islands: piped water, rain tank, bore hole/well/spring, and river/stream. The piped water is classified into three types: inside dwelling, outside for private use, and outside for shared use.

Table 2-1 shows the percentage distribution of source of water supply in Honiara. Piped water and rain tanks are the main sources of water supply. The low income households rely on piped water more than the high income households. One-fourth of households in the high income area have rain tanks for water supply.

Table 2-1 Sources of Water Supply

Sources		Honiara		
		High income	Low income	Total
Piped water	in dwelling	67%	33%	52%
	outside (private)	1%	24%	12%
	outside (shared)	2%	30%	14%
Rain tank		28%	8%	19%
Bore hole/spring/well		0%	2%	1%
River/stream		0%	0%	0%
Other		3%	2%	3%

(2) Source of Drinking Water

1999 census noted that piped water was the major source (89%) for the households in Honiara. However, the percentage obtained from this survey is lower (75%) because the high income households use rain tanks for dinking water. 22% of households rely on rain tanks for drinking water. It seems that rain water is preferred for drinking use because piped water is sometimes

Part I Interview Survey

contaminated during rainy days and too much chlorinated. The low income households rely on piped water for drinking.

Table 2-2 Sources of Drinking Water

Sources		Honiara		
		High income	Low income	Total
Piped water	in dwelling	59%	33%	47%
	outside (private)	2%	27%	14%
	outside (shared)	1%	29%	14%
Rain tank		35%	8%	22%
Bore hole/spring/well		0%	1%	1%
River/stream		0%	0%	0%
Other		3%	1%	2%

(3) Water Use and Bill

Average water consumption volume in Honiara is 303 litres per day per household (l/d/HH). By income level, it is 279 for the high income area and 326 l/d/HH for the low income area. This volume is less than the figure calculated by SIWA. SIWA estimated that water use per day per family was at least 1,000 litres. 78% of the households are satisfied with the water volume in Honiara.

As shown in Figure 2-8, 27 % of the respondents paid less than SI\$50 per month, followed by 100–200 group (25%), 50–100 group (22%) and 200-300 group (14%). By income level, one-fourth of the low income households pay less than SI\$50 per month (see Figure 2-9).

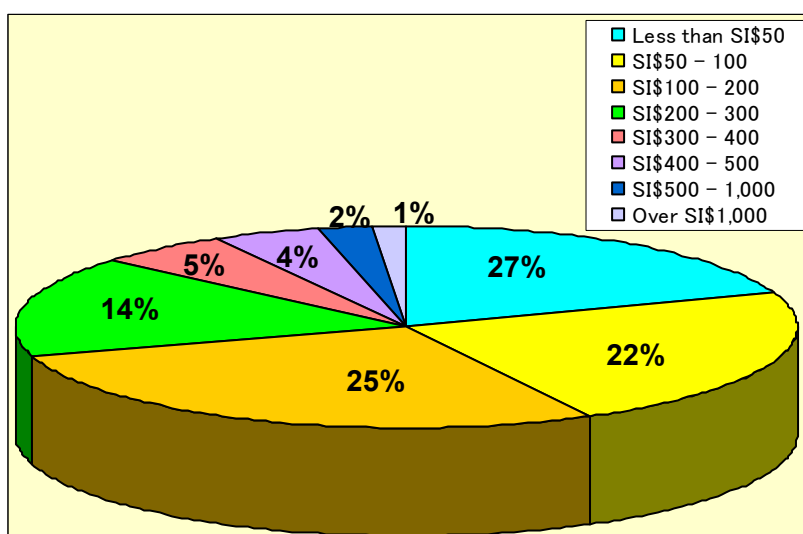


Figure 2-8 Monthly Water Bill

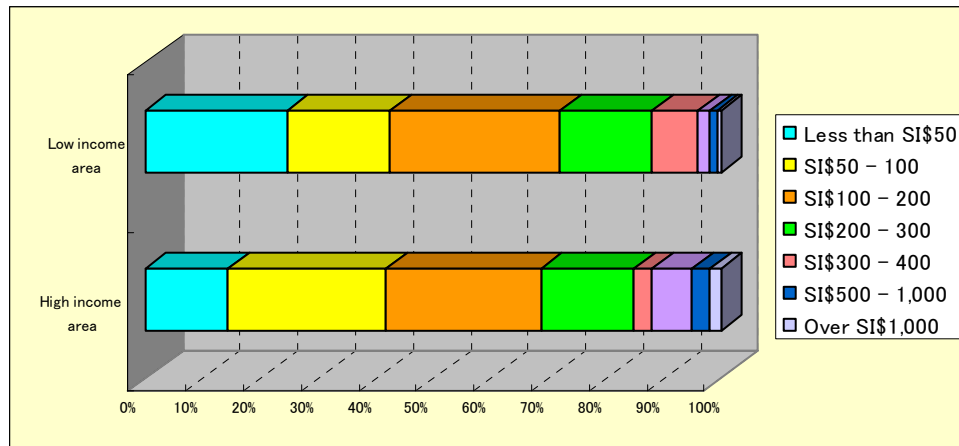


Figure 2-9 Monthly Water Bill, by Income Level

(4) Priority of Water

In the interview survey, the sample households were asked to prioritise the following items in order to improve living condition: food, water, house, education, electricity and clothes. 53% of the households in Honiara think that water is most important among them. It is followed by house (26%) and food (12%). The percentage distribution is almost same in both income areas.

2.4 Sanitation

(1) Sewer System

In this survey, sewer system is defined as follows:

- ◆ Sewer connection: Pipe line distributed as public service in order to collect wastewater discharged from households
- ◆ Septic tank: Underground tank installed at each household where wastewater from toilet, kitchen, or shower is discharged and treated
- ◆ Latrine, informal or no sanitation: Night soil (human excreta) from toilet is disposed into the pit or ground and not treated at all.

Major sewer system in Solomon Islands is septic tank. 71% of the households use septic tank in the Honiara. The households with sewer connection are only 5%. The percentages of using septic tank are 88% for the high income area and 53% for the low income area. In the low income area, almost half of the households use latrine.

For provision of sewerage services by SIWA (installation of septic tank and maintenance), 84% of the households are willing to use the facility and are prepared to pay for the services in Honiara. Current charge of sewerage services is 50% of water consumption. However, the survey result shows that 61% of the households can pay only 10% of water bill to sewerage services (see Figure 2-10). Figure 2-11 shows the percentage distribution of willingness to pay for sewerage services by income level.

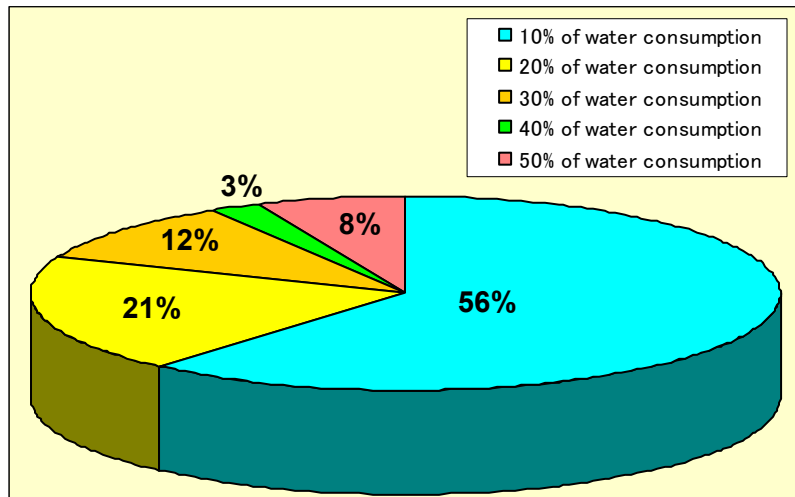


Figure 2-10 Willingness to Pay for Sewerage Services by SIWA

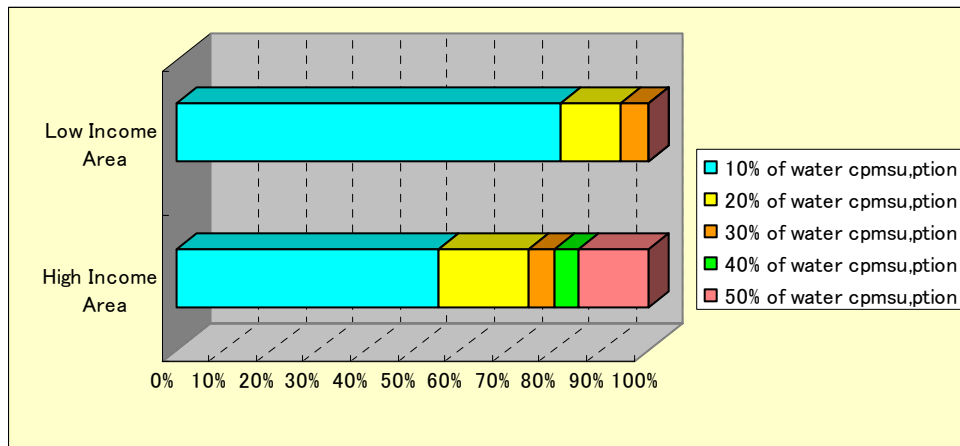


Figure 2-11 Willingness to Pay for Sewerage Services, by Income Level

(2) Disease caused by Drinking Water

45% of the respondents have the experiences of disease caused by drinking water. The percentage is 61% for the low income area and 29% for the high income area. Almost of the disease type is diarrhea (94%). Table 2-3 shows the relation between disease and source of drinking water. Of the respondents that have the experiences of disease caused by drinking water, 92% rely on piped water for drinking.

Table 2-3 Disease and Source of Drinking Water

Source of drinking water	Disease - "yes"
Piped water in dwelling	51%
Piped water outside (private)	17%
Piped water outside (shared)	24%
Rain tank	6%
Bore hole/spring/well	1%
River/stream	0%
Other	1%

(3) Conservation of Water Source

91% of the households think that water source should be conserved. As for sewerage system, 91% of the households indicated that sewer system should be improved to conserve water source. 70% of the households are not willing to use public toilet in the area. In the low income area, 41% of the households are receptive to installation of public toilet. 81% of the households intend to participate in the activities such as management of the public facility, PR to conserve the source of water supply, etc.

2.5 Opinions and Requests to Water Supply and Sewerage Systems

Many opinions and requests are collected from the households during interview survey. Most of them are related to water quality: poor water quality during rainy days, necessity of installing filtration to purify water, etc. (see Table 2-4). Billing, metre reading, and water pressure are also major concerns. Request of installation of standing pipe was gained from the respondents in the low income area.

Table 2-4 2.5 Opinions and Requests to Water Supply and Sewerage Systems

No.	Opinions/Requests	Total
1	Water quality should be improved - Poor water quality (dirty/muddy) during rainy days.	126
2	Billing/metre reading should be reliable.	82
3	Frequency/pressure of water supply should be improved.	61
4	Filtration system should be installed to purify water.	40
5	Sewerage service including sewage treatment plant and installation of septic tank should be provided.	20
6	Stand pipe should be installed.	15

3 SURVEY RESULT (2) - NORO, AUKI AND TULAGI -

3.1 Socio-Economic Aspects

(1) General Information

Table 3-1 shows identification of respondents in provincial areas (Noro, Auki and Tulagi)

Table 3-1 Identification of Respondents

	Male	Female	Average age
Noro	50%	50%	35.2
Auki	90%	10%	41.2
Tulagi	100%	0%	41.6

Figure 3-1 shows the percentage distribution of respondents' occupation in Noro, Auki and Tulagi. 90% of respondents are employed. Others include employers, priests, retired, students, etc.

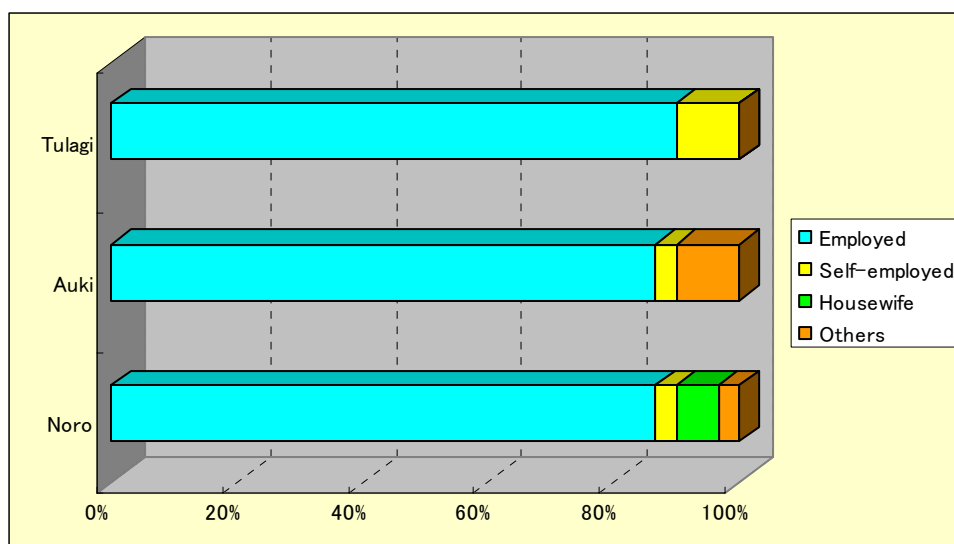


Figure 3-1 Percentage Distribution of Respondents' Occupation

(2) Housing

Figure 3-2 shows the percentage distribution of tenure structure of dwellings. Percentage of owner-occupied dwellings for these towns is lower than Honiara. In Noro, 57% of the respondents live in the rent-free dwelling. Those housed are provided by employers such as Sol Taiyo. Employees need not to pay for water bill as well as house rent. In Auki, 77% of the respondents live in the rented dwelling. In Tulagi, the percentage of rented dwelling is same as that of rent-free (40%).

Part I Interview Survey

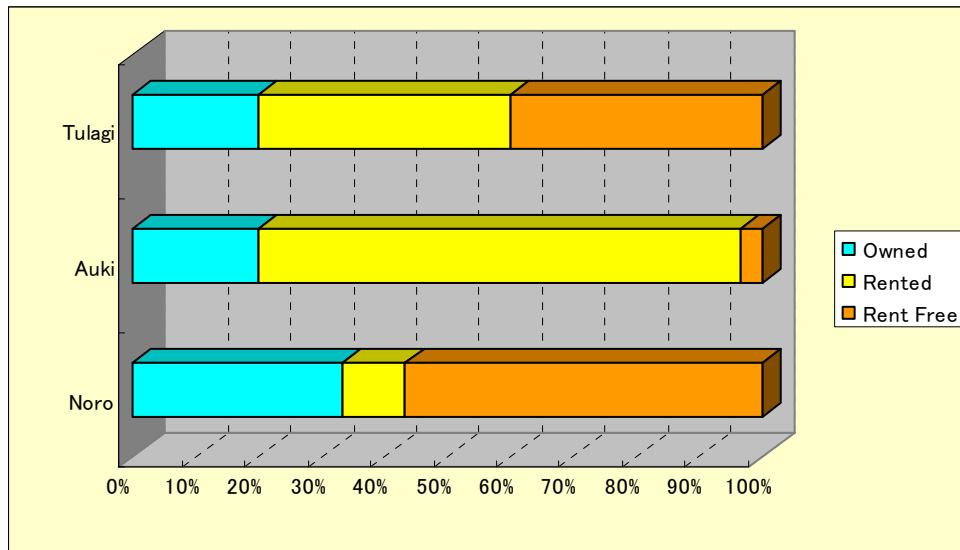


Figure 3-2 Percentage Distribution of Dwelling Types, by Town

Figure 3-3 shows the number of years living in dwellings. In Noro, 63 of respondents have lived in the area for less than 5 years. In Auki, the percentage of 5-10 years group is the highest (40%) followed by 10-20 years group (33%) and less than 5 years group (23%). In Tulagi, the percentage of less than 5 years group is the highest (40%) followed by 5-10 years group (30%), 10-20 years group (20%) and 20-30 years group (10%).

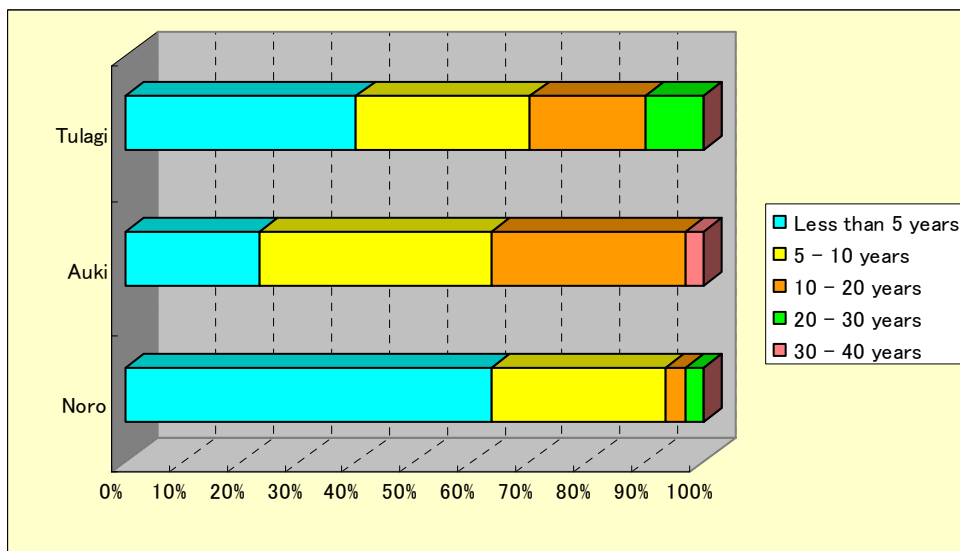


Figure 3-3 Length of Dwelling, by Town

The average household size is 5.0 persons for Noro, 6.7 for Auki and 5.3 for Tulagi. The average number of rooms is 3.6 for Noro, 2.6 for Auki and 3.7 for Tulagi.

33% of the respondents use kitchen outside dwellings in Noro (Table 3-2). Of the respondents with kitchen outside dwellings in Noro, 20% of households shared the kitchen with other households. Kitchen is most used in the mornings and evenings.

Table 3-2 Location of Kitchen, by Town

	Kitchen	
	In dwelling	Outside dwelling
Noro	63%	33%
Auki	73%	27%
Tulagi	90%	10%

21.5 % of the respondents do not have shower in Noro (Table 3-3). Percentage of the respondents using shower outside is 21.5% for Noro, 17% for Auki and 30% for Tulagi.

Table 3-3 Location of Shower, by Town

	Shower		
	In dwelling	Outside dwelling	No shower
Noro	57%	21.5%	21.5%
Auki	83%	17%	-
Tulagi	70%	30%	-

Major type of toilet is also flush one in Noro, Auki and Tulagi. In Noro, 21% of the respondents use latrine or have no toilet (see Table 3-4).

Table 3-4 Type of Toilet, by Town

	Noro	Auki	Tulagi
Flush	72%	93%	100%
Pour	7%	7%	-
Others (Latrine or no toilet)	21%	-	-

(3) Income

The number of paid workers per household is 1.9 persons for Noro, 1.3 for Auki, and 1.3 for Tulagi (Table 3-5). The average monthly income is 1,162 Solomon Islands Dollars (SIS) for Noro, SIS935 for Auki and SIS539 for Tulagi. In Noro, the percentage of the households which have saving and owe money is relatively low.

Table 3-5 Income, Saving and Owning Money, by Town

	Noro	Auki	Tulagi
Number of paid workers	1.9	1.3	1.3
average monthly income per household	SIS1,162	SIS935	SIS539
Saving money - yes	40%	70%	60%
Owing money- yes	23%	37%	40%

3.2 Social Activities

Social activities in provincial centres are almost same as in Honiara. The followings are major activities in provincial centres:

<Community-basis>

- ◆ Sport
- ◆ Fundraisings
- ◆ Cooking
- ◆ Gardening
- ◆ Workshop

<Religious-basis>

- ◆ Fundraisings
- ◆ Music
- ◆ Sports
- ◆ Youth, Men's, Women's group

3.3 Water Supply

(1) Sources of Water Supply

In Noro and Tulagi, piped water and rain tanks are major source of water supply (Figure 3-4). Although the respondents in Auki also use rainwater, they do not use rain tanks but store rainwater in small containers.

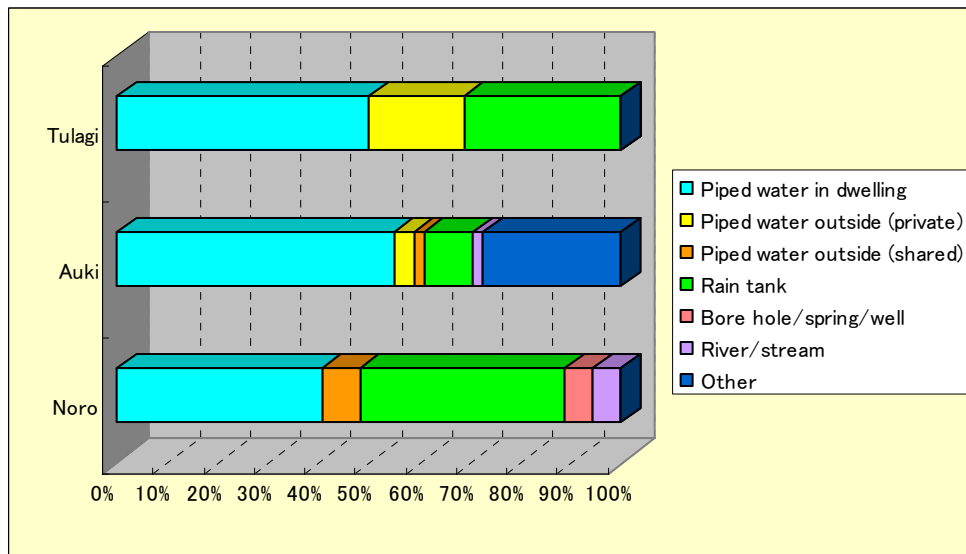


Figure 3-4 Sources of Water Supply, by Town

(2) Source of Drinking Water

Figure 3-5 shows the source of drinking water in three towns. The respondents in Noro and Tulagi rely on rain water for drinking. It accounts 80% for Noro and 50% for Tulagi. 77% of the respondents in Auki rely on piped water for drinking.

Part I Interview Survey

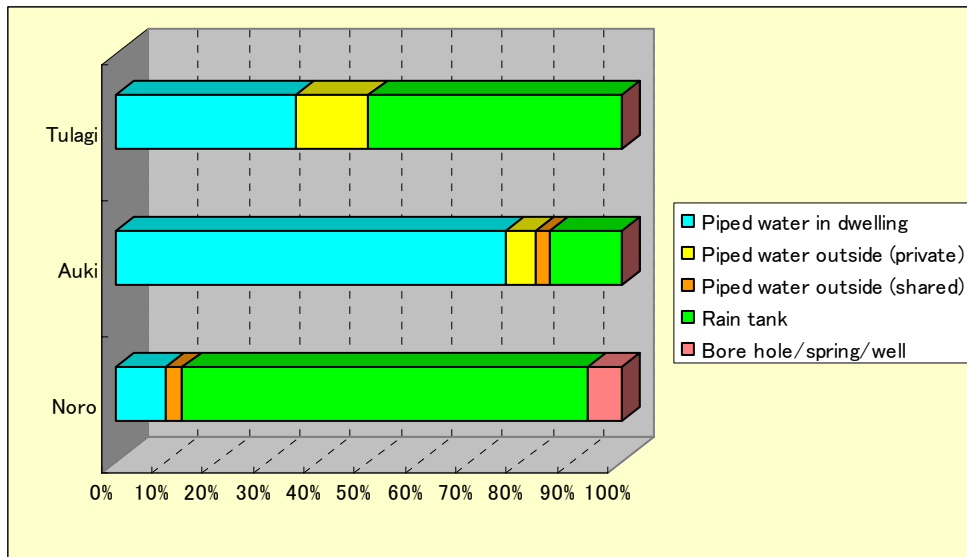


Figure 3-5 Sources of Drinking Water, by Town

(3) Water Use and Bill

The average water bill is 173 liter per day per household (l/d/HH) for Noro, 99 l/d/HH for Auki, and 942 l/d/HH for Tulagi. 63% of the respondents in Noro and 80% in Tulagi are satisfied with the water volume, while the percentage in Auki is only 17%.

93 % of the respondents in Auki pay less than SI\$50 per month, followed by SI\$50–100 group (7%) (Figure 3-6). In Noro, over 50% of the respondents pay less than SI\$50 per month. 56% of the respondents in Tulagi pay SI\$50 to 100 per month.

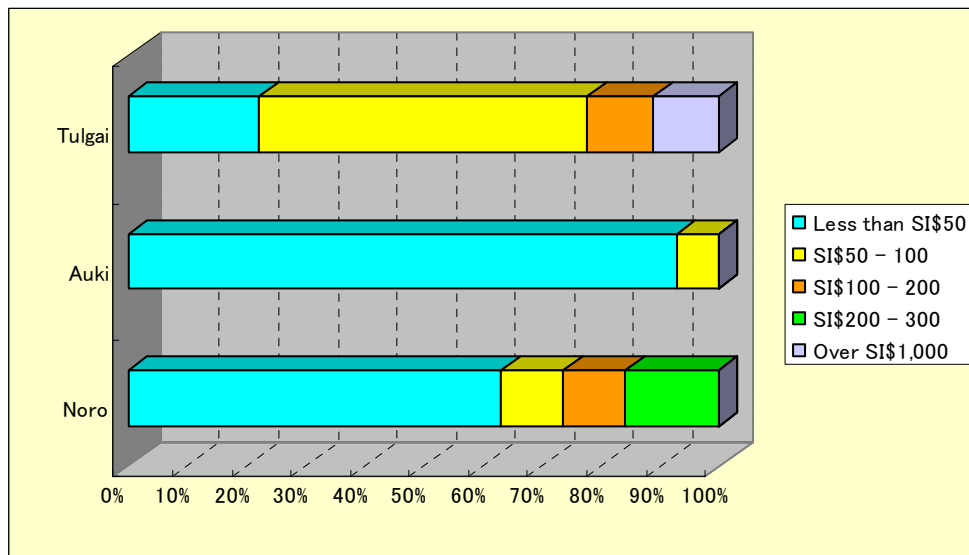


Figure 3-6 Monthly Water Bill, by Town

(4) Priority of Water

In Noro and Auki, the respondents noted that water is most important for improvement of living conditions, followed by food (Table 3-6). In Auki, 77% of the respondents feel that water is most important. In Tulagi, priority of food, water and house is same (30%).

Table 3-6 First Priority for Improvement of Living Conditions

	Noro	Auki	Tulagi
Food	37%	13%	30%
Water	43%	77%	30%
House	7%	10%	30%
Education	13%	-	10%
Electricity	-	-	-
Clothes	-	-	-

3.4 Sanitation

(1) Sewer System

Major sewer system in Noro, Auki and Tulagi is also septic tank. It accounts 77% for Noro, 100% for Auki, 90% for Tulagi. There is no sewer connection in provincial centres.

(2) Disease caused by Drinking Water

Percentage of experience of disease caused by drinking water is 57% for Noro, 83% for Auki and 30% for Tulagi. There are a few cases of skin infections by water in Noro due to wastewater from factories.

(3) Conservation of Water Source

All the respondents think that water source should be conserved in order to avoid contamination of water. As for installation of public toilet, 60% of the respondents are positive in Noro and Tulagi, while 93 % are negative in Auki. 83% of the respondents intend to participate in the activities such as management of the public facility, PR to conserve the source of water supply, etc. in Noro, It accounts 100% for Auki and 90% for Tulagi

Table- 3.1 Conservation of Water

	Noro	Auki	Tulagi
Conservation of water source – “yes”	100%	100%	100%
Improvement of sewer system – “yes”	100%	100%	100%
Public toilet – “yes”	67%	7%	60%
Public participation activities – “yes”	83%	100%	90%

PART II WORKSHOP



1 PREPARATION

1.1 Selection of community

During the interview survey, supervisor tried to make a contact with and explain to the chief of communities. As a result, JICA Study Team could obtain cooperation with one fishing village (low income area) and the captain of marine school located in the coast side of Panatina area (high income area).

1.2 Arrangement of Workshop

After obtaining the understanding of community leaders, JICA Study Team prepared and distributed invitation letters of the workshop to the households in two areas.

Training of facilitators was also carried out based on the discussion points to instruct the objective of workshop, how to facilitate the discussion among the participants.

1.3 Discussion Points

To complement the results of interview survey, the following discussion points were prepared.

(1) Community Profile

- ◆ Village history, important events/occurrences in relation to water and sanitation
- ◆ Social norms, customs and structure
- ◆ Access to information
- ◆ Community activities
- ◆ Support from outside of community

(2) Water Supply

- ◆ Method of purchasing water
- ◆ Water quality of drinking water
- ◆ Water price
- ◆ Illegal connection
- ◆ Improvement of water supply
- ◆ Water conservation
- ◆ Request to SIWA

(3) Sanitation (Public Hygiene)

- ◆ Water quality of rivers, springs or wells
- ◆ Reduction of water pollution
- ◆ Current sewerage system
- ◆ Conservation of water source
- ◆ Request to SIWA

2 DISCUSSION NOTES

2.1 Ranadi Community Workshop at Marine School of SICHE

(1) Community Profile

Opening for this workshop was intended to draw the profile for this community. But questions under this community profile can not be answered fully because this community is not organised. Therefore, the workshop was started with access to information.

During the workshop, participants stated that information about SIWA activities always obtained through the national radio (Solomon Islands Broadcasting Corporation: SIBC) and the print media (Solomon Star Newspaper). As the participants highlighted, because the community does not organise, there is no help from outside including NGOs. But there is a need to form a group so that a collective voice can represent people's concern as a group.

(2) Water Supply

This is a concern with people's attitude towards paying for water services they receive or use. They stated that the method of purchasing is not satisfactory, this is simply because the unit of water used is not only paid for but other expenses such as fuel adjustment cost, tariff and maintenance cost. Moreover, SIWA doesn't pay for the water source at Konglae, but it is the Solomon Islands Government (SIG) who pays 25% to the land owners of water sources.

Participants noted that the water quality is not satisfactory because it has a very strong smell as the result of high content of chlorine in the water especially Konglae water source. It was explained that due to this water source comes from a stream hence it has high chances for water contamination. They further comment on the water price as it is very costly and unaffordable. This is because not everybody who uses water has the earning power to afford. Furthermore, billing is not satisfactory as everybody doesn't have a post office box hence it was strongly recommended that SIWA deliver water bills to residences or households.

Illegal water connection is not favoured, therefore those who are involved are recommended to be penalized.

Participants noted that they are prepared to pay more for quality water services particularly if water is continuously supplied to residences.

Participants also stated that there is a need for water conservation as it is part of safeguarding water from water wastage. Moreover, there is also a need for water conservation education by both SIWA and Honiara residences to Honiara Town dwellers and household members.

It was requested to SIWA that proper management of information and water usage is important as well as needed. Furthermore, security of water sources is important to protect water sources from people contaminating the water sources in Honiara as well as in the water supply to their residences.

(3) Sanitation

The participants highlighted that there is a need to protect rivers and streams from contamination, therefore part of this is to build houses far from these sources including securing household septic tanks, drainage and sewerages. Direct contamination of water sources includes people wrongly using streams, rivers, bushes and beaches for personal comfort or as toilets. Reduction of water pollution in Honiara will include education. Honiara Town dwellers and provincial drifters should be aware of proper use of water and water conservation.

Improvement of water pollution is a much needed issue, therefore participants had indicated that they are prepared to pay more for improved services. They also indicated that the current sewerage

Part II Workshop

system is not satisfactory as it runs direct into the Honiara sea front as well as into the nearby rivers and streams. Preventing of water contamination is partly the responsibility of Honiara residences, therefore there is a need for people to know what involves the causes of water contamination and those found of polluting water in Honiara must be severely penalized.

Participants highlighted that there is a need for collective conservation of water sources, this is because carelessness towards this concern will add to lots of expense for SIWA. Hence it will be reflected in people's water bills as extra expenses. Recommendation to SIWA is to build peoples confidence and work closely with the Honiara Town Council to build more public toilet for public use and recommended that fees are charged for usage of public toilet facilities. Participants noted that they are prepared to pay for the usage of public toilet and public toilet should be managed properly with the collected fees.

2.2 Fishing Village Workshop at the open space of Village

Community workshop in the fishing village was planed to hold in the village in cooperation with community chief. However, after twice postponement, the workshop was cancelled.

APPENDICES



Appendix 1 Questionnaire Sheet

ANSWER SHEET FOR SOCIO - ECONOMIC SURVEY

Name of Interviewer: _____ Sheet No. _____ / _____

Date of Interview: _____ Household No. _____

Town _____ Ward _____ Area _____

1. Identification of the Respondent

1-1 Name		1-2 Sex	M	F	1-3 Age	
1-4 Occupation		1-5 Relationship to the household head				

2. Dwelling

2-1 Which type is the dwelling or family house?	1. Owned 2. Rented 3. Rent free 4. Other
2-2 How long has the family lived in the area?	_____ years
2-3 How many rooms are there inside the dwelling?	_____ rooms
2-4 How many people live in the dwelling?	Adult men _____ Adult women _____ Boys _____ Girls _____ Total _____
2-5 Do you have a kitchen in the dwelling?	1. Yes (inside) 2. Yes (outside) 3. No
2-6 If "YES", is the kitchen private or shared?	1. Private 2. Shared
2-7 If the answer of Question 2-5 is "YES", when the kitchen is most used?	
2-8 Do you have a shower in the dwelling?	1. Yes (inside) 2. Yes (outside) 3. No
2-9 If "YES", the shower is private or shared?	1. Private 2. Shared
2-10 When the shower is most used?	
2-11 Which type of toilet is there in the dwelling?	1. Flush 2. Pour 3. Pit 4. Ventilated improved pit 5. Others
2-12 Where is the location of the toilet?	1. Inside 2. Outside (private) 3. Outside (shared)

3. Household

3-1 How many people in the household earn wages/salary?	
3-2 How much money comes into the household a month?	(SIS) / month
3-3 Do you have any savings?	1. Yes 2. No
3-4 Do you owe money?	1. Yes 2. No

4. Community Activities

4-1 What are social activities in your area?	<ul style="list-style-type: none"> • _____ (Community/Religious) • _____ (Community/Religious) • _____ (Community/Religious) • _____ (Community/Religious)
4-2 Do you think that people in the community are active in participating in community activities?	1. Active 2. Less active

ANSWER SHEET FOR SOCIO - ECONOMIC SURVEY

5. Water Supply

5-1 What is the source of water? (Multiple answer)	1. Piped water in dwelling 3. Piped water outside (shared) 5. Bore hole/well/spring 7. Others	2. Piped water outside (private) 4. Rain tank 6. River/stream
5-2 What is the main source of drinking water?	1. Piped water in dwelling 3. Piped water outside (shared) 5. Bore hole/well/spring 7. Others	2. Piped water outside (private) 4. Rain tank 6. River/stream
5-3 How much volume of water do you use a day (month)?	m ³ / day (month)	
5-4 How much do you pay for water a month/week/day?	SIS / (month/week/day)	
5-5 Is the amount of water available to you sufficient or not sufficient?	1. Sufficient	2. Not sufficient
5-6 If the answer of <i>Question 5-1</i> is NOT "piped water", what is the reason why you don't use the piped water?	1. Enough volume from other sources 2. No connection with the piped water 3. Not affordable 4. Others (_____)	
5-7 If standing pipe is provided by SIWA in your area, do you want to use it?	1. Yes	2. No
5-8 If "YES", how much you are willing to pay per month for your water supply?	1 – 20 SIS / month 41 - 60 SIS / month 81 – 100 SIS / month	21 – 40 SIS / month 61 – 80 SIS / month Over 100 SIS / month
5-9 What are necessary things for improvement of your living conditions? Please prioritise.	a. Food b. Water c. House d. Education e. Electricity f. Clothes 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____	

6. Sanitation

6-1 Do you think the source of water supply should be conserved?	1. Yes	2. No
6-2 If "YES", do you think sewerage system should be improved for water conservation?	1. Yes	2. No
6-3 Which type of sewerage system do you have?	1. Sewer Connection 3. Latrine, informal or no sanitation	2. Septic tank
6-4 If SIWA provides septic tank and its maintenance service to you, do you want to use the sewerage system?	1. Yes	2. No
6-5 If "YES", how much you are willing to pay for sewerage services? (Current rate is 50% of water consumption)	10% / 20% / 30% / 40% / 50% of water consumption	
6-6 If public toilet is constructed in your area, do you want to use it?	1. Yes	2. No
6-7 Are you willing to participate in the activities such as management of the public facility, PR to conserve the source of water supply, etc.?	1. Yes	2. No
6-8 Have anybody suffered from diarrhea or dysentery due to drinking water in the household?	1. Yes	2. No
6-9 If "YES", which disease they suffered from?	1. Diarrhea 2. Dysentery 3. Others (specify _____)	
6-10 Do you boil water before drinking?	1. Yes	2. No
6-11 Do you wash your hands after using toilet?	1. Yes	2. No
6-12 Do you wash your hands before eating?	1. Yes	2. No

ANSWER SHEET FOR SOCIO - ECONOMIC SURVEY

7. Opinion or Request to Water Supply and Sewerage Services

(water quality, water price, billing and collection, etc.)

ANSWER SHEET FOR ADDITIONAL SOCIAL SURVEY

Name of Interviewer: _____ Sheet No. _____ / _____

Date of Interview: _____ Household No. _____

Town _____ Ward _____ Area _____

1. Identification of the Respondent

1-1 Name		1-2 Sex	M	F	1-3 Age	
1-4 Occupation		1-5 Relationship to the household head				

2. Water Supply

2-1 What do you think about SIWA's current water price?	1. Expensive 2. Slightly expensive 3. Fair 4. Slightly Cheap 5. Cheap
2-2 If the answer of Q2-1 is "1. Expensive" or "2. Slightly Expensive", please describe why you think so.	
2-3 What do you think about SIWA's water supply services (including staffs and equipment/facilities)?	1. Very good 2. good 3. Fair 4. Poor 5. Very poor
2-4 What do you think about quality of piped water?	1. Very good 2. good 3. Fair 4. Dirty 5. Very dirty
2-5 If the answer of Q2-4 is "4. Dirty" or "5. Very dirty", please describe when piped water is dirty.	(ex. After heavy rain, during rainy season, etc.)
2-6 What do you think about water pressure?	1. Very high 2. High 3. Fair 4. Low 5. Very low
2-7 If the answer of Q2-6 is "4. Low" or "5. Very low", please describe when water pressure becomes low.	1. Morning 2. Afternoon 3. Evening 4. All times
2-8 What do you think about frequency of interruption of water supply?	1. Very high 2. High 3. Low 4. Very low 5. No interruption
2-9 Which is your type of water billing?	1. According to water consumption 2. Fixed rate 3. Free of charge (company pays) 3. Other ()
2-10 If you can receive better water supply services, for example improving water quality, less frequency of interruption and increasing water supply volume, how much increase you are prepared to pay a month in your average water bill?	Up to SIS _____ per month
2-11 How much volume of water do you use a day (week or month)?	liter day m ³ per week gallon month

Appendix 2 Articles of Newspaper

SIWA survey underway in Honiara

A SURVEY aimed at improving the delivery of water supply services in Honiara and other urban centres is currently underway.

And the Solomon Islands Water Authority (SIWA), which is conducting the survey, is calling on every resident to cooperate.

SIWA spokesman and survey supervisor, Moses Ramo, said yesterday the survey started last week in Honiara and will continue on for another week.

"What I would like to let the public know is if our surveyors come around to ask you questions relating to the water supply system, please do cooperate and answer their queries," Mr Ramo said.

The survey is part of Japan International Cooperation Agency's (JICA) Study for Rehabilitation and Improvement of SIWA's Water Supply and Sewerage Systems in Solomon Islands.

It is a project funded by Japan through JICA.

The aim of the study is to improve SIWA's infrastructure and their capacity of maintenance and operation, and also to cater adequately in serving the present and future demands.

Under the Study, socio-economic survey is carried out in order to grasp the current socio-economic conditions of households in the target areas of the Study - Honiara, Noro, Auki and Tulagi.

The survey result will be utilised to set up the baseline of facility improvement and action plan, and to prepare pilot projects.

Mr Ramo explains that the information collected during the survey is confidential and will be used only for the purpose of formulating facility improvement plan and action plan of SIWA.

He said disclosure of the information to anyone is strictly prohibited.



The Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage Systems in Solomon Islands



Socio-Economic Survey

1. Outline of the survey

Method : Interview survey to the households
 Target Area : Honiara, Noro, Auki, and Tulagi
 Sampling Number : Over 400 households in the towns

2. Objectives

JICA Study Team is conducting the Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage Systems in Solomon Islands. The objectives of the Study are 1) to formulate an urgent rehabilitation plan for Honiara and urgent restoration plan for Auki or Tulagi, 2) to formulate a facility improvement plan for the water supply and sewerage systems of Honiara, Tulagi, Auki and Noro for the target year 2010, and 3) to formulate an action plan for supporting capacity development of SIWA to strengthen its management.

In order to grasp the current social and economic conditions of the communities in town areas and get the information for setting up the baseline of the facility improvement plan for Honiara, Tulagi, Auki and Noro, JICA Study Team will carry out the socio-economic survey in those cities.

3. Survey Method

(1) Questionnaire survey

Interviewers will visit the selected households, and ask questions about dwelling, water supply, sewerage, etc. They have a name tag and letter of appointment issued by JICA Study Team. Information collected by this survey will be utilised for formulation of plans which improve water supply and sewerage systems.

Items to be asked

Items	Contents
Identification of Answers	Name, sex, age, occupation, duration of dwelling, etc.
Family	Number, sex etc.
Social activities	Community organization, religious activities, etc
Household	Income, expenditure, debt and saving
Condition of dwelling	Owned or rented, no. of rooms, kitchen, bathroom, type of toilet
Water supply and sewerage	Source, storage, consumption volume and willingness to pay, etc.
Opinions	Opinion or request to water supply and sewerage services.

(2) Schedule of the survey

Item	1st week 4-10 July	2nd week 11-17 July	3rd week 18-24 July	4th week 25-31 July
Honiara	●			●
Auki		●	●	
Noro			●	●
Tulagi			●	●

Solomon Star, Friday 15 July 2005

Appendix 3 Survey Manual

Interviewer's Manual for Socio-Economic Survey

I GENERAL

1. Introduction

JICA (Japan International Cooperation Agency) is conducting the Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage System in Solomon Islands in order to improve SIWA's infrastructure and their capacity of maintenance and operation, and also to cater adequately in serving the present and future demand. Under the Study, socio-economic survey is carried out in order to grasp the current socio-economic conditions of households in the target areas of the Study (Honiara, Noro, Auki and Tulagi). The survey result will be utilised to set up the baseline of facility improvement plan and action plan, and to prepare pilot projects.

2. Role of Interviewers

(1) Explanation of confidentiality

Nobody knows why and for what we are carrying out this survey. Thus, at the start of the interview, you shall explain the objective of the survey politely. You must mention that information obtained from this survey is confidential and it is not used for taxation purposes. You also have to explain that the survey result is used for demand analysis of water supply and sewerage systems, cost estimation and project evaluation of facility improvement plan formulated by JICA Study Team for SIWA project.

If someone doesn't want to answer the questions, you should explain the purpose of the survey again and ask the reason why he/she doesn't want. If he/she still doesn't want to answer, you should report the problem to the supervisor.

(2) Asking Questions and Recording Answers

Roles of interviewers are as follows:

- To visit all the sample households in your area
- To explain the purpose of this survey
- To ask the questions mentioned in the survey sheet
- To record the answers on the sheet
- To compile and submit the data collected to supervisor

The information you collect is confidential and will be used only for the purpose of formulating facility improvement plan and action plan of SIWA. Disclosure of the information to anyone is strictly prohibited. Therefore, you shall fill in the sheet personally and not allow any other person to look at or fill in any part of the sheet.

The Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage Systems in Solomon Islands

II WORK INSTRUCTION FOR FILLING IN SURVEY SHEET

1. Header

Write down your name, sheet number, date of interview

Household No. means the number of selected households shown in sampling map.

Fill in Town (Honiara/ Noro/Auki/Tulagi)ward and area where you are in charge.

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ANSWER SHEET FOR SOCIO - ECONOMIC SURVEY

Name of Interviewer: _____ **Sheet No.** _____ / _____

Date of Interview: _____ **Household No.** _____

Town _____ **Ward** _____ **Area** _____

2. Identification of Respondent

1-1 Name		1-2 Sex	M	F	1-3 Age	
1-4 Occupation		1-5 Relationship to the household head				

- 1-1 Ask name of respondent. Write down the name in the box.
- 1-2 Circle sex of respondent.
- 1-3 Ask: *How old is the respondent?* Write down age of respondent in the box.
- 1-4 Ask: *What is occupation of the respondent?* Write down the respondent's occupation in the box.
- 1-5 Ask: *What is the respondent's relationship to the household head?* Write down the relationship in the box.

3. Dwelling

2-1 Which type is the dwelling or family house?	1. Owned	2. Rented	3. Rent free	4. Other
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- Ask: *Which type is the dwelling or family house?*
- Circle one of the given choices in the survey sheet.

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2-2 How long has the family lived in the area?	years
--	-------

- Ask: *How long has the family lived in the area?*
- Write down the number of years in the box. If the respondent can't count the number, ask when the family started to live in the area.
- Then, you can count how long the family has lived in the area.

2-3 How many rooms are there inside the dwelling?	rooms
---	-------

- Ask: *How many rooms are there in the dwelling/family house?*
- Rooms include bedrooms, living rooms, lounge rooms, dining rooms, (separate) kitchens, studies or working rooms. Don't include bathrooms, storerooms and toilet rooms.
- If two or more households share the dwelling/family house, divide the number of rooms among the number of household sharing the dwelling/family house.

2-4 How many people live in the dwelling?	Adult men____Adult women____Boys____Girls____ Total____
---	---

- Ask: *How many people live in the dwelling/family house?*
- Write down the number of adult man, adult women, boys and girls in the box.
- Calculate the total number and write down the number in the box.
- If two or more households share the dwelling/family house, ask the number of family belonging to the household head.

2-5 Do you have a kitchen in the dwelling?	1. Yes (inside) 2. Yes (outside) 3. No
--	--

- Ask: *Do you have a kitchen in the dwelling/family house?*
- Circle one of the given choices in the survey sheet.
- If sink is in side of the dwelling and cooking stove is outside, circle "YES (INSIDE)".

2-6 If "YES", is the kitchen private or shared?	1. Private 2. Shared
---	---------------------------

- Ask: *If "YES", is the kitchen private or shared?*
- Circle one of the given choices in the survey sheet.

2-7 If the answer of Question 2-5 is "YES", when the kitchen is most used?	
--	--

- If the answer of **Question 2-5** is "YES", ask when the kitchen is most used.
- This is the question to know the peak time of cooking or kitchen usage.

2-8 Do you have a bathroom or shower in the dwelling?	1. Yes (inside) 2. Yes (outside) 3. No
---	--

- Ask: *Do you have a bathroom or shower in the dwelling/family house?*
- Circle one of the given choices in the survey sheet.

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2-9 If "YES", the bathroom or shower is private or shared?	1. Private	2. Shared
--	------------	-----------

- Ask: *Is the bathroom or shower private or shared?*
- Circle one of the given choices in the survey sheet.

2-10 When the bathroom or shower is most used?	
--	--

- If the answer of **Question 2-8** is "YES", ask when the bathroom or shower is most used.
- This is the question to know the peak time of the bathroom or shower usage.

2-11 Which type of toilet is there in the dwelling?	1. Flush 2. Pour 3. Pit 4. Ventilated improved pit 5. Other
---	---

- Ask: *Which type of toilet is there in the dwelling/family house?*
- Circle one of the given choices in the survey sheet.
- Description of toilets are as follows:
 - 1) Flush toilet: an installation that has its own cleaning-water system, which washes away the wastes
 - 2) Pour toilet: an installation where the toilet is cleaned after use by pouring water from a bucket
 - 3) Pit toilet: a (covered) hole in the ground used as a toilet
 - 4) Ventilated improved pit toilet: a modernized pit-type toilet
 - 5) Other: any type of toilet that does not fit any of the above description

(Source: Report on 1999 Population & housing Census, Statistics Office)

2-12 Where is the location of the toilet?	1. Inside 2. Outside (private) 3. Outside (shared)
---	--

- Ask: *Where is the location of the toilet?*
- Circle one of the given choices in the survey sheet.

4. Household

3-1 How many people in the household earn wages/salary?	
---	--

- Ask: *How many people in the household earn wages/salary?*
- Write down the number in the box.

3-2 How much money comes into the household a month?	(SI\$) / month
--	----------------

- Ask: *How much money comes into the household a month?*
- Weekly or bi-weekly basis is applicable. In case, cross out "month" and write down the basis.
- Write down the amount in the box.
- If two or more people earn salary in the household, total amount should be calculated.

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3-3 Do you have any savings?	1. Yes	2. No
------------------------------	--------	-------

- Ask: *Do you have any savings?*
- Circle one of the given choices in the survey sheet.

3-4 Do you owe money?	1. Yes	2. No
-----------------------	--------	-------

- Ask: *Do you owe money?*
- Circle one of the given choices in the survey sheet.

5. Social Activities

4-1 What are social activities in your area?	<ul style="list-style-type: none"> • (Community/Religious) • (Community/Religious) • (Community/Religious) • (Community/Religious)
--	--

- Ask: *What are social activities in your area?*
- Distinguish the activities, community-based or religious.
- Write down the activities and circle one of the given choices.

4-2 Do you think that people in the community are active in participating in community activities?	1. Active	2. Less active
--	-----------	----------------

- Ask: *Do you think that people in the community are active in participating in community activities?*
- Circle one of the given choices in the survey sheet.

6. Water Supply

5-1 What is the source of water? (Multiple answer)	1. Piped water in dwelling 2. Piped water outside (private) 3. Piped water outside (shared) 4. Rain tank 5. Bore hole/well/spring 6. River/stream 7. Others
--	---

- Ask: *What is the source of water?*
- Multiple answers are possible because some households have several sources of water.
- Circle the answers in the survey sheet.

5-2 What is the main source of drinking water?	1. Piped water in dwelling 2. Piped water outside (private) 3. Piped water outside (shared) 4. Rain tank 5. Bore hole/well/spring 6. River/stream 7. Others
--	---

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- Ask: *What is the main source of drinking water?*
- Circle one of the given choices in the survey sheet.
- It should be selected from the answers chosen in Question 5-1.

5-3 How much volume of water do you use a day (month)?	m ³ / day (month)
--	------------------------------

- Ask: *How much volume of water do you use a day?*
- If the respondent can't answer the volume, ask how many buckets or tanks of water they use a day and estimate the amount.
- In case that the respondent has invoice of SIWA, you can know the amount of water they use a month.
- Write down the volume in the box.

5-4 How much do you pay for water a month/week/day?	SI\$ / (month/week/day)
---	-------------------------

- Ask: *How much do you pay for water a month?*
- Weekly or daily basis is applicable.
- If the respondent has invoice of SIWA, write down the billed amount.
- Circle one of the given choices in the survey sheet.

5-5 Is the amount of water available to you sufficient or not sufficient?	1. Sufficient	2. Not sufficient
---	---------------	-------------------

- Ask: *Is the amount of water available to you sufficient or not sufficient?*
- Circle one of the given choices in the survey sheet.

5-6 If the answer of Question 5-1 is NOT "piped water", what is the reason why you don't use the piped water?	1. Enough volume from other sources 2. No connection with the piped water 3. Not affordable 4. Other (_____)
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- Ask: *If the answer of Question 5-1 is NOT "piped water", what is the reason why you don't use the piped water?*
- Circle one of the given choices in the survey sheet.
- If the answer is "OTHER", describe the reason in detail.

5-7 If standing pipe is provided by SIWA in your area, do you want to use it?	1. Yes	2. No
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- Ask: *If standing pipe is provided by SIWA in your area, do you want to use it?*
- Circle one of the given choices in the survey sheet.

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5-8 If "YES", how much you are willing to pay per month for your water supply?	1 – 20 SI\$ / month	21 – 40 SI\$ / month
	41 - 60 SI\$ / month	61 – 80 SI\$ / month
	81 – 100 SI\$ / month	Over 100 SI\$ / month

- Ask: *If "YES", how much you are willing to pay per month for your water supply?*
- Circle one of the given choices in the survey sheet.

5-9 What are necessary things for improvement of your living conditions? Please prioritise.	a. Food	b. Water	c. House	d. Education	e. Electricity	f. Clothes
	1 _____	2 _____	3 _____	4 _____	5 _____	6 _____

- Ask: *What are necessary things for improvement of your living conditions?*
- You read the choices, ask the respondent to prioritise among them.

7. Sanitation

6-1 Do you think the source of water supply should be conserved?	1. Yes	2. No
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- Ask: *Do you think the source of water supply should be conserved?*
- Circle one of the given choices in the survey sheet.

6-2 If "YES", do you think sewerage system should be improved for water conservation?	1. Yes	2. No
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- Ask: *If "YES", do you think sewerage system should be improved for water conservation?*
- Circle one of the given choices in the survey sheet.

6-3 Which type of sewerage system do you have?	1. Sewer Connection	2. Septic tank
	3. Latrine, informal or no sanitation	

- Ask: *Which type of sewerage system do you have?*
- Circle one of the given choices in the survey sheet.
- Description of systems are as follows:
 - 1) Sewer connection: Pipe line distributed as public service in order to collect wastewater discharged from households
 - 2) Septic tank: Underground tank installed at each household where wastewater from toilet, kitchen, or shower is discharged and treated
 - 3) Latrine, informal or no sanitation: Night soil (human excreta) from toilet is disposed into the pit or ground and not treated at all.

6-4 If SIWA provides septic tank and its maintenance service to you, do you want to use the sewerage system?	1. Yes	2. No
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- Ask: *If SIWA provides septic tank and its maintenance service to you, do you want to use the sewerage system?*

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- Circle one of the given choices in the survey sheet.

6-5 If "YES", how much you are willing to pay for sewerage services?	10% / 20% / 30% / 40% / 50%
	of water consumption

- Ask: *If "YES", how much you are willing to pay for sewerage services?*
- For your reference, current rate of sewerage service is 50% of water consumption.
- Circle one of the given choices in the survey sheet.

6-6 If public toilet is constructed in your area, do you want to use it?	1. Yes	2. No
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- Ask: *If public toilet is constructed in your area, do you want to use it?*
- Circle one of the given choices in the survey sheet.

6-7 Are you willing to participate in the activities such as management of the public facility, PR to conserve the source of water supply, etc.?	1. Yes	2. No
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- Ask: *Are you willing to participate in the activities such as management of the public facility, PR to conserve the source of water supply, etc.?*
- Circle one of the given choices in the survey sheet.

6-8 Have anybody suffered from diarrhea or dysentery due to drinking water in the household?	1. Yes	2. No
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- Ask: *Have anybody suffered from diarrhea or dysentery due to drinking water in the household?*
- Circle one of the given choices in the survey sheet.

6-9 If "YES", which disease they suffered from?	1. Diarrhea 2. Dysentery 3. Other (specify _____)
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- Ask: *If "YES", which disease they suffered from?*
- Circle one of the given choices in the survey sheet.
- If the answer is "OTHER", specify the disease.

6-10 Do you boil water before drinking?	1. Yes	2. No
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- Ask: *Do you boil water before drinking?*
- Circle one of the given choices in the survey sheet.

6-11 Do you wash your hands after using toilet?	1. Yes	2. No
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- Ask: *Do you wash your hands after using toilet?*
- Circle one of the given choices in the survey sheet.

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6-12 Do you wash your hands before eating?	1. Yes	2. No
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- Ask: *Do you wash your hands before eating?*
- Circle one of the given choices in the survey sheet.

8. Opinion or Request to Water Supply and Sewerage Services

Ask: *Does the respondent have any opinions or requests to water supply and sewerage services?* (Water quality, frequency or duration of water supply, water price, billing and collection method, environmental issues such as odour, water contamination, etc.) For example, If the answer of Question 5-5 is “not sufficient”, ask opinion of the respondent, why the amount of water available to the family is not sufficient, what is needed to improve the situation, etc.

Appendix 4 Workshop Programme

Community Workshop on Water Supply and Sewerage

at Marine School, Ranadi, 30 July 2005 (14:00 – 17:00)

1. Objectives of the Study

JICA (Japan International Cooperation Agency) is conducting the Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage Systems in Solomon Islands. The objectives of the Study are 1) to formulate an urgent rehabilitation plan for Honiara and urgent restoration plan for Auki or Tulagi, 2) to formulate a facility improvement plan for the water supply and sewerage systems of Honiara, Tulagi, Auki and Noro for the target year 2010, and 3) to formulate an action plan for supporting capacity development of SIWA to strengthen its management.

2. Public Participation Workshop

This workshop is carried out to grasp the public consciousness on water supply and sewerage in Honiara Town, and analyse the data for setting up the baseline of the facility improvement plan for Honiara

Time	Issues
14:00 - 14:15	<p>< Introduction > Captain → Opening remarks and introduction of participants JICA Team → Explanation of the objectives and method of workshop</p>
14:15 - 15:00	<p>< Community Profile > <i>Objective: To grasp history, customs, and characteristics of community</i></p> <ul style="list-style-type: none"> • Village history, important events/occurrences in relation to water and sanitation • Social norms, customs and structure • Access to information • Community activities • Support from outside of community
15:00 – 16:00	<p>< Water Supply > <i>Objective: To grasp the attitude of community members to water supply</i></p> <ul style="list-style-type: none"> • Method of purchasing water • Water quality of drinking water • Water price • Illegal connection • Improvement of water supply • Water conservation • Request to SIWA
16:00 – 16:45	<p>< Sanitation > <i>Objective: To grasp the attitude of community members to sanitation</i></p> <ul style="list-style-type: none"> • Water quality of rivers, springs or wells • Reduction of water pollution • Current sewerage system • Conservation of water source • Request to SIWA
16:45 – 17:00	<p>< Wrap-up and Closing Remarks > Facilitator → Presentation of findings Participants → Comments on the presentation of facilitator Captain → Closing remarks</p>

Community Workshop on Water Supply and Sewerage

at Fishing Village, 31 July 2005 (14:00 – 17:00)

1. Objectives of the Study

JICA (Japan International Cooperation Agency) is conducting the Study for Rehabilitation and Improvement of Solomon Islands Water Authority's Water Supply and Sewerage Systems in Solomon Islands. The objectives of the Study are 1) to formulate an urgent rehabilitation plan for Honiara and urgent restoration plan for Auki or Tulagi, 2) to formulate a facility improvement plan for the water supply and sewerage systems of Honiara, Tulagi, Auki and Noro for the target year 2010, and 3) to formulate an action plan for supporting capacity development of SIWA to strengthen its management.

2. Public Participation Workshop

This workshop is carried out to grasp the public consciousness on water supply and sewerage in Honiara Town, and analyse the data for setting up the baseline of the facility improvement plan for Honiara

Time	Issues
14:00 - 14:15	<p>< Introduction > Chief → Opening remarks and introduction of participants JICA Team → Explanation of the objectives and method of workshop</p>
14:15 - 15:00	<p>< Community Profile > <i>Objective: To grasp history, customs, and characteristics of community</i></p> <ul style="list-style-type: none"> • Village history, important events/occurrences in relation to water and sanitation • Social norms, customs and structure • Access to information • Community activities • Support from outside of community
15:00 – 16:00	<p>< Water Supply > <i>Objective: To grasp the attitude of community members to water supply</i></p> <ul style="list-style-type: none"> • Method of purchasing water • Water quality of drinking water • Water price • Illegal connection • Improvement of water supply • Water conservation • Request to SIWA
16:00 – 16:45	<p>< Sanitation > <i>Objective: To grasp the attitude of community members to sanitation</i></p> <ul style="list-style-type: none"> • Water quality of rivers, springs or wells • Reduction of water pollution • Current sewerage system • Conservation of water source • Request to SIWA
16:45 – 17:00	<p>< Wrap-up and Closing Remarks > Facilitator → Presentation of findings Participants → Comments on the presentation of facilitator Chief → Closing remarks</p>