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**SAMOA**  
***HIES FOOD AND BASIC NEEDS***  
***EXPENDITURE***

***REPORT BASED ON THE***  
***HIES POVERTY STRATEGIES INITIATIVE***

***STATISTICS PROGRAMME***  
***SECRETARIAT OF THE PACIFIC COMMUNITY***

**NOUMEA**

**OCTOBER 1998**





undp

# **SAMOA**

## **HIES FOOD AND BASIC NEEDS EXPENDITURE**

**REPORT BASED ON THE  
HIES POVERTY STRATEGIES INITIATIVE  
PRO 301 PSI/SAM**

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En réponse, veuillez préciser

PRO 30/1

Noumea, 12 October, 1998

Officer-in-charge  
United Nations Development Programme  
Private Mail Bag  
APIA, SAMOA

Dear Sir / Madam,

Please find attached the report of the technical assistance consultancy to broadly describe the patterns of household food and basic needs expenditure in Samoa based on the results of the 1997 Household Income and Expenditure Survey (HIES). This was completed under UNDP project PRO 301 PSI/SAM.

It should be noted that this is the first analysis of absolute and relative poverty at a national and regional level in Samoa, and more detailed research and studies should follow. The HIES, partly funded by UNDP, contains a wealth of information for socio-economic research.

Three different analyses are contained in this report: daily food needs, daily basic needs and an analysis of the lowest 20% daily expenditure households. The results of all three studies indicate significant levels of poverty in Samoa, especially in rural areas.

Other significant findings include that households headed by women were more likely to have a daily food expenditure surplus than male headed households.

There is concern for households where the head is a farmer, planter or fisherman because of the relatively high proportion of these households with a daily food expenditure deficit (54%) – 'subsistence affluence' is not as prevalent as it once was (or was thought to be) in Samoa.

This report, and the data it is based on, has been copied onto a CD ROM which has been submitted to UNDP and the Department of Statistics in Samoa.

Yours faithfully

Kim Robertson  
Statistical Training Specialist  
Secretariat of the Pacific Community

## Preface

This report was prepared as part of the Poverty Strategies Initiative (PSI) project in Samoa. The PSI project in Samoa part funded the Household Income and Expenditure Survey, conducted from July to September 1997. Other reports from the PSI project include the study into the valuation of non-SNA household activities in Samoa.

There has been increasing awareness of poverty as an issue in the world and the Pacific over recent years. It is estimated that nearly one third of the population in developing countries live in poverty (incomes and consumption levels less than US\$1.00 per day). There are many aspects to poverty, not just low incomes or expenditures. Indicators of poverty include access to clean water and sanitation, education, housing, health care and other basic services. The burden of poverty falls more heavily in rural than in urban areas. UNDP estimates that in developing countries 37% of the rural residents live in absolute poverty, compared with 28% of urban dwellers. Rural areas with high population densities or poor resource bases are most likely to be home to the absolute poor. Studies have also found that poor couples are more likely to have a large number of children than couples with higher incomes – children make up a large proportion of the poorest communities.

Poverty is a universal phenomenon – it is also a concern in developed, industrialised countries. In 1991, 14% of the population in the United States fell below the official US poverty line. Of those, 40% were considered in “deep poverty”, ie with incomes less than half the poverty line.

Successful poverty reduction programmes have focused on investment in people, and not necessarily investment in economic development programmes. Helping poor people to become productive through education and health care increases their incomes. These programmes of poverty reduction have focused on:

- ☐ Policies to encourage broad based economic growth;
- ☐ Provision of social services;
- ☐ Targeted interventions to reach ‘poverty pockets’;
- ☐ Provision of physical infrastructure;
- ☐ Programmes for women and girls; and
- ☐ Better information on the number of poor and where they live.

More progress has been made in reducing global poverty in the last five decades than the last five centuries. Today poverty eradication is the number one goal of development assistance, and it is the “central mission and overriding objective” of UNDP. James Gustave Speth, UNDP Administrator:

“Mass poverty is the gravest human tragedy of our time; it is the greatest challenge facing the international community today. Our civilisation can, and probably will, be measured by how we respond to this human suffering, hunger and other deprivations associated with extreme poverty ...”

This report is the first analysis of poverty in Samoa. It is the first step to describe the characteristics of the poor in Samoa, and much more analysis can be done using the HIES data. The challenge now is for Government and donors to provide an environment to encourage equitable broad-based economic growth, promoting the livelihoods of the poor by helping to provide poor families with “access to assets” and opportunities such as skills, land, credit, technology, training, job opportunities, environmental and energy services, legal rights and market access.



## Acknowledgments

This project was funded by UNDP through the Poverty Strategies Initiative (PSI) project in Samoa. The PSI project in Samoa part funded the Household Income and Expenditure Survey (HIES), which is the source of this analysis. The Secretariat of the Pacific Community (SPC) indirectly supported the project by funding the additional time taken to prepare this report.

My gratitude goes to Margaret Chung of UNDP in Fiji and Peggy Fairbairn-Dunlop in Samoa for the information and advice they provided. Margaret Chung provided me with information about the method and findings used in the Fiji Poverty study which is cited in this report.

My thanks also go to the UNDP office in Samoa and the Statistics Department in Samoa for their support of the project. I would also like to thank Paul Meredith and Alii Salani from Treasury for their assistance.

I would also like to thank the other programmes at SPC who provided assistance with this research – in particular the demography programme, the library staff and the computer and technical support team.

Finally, I would like to thank the HIES Steering Committee for their support of the project.



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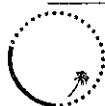
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## **Abbreviations**

AUA	Apia Urban Area
CPI	Consumer Price Index
HIES	Household Income and Expenditure Survey
NWU	North West Upolu
PSI	Poverty Strategies Initiative
ROU	Rest of Upolu
SAT	Samoa Tala (July 1997 USD 1 = SAT 0.4202)
SAV	Savaii
SPC	Secretariat of the Pacific Community
UNDP	United Nations Development Programme



## Executive summary

This report was prepared as part of the Poverty Strategies Initiative (PSI) project in Samoa funded by UNDP. The PSI project in Samoa part funded the Household Income and Expenditure Survey, conducted from July to September 1997. Other reports from the PSI project include the study into the valuation of non-SNA household activities in Samoa.

To provide a context for the absolute and relative poverty analysis, average daily household expenditure patterns were analysed in terms of food and non-food expenditure. Savaii had the lowest daily average household expenditure at SAT 38.25. Almost two thirds of this was expenditure on food.

Two main types of poverty analysis were undertaken – an absolute analysis using food and basic needs expenditure requirements, and a relative analysis examining the characteristics of the lowest 20% expenditure households.

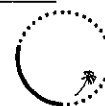
### Absolute poverty

Absolute poverty defines those households living in conditions where minimum requirements for food, shelter, clothing etc. (ie. the basic needs) are not met. There are a number of assumptions made when carrying out this type of analysis, and these are included in the report. The Nutrition Centre at the Department of Health developed a nutritious and palatable diet for a family of seven which cost SAT 152.43 per week, or SAT 21.77 per day. HIES food expenditure data was then compared to the cost of the diet to identify households with daily food expenditure deficit or surplus.

Overall, 48% of households did not have sufficient daily food expenditure to meet their estimated food requirements. Of this 48%, the majority of households were in Savaii (16%), followed by the Rest of Upolu and North West Upolu (12%) and Apia Urban Area (8%). Within each region, Savaii had the largest proportion of households in food poverty, with 55% of households in Savaii having a daily food expenditure deficit. This compared with 49% of households in the Rest of Upolu, 48% of households in North West Upolu and 39% of households in Apia.

The characteristics of households with daily food expenditure deficits were:

- ☐ Large households were more likely to be in food poverty;
- ☐ Households whose main source of water was rain water were likely to be in food poverty;
- ☐ Households using wood as their main cooking fuel were likely to be in food poverty;
- ☐ Households with a pit toilet were likely to be in food poverty;
- ☐ Households where the household head was female had more chance of having a daily food expenditure surplus than households headed by males;
- ☐ Households where the household head was in paid employment (full-or part-time work and self-employed) were more likely to have a daily food expenditure surplus;
- ☐ 54% households where the household head was a farmer, planter or fisherman had a daily food expenditure deficit (food produced and consumed in the home was included in daily food expenditure). This indicates that 'subsistence affluence' is not as prevalent as it once was (or was thought to be) in Samoa.





In addition to the daily food expenditure analysis, a daily basic needs expenditure study was carried out. In addition to food costs, other costs were added for transport, energy, health, education, water and housing. This resulted in weekly required basic needs expenditure of SAT 183.73, or SAT 26.25 per day for a family of seven. Total household expenditure from the HIES data was then compared to the basic needs requirements to identify those households with daily basic needs expenditure deficit or surplus.

Overall, 33% of households did not have sufficient total daily expenditure to meet their estimated basic needs requirements. Of this 33%, the majority of households were in Savaii (13%), followed by the Rest of Upolu (9%), North West Upolu (7%) and Apia Urban Area (4%). Within each region, Savaii had the largest proportion of households in basic needs poverty, with 46% of households in Savaii having a daily basic needs expenditure deficit. This compared with 36% of households in the Rest of Upolu, 27% of households in North West Upolu and 17% of households in Apia.

The characteristics of households with daily food expenditure deficits were:

- ☐ Large households were more likely to be in basic needs poverty;
- ☐ Households whose main source of water was piped for their exclusive use were more likely to have a basic needs expenditure surplus;
- ☐ Households which used electricity, gas or kerosene as their main cooking fuel were more likely to have daily total expenditure surplus to requirements than households using wood;
- ☐ Households using spirit or kerosene lighting were more likely to have a daily basic needs expenditure deficit compared with households using electric lighting;
- ☐ Households with a pit toilet were likely to have a daily basic needs expenditure deficit.

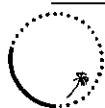
### Relative poverty

The characteristics of the poorest households in Samoa were based on standardised household expenditure data. Total household expenditure data was standardised to take into account the different size of households – typically small households spend less than large households do. Note that this assumes that household expenditure is for all members because household expenditure was divided evenly across all household members based on adult male equivalents.

The median total daily expenditure per adult male equivalent using the standardised data was SAT 6.12 – that is 50% of households spent more than SAT 6.12 per day for each adult male equivalent, and 50% spent less. The lowest 20% of households spent SAT 3.39 per day for each adult male equivalent.

The relative poverty analysis once again highlighted the rural areas of Samoa as being vulnerable to poverty. Almost half of the households in the lowest 20% were in Savaii (42%), a further 28% were in the Rest of Upolu, 21% were in North West Upolu and 9% were in Apia urban area.

All three types of analysis undertaken have highlighted Savaii as the region of most concern in Samoa, followed by the Rest of Upolu, North West Upolu and Apia urban area. Poverty is of concern in all regions, with levels of daily food expenditure in particular at lower levels than expected.



## Introduction

### Definitions

Poverty is a difficult concept to understand and maintain an objective perspective. It can be thought of as an unacceptable standard of living, but then 'standard of living' is also difficult to define. In this study poverty is analysed in terms of the cost of living of households. Poverty is also a highly charged emotional term, especially in Samoa where common beliefs support a 'subsistence affluence' lifestyle and the absence of poverty under the traditional Samoan way of life (*fa'a Samoa*) which ensures that families share resources.

Defining poverty is "a major analytical problem for those who wish to study [it] and definitions can vary dramatically" (Webster, 1984:16). Most would accept that there are two principal definitions of poverty. The first relates to a minimum subsistence level and is sometimes referred to as absolute poverty, the second relates to the relative nature of poverty in society and is referred to as relative poverty.

**Absolute poverty** defines those households living in conditions where minimum requirements for food, shelter, clothing etc. (ie. the basic needs) are not met.

**Absolute poverty** (or the subsistence concept of poverty) is defined as that situation in which people are unable to obtain sufficient amounts of food, water, shelter, clothing, education and health care to meet their basic needs. Analysts usually establish a 'poverty line' against which they determine those living in absolute poverty. This poverty line is simply a certain level of income or expenditure below which an individual or family will be deprived of the basic necessities of life for a specified time period. It is calculated in terms of expenditure for a nutritionally adequate diet plus expenditure for non-food items such as rent, clothing, fuel etc. compared with the actual income (or expenditure on these items). The poverty line is considered to give an apparently objective measure of poverty in a society, if adjusted to the current economic situation. Critics of absolute poverty measures say they are an assessment based only on the biological and physiological demands of the human body for food, warmth and shelter; they do not discriminate the needs of different households; and they are absolutely basic and ascetic.

**Relative poverty** is defined by the minimum standard accepted as normal or 'decent' in a given society. People below this standard are considered to be in poverty. People may be able to obtain basic necessities, but are unable to maintain the standard of living that is considered normal in the society. Here poverty is measured not in terms of how household incomes compare with a poverty line, but in terms of how household incomes compare with the rest of society. Income level (or expenditure level) determines a household's ability to participate in the way of life of the wider community according to accepted standards. Thus the concept of relative poverty tries to assess relative deprivation according to a local cultural and social perception of approved needs, customary values and lifestyles.

**Relative poverty** is when people below a certain level of income or resources cannot share in the diets, customs and activities comprising the society's standard of living. It is related to the concept of inequality.

Barr, K. J. 1990, pp 28-30

This study examines absolute poverty using food and basic needs poverty lines in Samoa. Relative poverty is assessed in terms of the characteristics of the 'poorest' 20% of households.

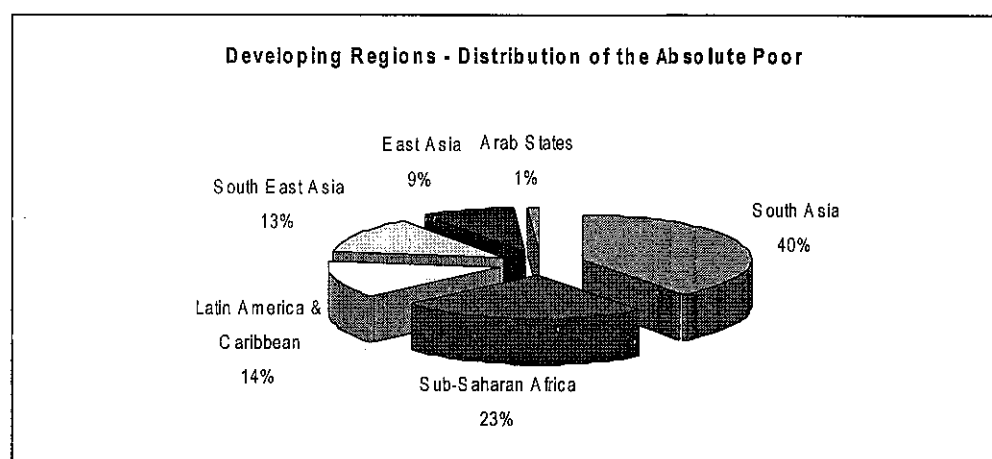


## Global context

More progress has been made in reducing global poverty in the last five decades than in the previous five centuries. But global poverty remains widespread. According to recent World Bank estimates, about one billion people live in absolute poverty – they live on *less* than one US dollar a day. Some 840 million go hungry every day and face food insecurity. In developing countries about one third of the population lives in absolute poverty – 1.3 billion people.

The largest proportion of people living in poverty are in Africa, but the largest number living in poverty are in Asia.

**Figure 1: Developing regions – distribution of absolute poverty (UNDP)**



Research has also shown that poverty is more prevalent in rural than urban areas. UNDP estimates that in developing countries, 37% of rural residents live in absolute poverty, compared with 28% of urban dwellers.

## Pacific context

Many countries in the Pacific are fortunate to have relatively small populations combined with an adequate resource base and favourable climatic and environmental conditions. However, there is increasing concern about the rising levels of poverty, or groups whose quality of life is not improving at the same rate as others in the society.

In a recent study in Fiji it was found that one quarter of household's were classified as poor, but many more were in constant danger of sliding into poverty or destitution because their household income was so small. The study also found that the poor were not a homogenous group – poor people were not necessarily subsistence farmers, the unemployed or the lazy. Most poor households had someone in employment. The report states “the vision of subsistence affluence was never an accurate picture of rural life ... People need income from jobs also, but the jobs they do have don't pay enough to keep them out of poverty” (Fiji Poverty Report: A Summary, p. 2).

Several methods were used to measure the poverty line in Fiji, and all painted a similar picture of the extent of poverty. The basic needs poverty line in Fiji was \$F83 (gross income) per week at the national level. Twenty-five percent of households lived in poverty using this basic minimum requirement.

In Samoa Peggy Fairbairn-Dunlop conducted a poverty study in 1996 (cited in the Samoa Human Development Report, draft). The food poverty line developed by the Nutrition Centre for this



study was SAT 126.95 for one week for a family of four (two adults and two children). The diet cost was reduced to SAT 52.11 if vegetables and staples were home grown. The basic needs poverty line developed was SAT 169.26. Fairbairn-Dunlop cites a case study of a young widow with a family of six children under 10 years old who had returned to her family home. The extended family (three adults and 10 children) had a cash income of SAT 130 per week – well below the food and basic needs poverty lines. Fairbairn-Dunlop lists the following three groups as being vulnerable to poverty in Samoa:

1. Apia squatter communities who have no lands for gardens,
2. Urban villagers with limited gardening space, and
3. Rural families who may have enough food to eat, but have few cash earning opportunities or chances to market their goods for cash.

Fairbairn-Dunlop also quotes annual income data from 1996 when the average hourly wage was SAT 1.25 per hour, or SAT 50.00 for a 40 hour week. In 1996 National Provident Fund data indicated national average wage of SAT 5,521.39 per year, with a median of just under SAT 5,000 (ie. 50% of wage workers had an income above this median value and 50% had an income below it). Approximately 86% of workers had an annual income of less than SAT 10,000.

In a recent research project into malnutrition in Samoa, low income was a common contributing factor listed in the causes of malnutrition. The study found that:

*“... cash income on its own not be a sufficient indicator identifying disadvantaged families as there are many transactions such as goods exchanged between families, families’ access to land for farming and the sea for fishing as well as cash remittances from overseas relatives that occur outside the formal market sector. Our findings also suggest that “absolute poverty”, or the inability to meet one’s basic needs as is found in other developing countries or the world ... is not prevalent in Samoa”.*

Adams and Sio, 1997, p 6.

## **UNDP Poverty Strategy Initiatives**

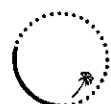
As a member of the United Nations, the Government of Samoa has endorsed the Copenhagen Declaration and the programme for action which resulted from the World Summit for Social Development (WSSD), held in Copenhagen in 1995. The Declaration outlines the rationale for developing national poverty eradication plans to address employment creation, health education, basic social services, household income generation and promotion of access to productive assets and economic opportunities. To fund the objectives of the declaration, the United Nations Development Programme (UNDP) initiated the Poverty Strategies Initiative (PSI) trust fund. Samoa successfully applied for PSI funding with a clear objective to analyse poverty:

“ The Samoa Poverty Strategy Initiative consists of a national Household Income and Expenditure Survey (HIES)<sup>1</sup> which will have four main objectives:

- ☐ To provide data to: (a) determine the extent of relative poverty and vulnerability in Samoa; and (b) to analyse and disseminate these data and findings to relevant Government departments and the public at large with a view to developing policies and programmes to address the needs of vulnerable groups; ... “

UNDP, Project Document for the Poverty Strategy Initiative, Apia, April, 1997

<sup>1</sup> The HIES was also funded by the Government of Samoa and the Asian Development Bank.



## **Samoa Household Income and Expenditure Survey**

The HIES was conducted in Samoa from July to September 1997, based on a 10% sample of households in both islands Upolu and Savaii<sup>2</sup>. The sample was stratified to provide accurate results for each of the four regions in Samoa: Apia Urban Area (AUA), North West Upolu (NWU), the Rest of Upolu (ROU) and Savaii (SAV). For more information on the sampling method see the report titled "Samoa HIES Tabulation Report" (SPC/UNDP).

The expenditure data from the HIES has been used for both the absolute and relative poverty analyses rather than the income data. It is generally believed that in HIES surveys the expenditure data is more accurate than the income data. Income is a sensitive topic to most people and some respondents are reluctant to disclose the full amount of their income, particularly if they have sensitive sources of income (for example, sources of income which they would not declare for taxation purposes). In analyses such as this, the assumption made is that ultimately income balances with expenditure – whether this balance is the result of a loan, gifts or the sale of assets etc.

Note that household expenditure does not include money or food received as gifts (but it does include food given as a gift). However, this is not thought to be a significant source of error because if a cash gift was spent during the survey period on goods, services or payment of accounts, the 'income' would have been included as an 'expenditure'. Also, it is thought that for all households, the expenditure on gifts should equal the income from gifts received (ie that for all households these will balance). Future analysis of the data from an 'income' perspective could investigate this. It is recognised that gifts were a important source of food and income for many households.

Household income could have been used for the *relative* poverty analysis (ie bottom 20% of household incomes). However, using household expenditure for both absolute and relative poverty analyses maintains consistency in the results. Future analysis could examine the differences between household income and expenditure.

### **Household expenditure**

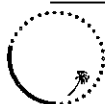
Annual household expenditure on food (home produced and purchased outside the home) was used for the food poverty analysis. Analysis of the data showed that household expenditures were better reported than household income, so total expenditure data was used for the basic needs poverty analysis. A total of 34 households either did not complete the two week expenditures diary or had not entered any food items in the diary, and were excluded from the analysis (sample weights were adjusted accordingly). A total of 1,968 households were included in the analysis. Note that spending on alcohol and tobacco was included in the food and basic needs poverty analysis.

There were five sources of data for total household expenditure:

- expenditures on goods and services from the diaries;
- home grown/produced items from the diaries;
- cash or bought goods given as gifts from the diaries;
- special events expenditures from the diaries; and

---

<sup>2</sup> And including the small island of Apolima which is part of the Rest of Upolu region.



- 'major household expenditures' from the Expenditure on Housing and Household Utilities, Education and Health Schedule.

Although the 'major household expenditures' were also collected in the diaries, these were excluded from the diary expenditures (to avoid double counting). The cash or bought goods given as gifts and special events expenditures were included in the data for expenditures on goods and services to facilitate data extraction for tabulation. Only the home grown/produced values which were coded as (1 = used) or (3 = given as gifts) were included as household expenditure.

The diary expenditures (including home grown) were for a period of two weeks, which have been weighted to daily amounts. No adjustments were made for seasonality. The major household expenditures were variable in their periodicity (annual for items such as overseas travel and motor cars, monthly for items such as electricity and telephone bills, three-monthly for medical costs and four monthly for education costs). Appropriate factors were applied to these major expenditures to create equivalent daily expenditures. For the major consumer durables, the question asked whether the item had been acquired by the household, and was then coded as being (1) bought from own funds or (2) received as a gift. Only those coded as (1) were included as expenditure.

## Method

### ***Absolute poverty***

Two types of absolute poverty measures, or poverty lines, were developed:

1. Food poverty line
2. Basic needs poverty line

#### Food poverty line

**"Food poverty"** identifies those households which cannot afford the basic minimum nutritionally adequate and palatable diet. The Nutrition Centre at the Department of Health developed a nutritionally adequate **and** palatable diet for one week based on the average household size of seven (included in Attachment 1). Note that a diet does not necessarily have to be palatable to be nutritious, and vice versa. In theory it would be possible to eat the same food at every meal to have a nutritionally adequate diet, but this wouldn't necessarily be palatable. Also note that the diet is based on the food which is available and consumed in Samoa – mutton flaps and turkey tails are not an ideal source of meat protein, but they are the main types of meat consumed in Samoa (other than fish). One of the main criticisms of this type of analysis is that the components in the diet used reflect a more 'ideal' situation of food consumption, not usually seen in actual diets. Another criticism is that household members might not consume food purchased by the household during the survey period. For example, a considerable amount might have been spent on food for a special dinner or a large gathering (like a wedding). This food might or might not have been consumed by all members of the household.

*The **food poverty line** was **SAT 152.43**. It was based on the diet for a family of four adults and three children provided by the Nutrition Centre.*

The Nutrition Centre diet was used as the 'minimum food requirement for one week' for a household of four adults and three children. The diet was based on daily kilocalorie intake (energy requirements) with a balance of protein, carbohydrates, vitamins and minerals. The total cost of the diet was SAT 152.43. The cost of the diet was based on the prices used for 'home



grown' items in the HIES, the average price of the food item from the Consumer Price Index (CPI) for the survey period, and the retail price list from the Department of Trade, Commerce and Industry. The source of the price for each item used in the diet is shown in Attachment 1.

The diet is based on the daily energy requirements of the following "standard" family of four adults and three children:

**Table 1: Household members and energy requirements used in the diet (week)**

<i>Person and activity level</i>	<i>Daily energy needs (kcal)</i>	<i>Proportion of household's energy needs</i>
Male, 65 years, light to moderate activity	2,690	0.15
Female, 65 years, light to moderate activity	1,997	0.11
Male, 30 years, heavy activity	3,759	0.21
Female, 30 years, moderate activity	2,403	0.13
Male, 16 years, heavy activity	3,980	0.22
Female, 7 years, moderate activity	1,768	0.10
Male, 3 years, moderate activity	1,553	0.08
<i>Total</i>	<i>18,150</i>	<i>1.00</i>

Source: Nutrition Centre, Department of Health

Before the proportions in the diet could be applied to the HIES data, some assumptions were made about the age group each 'person' represented. These are shown in Table 2. Future analysis could refine these proportions (in particular, that used for females aged 10 – 19 should be revised because energy etc. needs change quite markedly during these years).

**Table 2: Household members, energy requirements and the cost of the diet (tala per week)**

<i>Diet costs (4 adults, 3 children)</i>	<i>Age group and sex in data</i>	<i>Proportion of household's energy needs</i>	<i>Weekly Food Cost (SAT)</i>
Male, 65 years, light to moderate activity	Male 50 +	0.15	22.59
Female, 65 years, light to moderate activity	Female 50 +	0.11	16.77
Male, 30 years, heavy activity	Male 20 - 49	0.21	31.57
Female, 30 years, moderate activity	Female 49	0.13	20.18
Male, 16 years, heavy activity	Male 10 - 19	0.22	33.43
Female, 7 years, moderate activity	Female 10 - 19	0.10	14.85
Male, 3 years, moderate activity	Male/Female 0 - 9	0.08	13.04
<i>Total</i>		<i>1.00</i>	<i>SAT 152.43</i>

For each household in the HIES total household food expenditure was calculated at the request of the HIES Steering Committee on a daily basis. Note that the data presented here includes expenditure on alcohol and tobacco as 'food'. Other tables were prepared which excluded alcohol and tobacco from food (available from the Statistics Department). Alcohol and tobacco constituted 2.5% of total household expenditure in the HIES. For the survey period, industry sales were estimated 4 - 5% higher than this (ie between 6.5 – 7.5% of total household expenditure).

The diet was applied to the data using the proportions based on age and sex from the "standard" family. For example, if a household comprised one male, aged 44 years, he would have been given a 'rating' of 0.21, and the required expenditure on food would have been SAT 31.57 for



one week. If this person spent less than SAT 31.57 per week on food, he would be said to be in food poverty.

Likewise, if a household comprised two male adults aged 57 and 38; two female adults aged 34 and 24; two male children aged 15 and 12; and two female children aged 14 and 5, the diet requirements and weekly food cost for the household would be:

Household member	proportion of diet (requirements)	cost of food needs (SAT)
Male, 57	0.15	22.59
Male, 38	0.21	31.57
Female, 34	0.13	20.18
Female, 24	0.13	20.18
Male, 15	0.22	33.43
Male, 12	0.22	33.43
Female, 15	0.10	14.85
Female, 5	0.08	13.04
Total	1.24	SAT 189.27

So the total cost this household would have been expected to pay for its weekly food was SAT 189.27. If the household spent less than this on food, they would have been included in 'food poverty'.

### Basic needs poverty line

The basic needs poverty line is used to identify households which cannot afford the basic minimum nutritionally adequate and palatable diet as well as essentials for life transport, energy (electricity, kerosene and wood), health, education, water and housing. The basic needs were adjusted for household composition using the same 'ratings' used for their food requirements.

**The basic needs poverty line was SAT 183.73.** It was based on the diet for a family of four adults and three children as well as minimum costs for transport, energy, health, education, water and housing.

In Samoa the basic needs items were priced at minimum levels. For example, the health cost was based on one visit to a hospital clinic per week at SAT 2.00, with a SAT 1.00 prescription cost. In the Fiji study it was found that the basic needs increased the cost of the food needs (diet) by one third. The cost of the basic needs in Samoa increased the cost of the diet by 20%. Future studies could refine the pricing and add other essentials, such as clothing.





**Table 3: Cost of basic needs items (SAT per week)**

<i>Basic need item</i>	<i>Weekly estimate (SAT)</i>
Transport	5.00
Energy	7.50
Health	3.00
Education	5.00
Water	2.80
Housing	8.00
<i>Total basic needs cost</i>	<i>SAT 31.30</i>
<i>Total diet cost</i>	<i>SAT 152.43</i>
<b><i>Basic needs poverty line</i></b>	<b><i>SAT 183.73</i></b>

Note that total household expenditure was used for the basic needs poverty analysis. Total household expenditure would not necessarily include only food and the basic needs identified here – it would include other expenditure such as church donations, special events (*fa'alavelave*) entertainment and leisure, furniture and consumer durables etc. It also includes cash and credit expenditure.

### **Relative Poverty**

The characteristics of the poorest households in Samoa were analysed based on standardised household expenditure data. If the data was not adjusted, small households would have the lowest daily total expenditure because typically these households spend less than larger households do. A more accurate analysis of household expenditure is obtained by 'standardising' the data using adult male equivalent expenditure. Usually in relative poverty analysis the characteristics of the lowest 20% income or expenditure households are described. This is known to be arbitrary in that these households might not necessarily consider themselves to be poor, and some households with income or expenditures above this amount might consider themselves to be poor. However, it is generally accepted that the lowest 20% of households, whether measured in terms of income or expenditure, are poor. Note that this analysis also assumes that household expenditure is for the equal benefit of all household members, which may or may not be the case in reality.

The household data was converted to total daily adult male equivalent expenditure to control for household size affects (note that Tables 1 – 3 present weekly data). Total daily basic needs expenditure was divided by 4.51 (the cost of adult male daily food needs expenditure) to get the adult male equivalents in each household. Total daily expenditure for the household was then divided by the adult male equivalents to get the daily total expenditure for each adult male equivalent in the household. Future studies could refine the method used to derive person equivalents (by using all the person costs for daily food needs, not just adult males) to control for household size. Future analysis could examine the demographic, social and economic characteristics of these households using the HIES data.

### **Results**

By way of introduction, Table 4 provides an overview of daily expenditure and income patterns. However, in the HIES survey there is no direct relationship between household expenditure and income because expenditures were collected over a two week and annual basis, and income was mostly collected on an annual basis.



From Table 4 it is clear that food is the largest proportion of total daily expenditure for households in Savaii (66%), followed by the Rest of Upolu (56%). The minimum amount reported for both daily food and total expenditure was SAT 0.87. The maximum amount reported for daily food expenditure was SAT 979.92, and that for total expenditure was SAT 1,807.42 – reasons for this include the households hosting a ‘special event’ (wedding or funeral) which increased their daily food expenditure, or the purchase of an expensive item like a car.

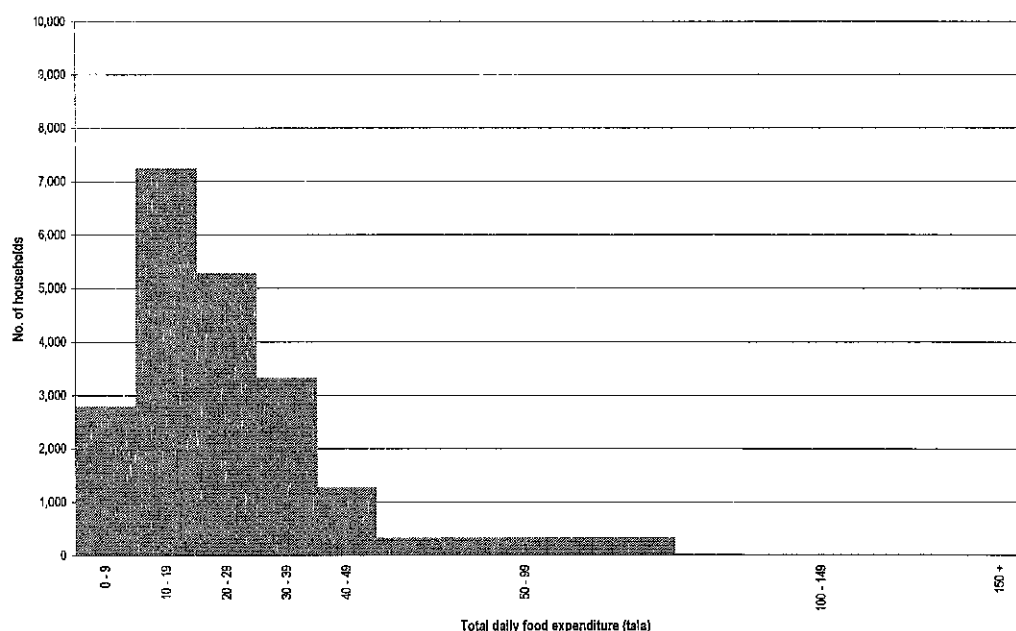
**Table 4: Average daily expenditures and income by region, 1997 HIES (Samoan Tala)**

	Total	AUA	NWU	ROU	SAV
Average household daily food expenditure	27.50	28.76	28.29	28.30	25.11
Average household daily non-food expenditure	23.78	36.71	26.12	22.43	13.14
Average household daily total expenditure	51.28	65.47	54.41	50.73	38.25
Proportion of food spending of total expenditure	53.6%	43.9%	52.0%	55.8%	65.6%
Average household daily total income	42.50	57.87	49.53	35.36	31.16
Difference between daily income and total expenditure	-8.78	-7.6	-4.88	-15.37	-7.09

Table 4 also shows that in all regions total daily expenditure exceed total daily income, with the largest difference occurring in the Rest of Upolu. Future studies could find out the reason for this.

Figures 2 and 3 show the comparison between daily food and non-food expenditure. For non-food items the largest single group of households spent between SAT 0.00 – 9.00 (over 9,000 households), whereas for food the largest group spent between SAT 10.00 – 19.00 per day (over 7,000 households).

**Figure 2: Total daily food expenditure (Samoan Tala)**



**Figure 3: Total daily expenditure on non-food items (Samoan Tala)**

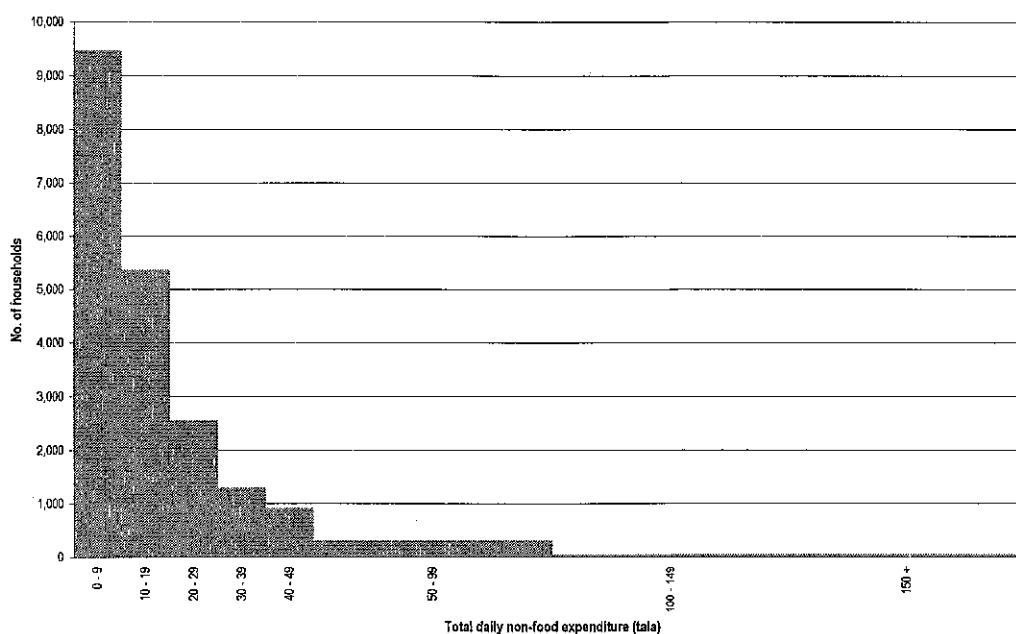
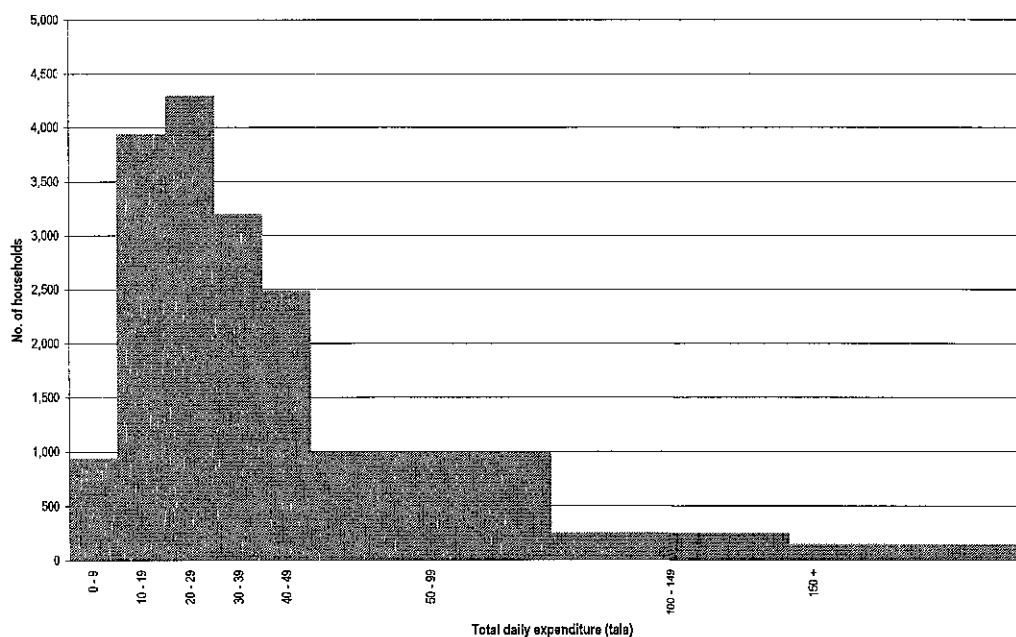


Figure 4 shows the distribution of total daily expenditure<sup>3</sup> - clearly most household's total daily expenditure is between SAT 10.00 – 49.00 per day. The largest single group is total expenditure of SAT 20.00 – 29.00 per day – not surprising from the distributions in Figures 2 and 3. A small number of households spent in excess of SAT 100.00 per day during the survey period – this could have been caused by a large expenditure, such as a car purchase, or a *fa'alave* (funeral, wedding, party etc).

**Figure 4: Total daily expenditure (Samoan Tala)**



<sup>3</sup> Note that the maximum on the vertical axis is 5,000 – half that of Figures 2 and 3.



## Food poverty line

### Summary of findings

- ☐ Overall, 48% of households did not have sufficient daily food expenditure to meet the dietary requirements of the household.
- ☐ Large households were more likely to be in food poverty.
- ☐ The majority of households which used rain water as their main water source had daily food expenditure less than that required.
- ☐ Households which used electricity or gas as their main cooking fuel were more likely to have daily food expenditure surplus to requirements than households using kerosene or wood.
- ☐ Over half the households using pit toilets had daily food expenditure less than that required.
- ☐ Female headed households were, overall, more likely to have daily food expenditure surplus to requirements compared with male headed households.
- ☐ The employment status of the household head indicated that if the household head was not in paid employment there was more chance that the household had daily food expenditure less than that required.
- ☐ 54% of households where the head was a farmer, planter or fisherman had a daily food expenditure deficit, implying that 'subsistence affluence' seems to be declining.

Table 5 compares total daily household food expenditure with food requirements. Overall, 48.2% of households were in food poverty. The region with the largest proportion of total households in food poverty was Savaii with 15.6%, (55% of the households in Savaii in food poverty). In part this could be due to data quality issues, in particular under-reporting of food in the diaries. Analysis of the expenditure diaries from Savaii showed less 'home produce' consumption than anticipated. However, some sort of follow up survey or study would be required to validate this anecdotal evidence.

The main finding from Table 5 is the pattern of poverty in Samoa – clearly rural areas are more 'at risk' to poverty than the Apia Urban Area, although a significant proportion of households in Apia – 39% – were not spending enough on food to meet the food requirements of the household.



**Table 5: Daily household food expenditure (deficit or surplus) and food requirements**

<i>Difference between daily food expenditure and food requirements (SAT)</i>	<i>Region</i>				<i>Total</i>
	<i>AUA</i>	<i>NWU</i>	<i>ROU</i>	<i>SAV</i>	
30 or more needed	80	101	121	134	436
25 - 29 needed	40	81	54	101	275
20 - 24 needed	150	202	134	213	699
15 - 19 needed	230	252	308	347	1,138
10 - 14 needed	320	554	389	740	2,003
5 - 9 needed	500	716	831	986	3,033
1 - 4 needed	510	635	898	874	2,917
0 - 4 surplus	740	635	751	919	3,045
5 - 9 surplus	540	554	684	740	2,518
10 - 14 surplus	520	464	550	359	1,892
15 - 19 surplus	310	252	308	191	1,061
20 or more surplus	770	887	563	572	2,791
<b>Total households</b>	<b>4,709</b>	<b>5,331</b>	<b>5,591</b>	<b>6,175</b>	<b>21,807</b>
<b>Households in daily food poverty</b>	<b>1,830</b>	<b>2,540</b>	<b>2,735</b>	<b>3,396</b>	<b>10,500</b>
<b>Percent total h/holds in food poverty</b>	<b>8.4%</b>	<b>11.6%</b>	<b>12.5%</b>	<b>15.6%</b>	<b>48.2%</b>
<b>Percent region h/holds in food poverty</b>	<b>38.9%</b>	<b>47.6%</b>	<b>48.9%</b>	<b>55.0%</b>	<b>48.2%</b>

There are three possible explanations for those households requiring SAT 30 or more to meet their food requirements. The first explanation is that these households are very poor and need some sort of assistance to maintain basic nutritional food levels. The second explanation is that these households did not complete the expenditure diaries accurately and under-reported their food consumption. Finally, the criteria used to derive the household's food requirements could have been inaccurate.

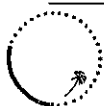
Just over one quarter of households – 27.3% – require between SAT 1.00 – 9.00 to meet their daily food requirements and most of these households are in the Rest of Upolu or Savaii. A further quarter of households have a SAT 0 – 9.00 surplus in daily food expenditure. This means just over half of all households are at risk to food poverty.

Even those households with a food expenditure surplus are at risk to poverty – especially those with a small surplus in expenditure. A poor growing season, loss of employment, natural disaster or 'one more mouth to feed' could push these households into poverty.

Also note that those households with large food expenditure surplus's could have hosted a wedding or funeral or another special event during the survey period – the large surplus in food expenditure might not be the norm for these households. In fact, they could have taken out a loan to enable this expenditure, with implications for future food security capacity.

### Characteristics of households

A series of tables were prepared with the characteristics of households in food poverty to see if there were any characteristics that could be used to identify households at risk to poverty. Note that detailed tables by region are included in Attachment 2. Any discussion about the different regions is based on data in Attachment 2. Table 6 shows the size of households by food requirements.

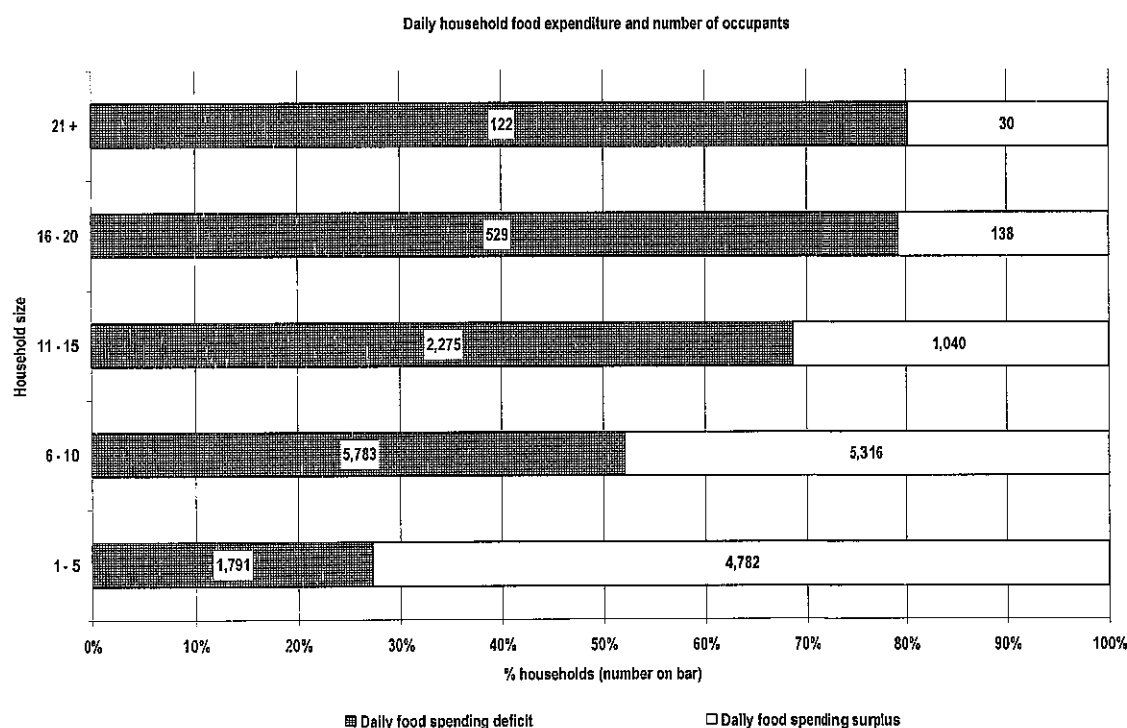


**Table 6: Daily household food expenditure (deficit or surplus) and number of occupants**

Daily food expenditure Deficit / surplus (SAT)	Number of occupants					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
30 or more needed			184	194	58	436
25 - 29 needed		32	221	11	10	275
20 - 24 needed		291	322	76	10	699
15 - 19 needed	10	655	395	67	10	1,138
10 - 14 needed	99	1,368	444	73	20	2,003
5 - 9 needed	584	1,952	412	85		3,033
1 - 4 needed	1,099	1,485	296	23	13	2,917
0 - 4 surplus	1,488	1,370	187			3,045
5 - 9 surplus	1,024	1,247	217	30		2,518
10 - 14 surplus	718	999	144	30		1,892
15 - 19 surplus	577	383	101			1,061
20 or more surplus	975	1,317	391	78	30	2,791
Total	6,574	11,099	3,315	667	152	21,807

Table 6 clearly shows that large households are the most likely to be in food poverty. Of the 3,315 households with 11 – 15 occupants, 2,274 or 69% had a daily food expenditure deficit. For households with 16 – 20 occupants, 529 or 79% had a daily food expenditure deficit; and 80% of households with over 21 occupants had a daily food expenditure deficit. This is shown in Figure 5.

**Figure 5: Daily household food expenditure (deficit or surplus) and number of occupants**



For households with more than 10 occupants, in Savaii 73% were in food poverty, compared with 70% in North West Upolu, and 68% in Apia and the Rest of Upolu. It is thought that this was partly caused by large households under-reporting food expenditure in the diaries, in particular



'home grown' items, but further studies would have to verify this. Nevertheless, the evidence for significant food poverty in large households is compelling.

**Table 7: Daily household food expenditure (deficit or surplus) and main source of water**

<i>Daily food expenditure deficit / surplus (SAT)</i>	<i>Water supply</i>			<i>Rain</i>	<i>Other</i>	<i>Total</i>
	<i>Piped water exclusive</i>	<i>Piped water shared</i>	<i>River / lake / well</i>			
30 or more needed	288	88	25	35		436
25 - 29 needed	198	45	21	11		275
20 - 24 needed	511	95	11	82		699
15 - 19 needed	848	110	70	110		1,138
10 - 14 needed	1,268	362	175	198		2,003
5 - 9 needed	1,927	497	239	358	11	3,033
1 - 4 needed	1,883	602	148	273	11	2,917
0 - 4 surplus	2,153	462	199	231		3,045
5 - 9 surplus	1,945	252	160	160		2,518
10 - 14 surplus	1,441	229	85	136		1,892
15 - 19 surplus	773	114	35	128	11	1,061
20 or more surplus	2,414	146	38	180	13	2,791
<i>Total</i>	<i>15,648</i>	<i>3,004</i>	<i>1,206</i>	<i>1,902</i>	<i>47</i>	<i>21,807</i>

Table 7 shows that 44% of households with exclusive piped water had food expenditure deficits. Households sharing piped water as their main water source had the highest proportion of food poverty – 60% or 1,799 of these households had a daily food expenditure deficit. This compares with 57% or 689 households using rivers, lakes or wells and 1,067 or 56% of households using rain water.

It is difficult to make generalisations about relationships between source of water and poverty in Samoa, because of the poor quality of piped water in some areas of Apia and some households preferring spring, river or rain water. Approximately one quarter of households in Savaii (28%) and the Rest of Upolu (23%) did not use piped water (exclusive or shared). In Apia and North West Upolu this dropped to 3% and 4% respectively. This in part reflects progress made by the Government and donors in water supply projects in Apia and North West Upolu.



**Table 8: Daily household food expenditure (deficit or surplus) and main type of lighting**

<i>Daily food expenditure deficit / surplus (SAT)</i>	<i>Main type of lighting</i>			<i>Total</i>
	<i>Electricity</i>	<i>Spirit / Kerosene</i>	<i>Other</i>	
30 or more needed	436			436
25 - 29 needed	275			275
20 - 24 needed	665	34		699
15 - 19 needed	1,066	71		1,138
10 - 14 needed	1,788	215		2,003
5 - 9 needed	2,609	414	10	3,033
1 - 4 needed	2,603	301	13	2,917
0 - 4 surplus	2,642	402		3,045
5 - 9 surplus	2,334	183		2,518
10 - 14 surplus	1,737	154		1,892
15 - 19 surplus	989	72		1,061
20 or more surplus	2,737	55		2,791
<i>Total</i>	<i>19,883</i>	<i>1,901</i>	<i>23</i>	<i>21,807</i>

There was no clear pattern about electricity use and food poverty, although 1,035 or 54% of households with spirit or kerosene lighting were in food poverty compared with 9,442 or 47% of households with electric lighting. In terms of a regional pattern for electric lighting, Apia had the lowest proportion of households with electric lighting in food poverty – 1,760 households or 39%; and Savaii had the highest with 3,149 (55%) households using electric lighting with a daily food expenditure deficit. The Rest of Upolu had the highest proportion of households using spirit or kerosene lighting with a daily food expenditure deficit, at 62% or 496 households.

**Table 9: Daily household food expenditure (deficit or surplus) and main type of cooking fuel**

<i>Daily food expenditure Deficit / surplus (SAT)</i>	<i>Main type of cooking fuel</i>					<i>Total</i>
	<i>Electricity</i>	<i>Gas</i>	<i>Kerosene</i>	<i>Wood</i>	<i>Other</i>	
30 or more needed				426	10	436
25 - 29 needed			20	255		275
20 - 24 needed		30	20	648		699
15 - 19 needed	10	51	155	921		1,138
10 - 14 needed	10	64	206	1,713	10	2,003
5 - 9 needed	61	110	299	2,519	43	3,033
1 - 4 needed	33	108	365	2,400	11	2,917
0 - 4 surplus	103	201	613	2,106	22	3,045
5 - 9 surplus	70	270	390	1,764	23	2,518
10 - 14 surplus	103	236	278	1,230	45	1,892
15 - 19 surplus	50	175	178	644	13	1,061
20 or more surplus	117	491	593	1,567	23	2,791
<i>Total</i>	<i>557</i>	<i>1,736</i>	<i>3,118</i>	<i>16,193</i>	<i>202</i>	<i>21,807</i>

Table 9 clearly shows that households in food poverty were less likely to use electricity or gas for cooking compared with households with a food expenditure 'surplus'. For the households using wood, 8,882 or 55% had a daily food expenditure deficit. For all 10,501 households with a daily food expenditure deficit, 84% or 8,882 households used wood as their main cooking fuel.





In Apia, 59% of households using wood as their main cooking fuel had a daily food expenditure deficit. This compares with 57% in Savaii, 54% in North West Upolu and 52% in the Rest of Upolu.

**Table 10: Daily household food expenditure (deficit or surplus) and type of toilet**

<i>Daily food expenditure deficit / surplus (SAT)</i>	<i>Type of toilet</i>				<i>Total</i>
	<i>Flush type</i>	<i>Pisikoa type*</i>	<i>Pit</i>	<i>Other</i>	
30 or more needed	129	233	74		436
25 - 29 needed	106	104	65		275
20 - 24 needed	205	332	161		699
15 - 19 needed	441	491	192	13	1,138
10 - 14 needed	613	881	508		2,003
5 - 9 needed	1,068	1,160	745	60	3,033
1 - 4 needed	1,195	1,034	651	38	2,917
0 - 4 surplus	1,201	1,193	638	13	3,045
5 - 9 surplus	1,156	879	461	21	2,518
10 - 14 surplus	1,052	587	232	21	1,892
15 - 19 surplus	656	245	160		1,061
20 or more surplus	1,910	632	249		2,791
<i>Total</i>	<i>9,732</i>	<i>7,771</i>	<i>4,136</i>	<i>168</i>	<i>21,807</i>

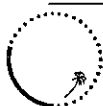
\* Water seal toilet

From Table 10, for households with a flush toilet, 5,975 or 61% had a daily food expenditure surplus. Pit or 'other' toilets are considered to be the lowest quality. For households with a pit toilet, 2,396 or 58% had a daily food expenditure deficit. Savaii had the largest proportion of households in food poverty using pit or other toilets, with 33% or 1,121 households. The Rest of Upolu followed with 24% or 644 households, then North West Upolu with 22% or 574 households. Apia had the lowest proportion using these two types of toilets, with 9% or 170 households.

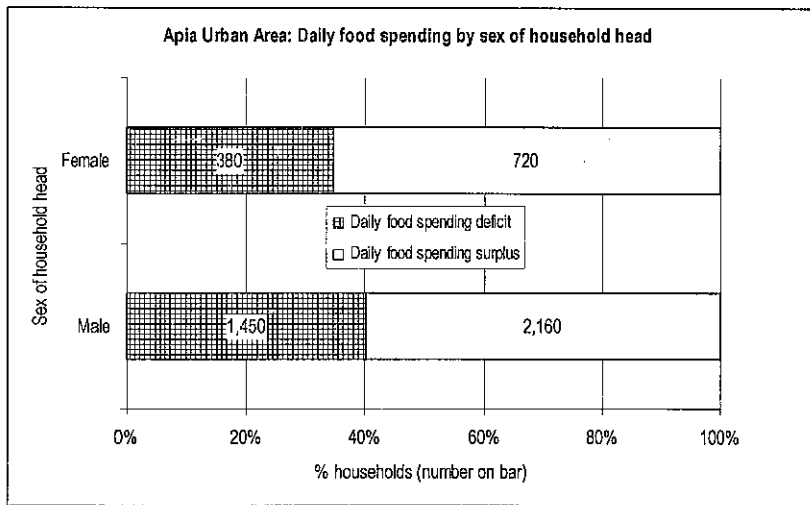
### Characteristics of household heads

Table 11 and Figure 6 (over) show the sex of household heads by their household's food expenditure deficit or surplus. It is difficult to define a direct relationship between the sex of the household head and poverty, because the demographic characteristics of the entire household should be analysed. Apia Urban Area has the highest proportion of female headed households with a food expenditure surplus at 66% (720 households) – which possibly reflects the increased opportunities to earn cash income in Apia compared with the rest of the regions which are more subsistence based.

In terms of female headed households only, almost half – 47% – in North West Upolu (433) and Savaii (415) were in food poverty. This dropped to 44% or 389 households in the Rest of Upolu and 34% or 380 households in Apia.

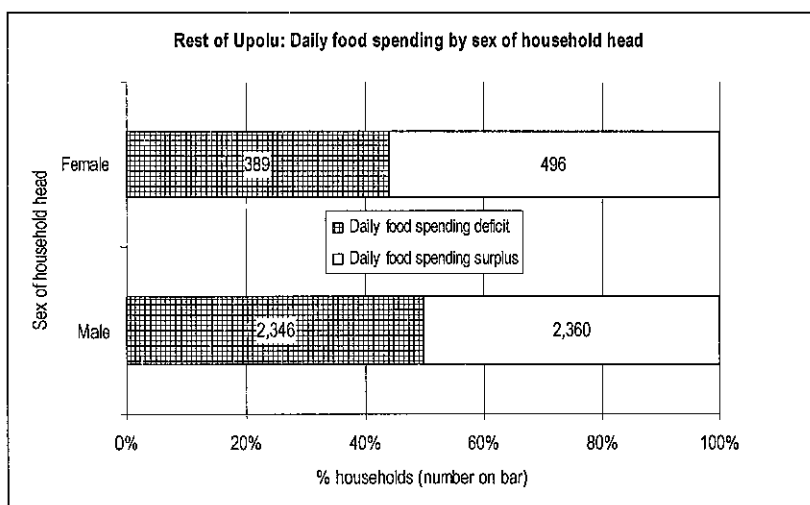
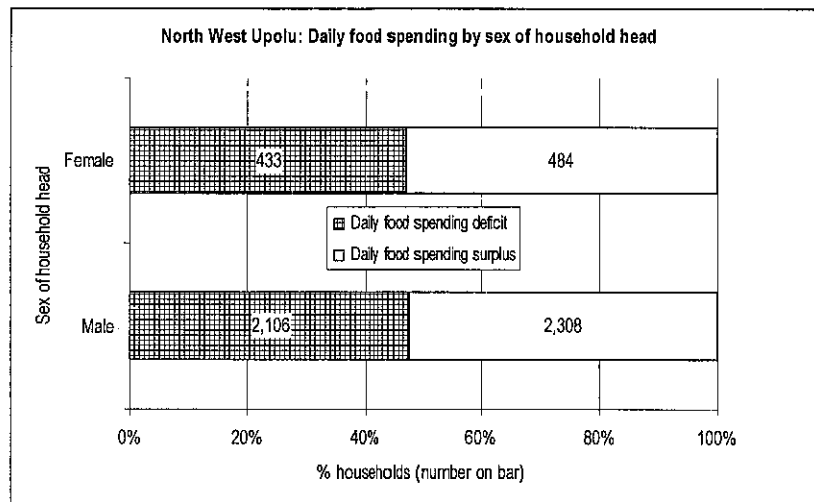


**Figure 6: Daily food expenditure (deficit or surplus) by region and sex of household head (Samoan Tala)**



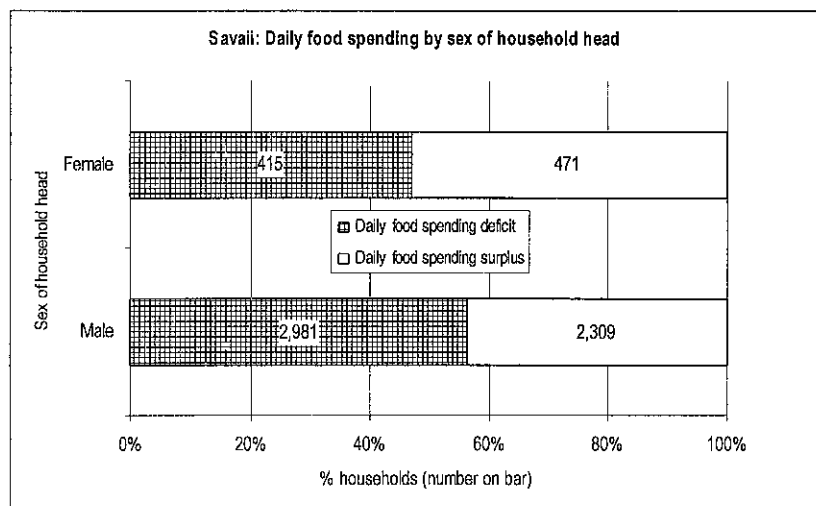
*A higher proportion of female headed households in Apia Urban Area had a food surplus (66%) compared with households headed by males (60%).*

*About the same proportion of female headed households in North West Upolu had a food surplus (53%) compared with households headed by males (52%).*



*A higher proportion of female headed households in the Rest of Upolu had a food surplus (56%) compared with households headed by males (50%).*

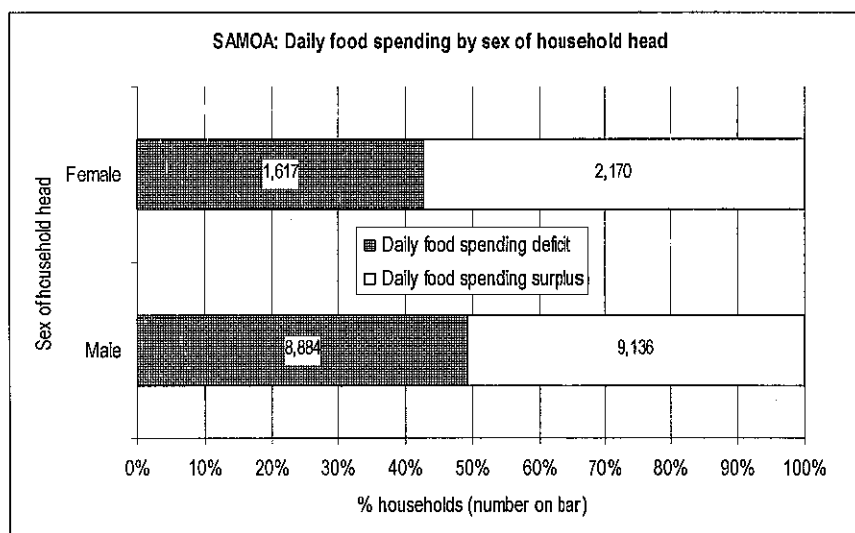




Over half of the households headed by women in Savaii had a food surplus (53%). In male headed households only 43% had a food surplus.

Figure 6 shows that, generally, households headed by women were LESS likely to be in food poverty than households headed by men. This is clearly seen in Figure 7, where overall, 57% of households headed by women had a food surplus. This compares with 51% of male headed households with a food surplus.

**Figure 7: Daily food expenditure (deficit or surplus) by sex of household head (Samoan tala)**



**Table 11: Daily household food expenditure (deficit or surplus) by region and sex of household head**

Daily food expenditure deficit / surplus (SAT)	Region and sex of household head										Total		
	AUA			NWU			ROU			SAV			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male		Female	Total
30 or more needed	60	20	80	81	20	101	107	13	121	101	34	134	436
25 - 29 needed	10	30	40	81		81	40	13	54	90	11	101	275
20 - 24 needed	110	40	150	171	30	202	94	40	134	202	11	213	699
15 - 19 needed	170	60	230	202	50	252	268	40	308	314	34	347	1,138
10 - 14 needed	280	40	320	474	81	554	335	54	389	684	56	740	2,003
5 - 9 needed	390	110	500	585	131	716	724	107	831	841	146	986	3,033
1 - 4 needed	430	80	510	514	121	635	778	121	898	751	123	874	2,917
0 - 4 surplus	600	140	740	514	121	635	603	147	751	762	157	919	3,045
5 - 9 surplus	410	130	540	443	111	554	523	161	684	639	101	740	2,518
10 - 14 surplus	350	170	520	393	71	464	483	67	550	280	78	359	1,892
15 - 19 surplus	260	50	310	212	40	252	255	54	308	123	67	191	1,061
20 or more surplus	540	230	770	746	141	887	496	67	563	504	67	572	2,791
Total	3,609	1,100	4,709	4,414	917	5,331	4,706	885	5,591	5,290	885	6,175	21,807

**Table 12: Daily household food expenditure (deficit or surplus) by sex and age group of household head**

Daily food expenditure deficit or surplus (SAT)	Age group and sex of household head												Total
	15-24		25-34		35-44		45-54		55-64		65+		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
30 or more needed					33		65		135	20	115	67	436
25 - 29 needed			10	10	20		77		69	23	44	21	275
20 - 24 needed	10				163		143	20	117	58	143	43	699
15 - 19 needed			31		197	23	191	25	265	72	269	65	1,138
10 - 14 needed	20		120	10	372	23	567	58	395	86	299	53	2,003
5 - 9 needed	13	10	347	44	662	30	513	63	508	124	496	223	3,033
1 - 4 needed	10		430	20	548	82	535	69	541	143	408	131	2,917
0 - 4 surplus	35		513	23	761	64	458	160	380	102	333	217	3,045
5 - 9 surplus			389	55	510	82	465	134	343	115	309	117	2,518
10 - 14 surplus	54		126	25	414	65	272	85	285	87	354	125	1,892
15 - 19 surplus	10		189	13	213	21	132	34	213	52	93	90	1,061
20 or more surplus	13		278	10	506	86	578	108	520	114	391	187	2,791
Total	165	10	2,432	210	4,400	476	3,996	755	3,772	996	3,254	1,340	21,807

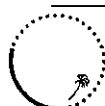
Table 12 shows where the household head was aged over 55 years, 51% of households were in food poverty compared with 48% for all ages. It is difficult to make any general conclusions about the age of the household head in Samoa, where traditionally the household is headed by the most senior male in the house, who is usually the eldest male.

Another feature from Table 12 is that 61% of households headed by persons aged less than 35 years had a food surplus. This implies that these 'younger' households are less at risk to food poverty than 'older' ones.

**Table 13: Daily household food expenditure (deficit or surplus) by sex and marital status of household head**

	Marital Status and sex of household head								
Daily food expenditure	Never married		Married		Separated / divorced		Widowed		Total
Deficit or surplus (SAT)	Male	Female	Male	Female	Male	Female	Male	Female	
30 or more needed			324		13	35	11	52	436
25 - 29 needed			209	10	11			45	275
20 - 24 needed		10	522	23	31		23	88	699
15 - 19 needed	21		866	10		37	66	137	1,138
10 - 14 needed	25	10	1,664	72		10	84	139	2,003
5 - 9 needed	51	21	2,344	81	10	76	134	315	3,033
1 - 4 needed	67	20	2,280	88	44	115	82	221	2,917
0 - 4 surplus	151	20	2,198	76	63	102	68	368	3,045
5 - 9 surplus	83	45	1,795	169	30	75	107	215	2,518
10 - 14 surplus	67	13	1,325	125	48	45	66	203	1,892
15 - 19 surplus	51	10	788	72		10	10	120	1,061
20 or more surplus	76	51	2,111	186	41	68	58	200	2,791
Total	592	201	16,426	912	292	572	710	2,102	21,807

Table 13 indicates that households headed by males or females who were 'never married' were more likely to have a food surplus than deficit with 72% of these households having a food surplus. Surprisingly, 50% of households where the household head was widowed had a food



surplus. Typically these households are vulnerable and at risk to poverty, and a higher proportion would be expected to be in food poverty. However, a large number of households headed by widows had a small daily food expenditure surplus (SAT 0 – 9) which does make them at risk to poverty. The prevalence of marriage is evident from Table 13, and approximately half of married household heads had a food expenditure surplus (51%).

The interesting feature from Table 13 is the proportion of female household heads divorced or separated with a daily food expenditure surplus – 52%. For both sexes, divorced or separated household heads were more likely to have a daily food expenditure surplus at 56%. For domestic or separated people, 58% stated that domestic duties were their main daily activity and 56% of this group were aged between 35 - 54 years.

Figure 8 shows the proportion (and number) of households with a food expenditure surplus or deficit by the main daily activity of the household head. The household heads with largest proportion of food expenditure surplus were either in full-time employment or self employed. The largest proportion of households with a food expenditure deficit were where the household head was retired (included in not applicable), where he or she was a farmer, planter or fisherman or domestic duties – a response sometimes given by people who are unemployed).

**Figure 8: Daily food expenditure (deficit or surplus) by main daily activity of household head (tala)**

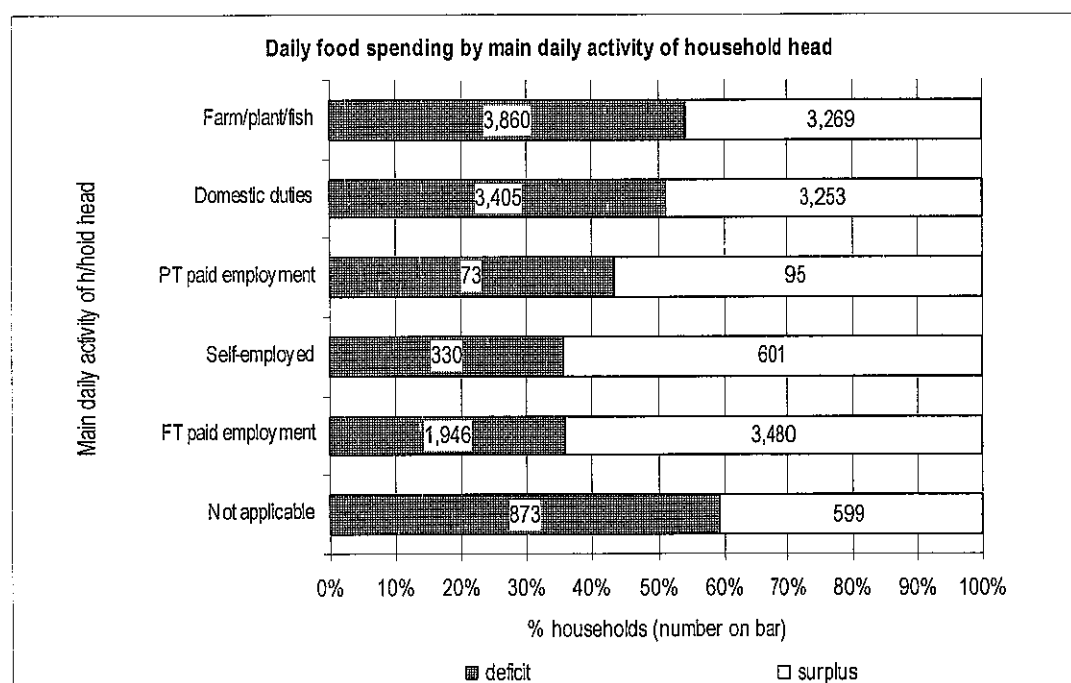
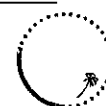


Table 14 (over) shows a more detailed break down of daily food expenditure and the main activity of the household head. For households where the head was a farmer, planter or fisherman 3,860 or 54% had a daily food expenditure deficit. This indicates that ‘subsistence affluence’ is not as prevalent as it once was (or was thought to be), although further studies would be needed to verify this. Where the head was ‘not applicable’ (includes retired), 873 or 59% had a daily food expenditure deficit.



**Table 14: Daily household food expenditure (deficit or surplus) by main daily activity and sex of household head**

Daily food expenditure deficit / surplus (SAT)	Main daily activity and sex														Total		
	FT paid employment		PT paid employment		Self-employed		Farm/plant/fish		Domestic duties		FT student		Unable to work			Not applicable	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		Male	Female
30 or more needed	11		10		10		116		154	66			47	21		436	
25 - 29 needed	41						81		78	55			20			275	
20 - 24 needed	83	13			20		309		108	98			57	10		699	
15 - 19 needed	196				41		347		253	173			117	11		1,138	
10 - 14 needed	332	10	21		92		768		415	178			145	32		2,003	
5 - 9 needed	466	30	30		44		1,175		635	361			190	103		3,033	
1 - 4 needed	721	44	11		114		1,054	10	471	361			88	30		2,917	
0 - 4 surplus	846	51	30		152		958		432	504			61	10		3,045	
5 - 9 surplus	674	85	21		65		855	13	273	350			127	45		2,518	
10 - 14 surplus	517	61			13		465		330	280	10		121	10		1,892	
15 - 19 surplus	302	22	20		61		281		149	159			37	20		1,061	
20 or more surplus	821	101	10		188		697		434	344			137	30		2,791	
Total	5,008	418	154	13	850	81	7,105	23	3,731	2,928	10	13	1,149	323		21,807	

Table 14 shows that households where the household head was in full-time employment or was self-employed were more likely to have a food expenditure surplus than deficit. For households where the head was in full-time employment, 64% or 3,479 households had a daily food expenditure surplus. For households where the head is self-employed, 65% or 600 households had a food expenditure surplus.

## Basic needs poverty line

### Summary of findings

- ☐ A total of 7,079 households (32%) did not have sufficient total daily household expenditure to meet their estimated basic needs requirements.
- ☐ Large households were more likely to have total daily household expenditure less than their basic needs requirements.
- ☐ Households with basic needs expenditure deficits were more likely not to have piped water for their exclusive use.
- ☐ Households which used electricity, gas or kerosene as their main cooking fuel were more likely to have daily total expenditure surplus to requirements than households using wood.
- ☐ Just over half the households with pit toilets had a daily basic needs expenditure deficit.

Table 15 compares total daily household expenditure with basic needs requirements. Overall, 32.5% of households were in basic needs poverty. This is approximately the global average – one third. However, the rural – urban distribution of basic needs poverty is of more concern. The region with the largest proportion of total households in basic needs poverty was Savaii with 12.9%, (46% of the households in Savaii were in basic needs poverty). This is higher than the global estimate for developing countries which is 37% (UNDP).

It must be noted that basic needs requirements have been compared with TOTAL household expenditure – future analysis could compare the requirements with the actual expenditure on the basic needs.

**Table 15: Daily household total expenditure (deficit or surplus) and basic needs requirements**

Daily basic needs expenditure deficit / surplus (SAT)	Region				Total
	AUA	NWU	ROU	SAV	
30 or more needed	20	81	40	112	253
25 - 29 needed	10	71	94	134	309
20 - 24 needed	70	101	107	134	413
15 - 19 needed	100	121	201	347	769
10 - 14 needed	140	322	268	639	1,369
5 - 9 needed	230	393	670	807	2,100
1 - 4 needed	220	363	644	639	1,865
0 - 4 surplus	340	494	510	672	2,016
5 - 9 surplus	430	443	536	650	2,060
10 - 14 surplus	370	504	469	437	1,780
15 - 19 surplus	290	373	375	325	1,363
20 or more surplus	2,490	2,066	1,676	1,278	7,509
<b>Total households</b>	<b>4,709</b>	<b>5,331</b>	<b>5,591</b>	<b>6,175</b>	<b>21,807</b>
<b>Households in basic needs poverty</b>	<b>790</b>	<b>1,451</b>	<b>2,025</b>	<b>2,813</b>	<b>7,079</b>
<b>Percent total h/holds in basic needs poverty</b>	<b>3.6%</b>	<b>6.7%</b>	<b>9.3%</b>	<b>12.9%</b>	<b>32.5%</b>
<b>Percent region h/holds in basic needs poverty</b>	<b>16.8%</b>	<b>27.2%</b>	<b>36.2%</b>	<b>45.6%</b>	<b>32.5%</b>





Once again, rural Samoa had the highest number and proportion of households in poverty.

There were 37% of households (8,041 households) in the range of SAT 9.00 needed to a SAT 9.00 surplus in basic needs requirements. Of these households, 3,965 or 49% had a basic needs deficit and 4,076 or 51% had a basic needs surplus.

### Characteristics of households

Once again a series of tables were prepared on the characteristics of households by their basic needs requirements and expenditure. These are presented here in summary form – given the concerns about comparing ‘basic needs’ requirements with total expenditure, detailed regional tables have not been included here (available from the Department of Statistics). The general trends and patterns in the basic needs tables are generally the same as those in the food poverty tables, with the following exceptions:

- ☐ There were less households with 10 or more occupants with a daily basic needs expenditure deficit.
- ☐ The basic needs analysis of main type of cooking fuel found that the majority of households had a surplus regardless of the main type of cooking fuel (those with wood as the main type of cooking fuel had a higher proportion of households with a daily food expenditure deficit). However, households using wood as their main cooking fuel were more likely to have a daily basic needs expenditure deficit, which is similar to that found in the food poverty analysis.

**Table 16: Daily household total expenditure (deficit or surplus) and number of occupants**

<i>Daily basic needs expenditure deficit / surplus (SAT)</i>	<i>Household size</i>					<i>Total</i>
	<i>1 - 5</i>	<i>6 - 10</i>	<i>11 - 15</i>	<i>16 - 20</i>	<i>21 +</i>	
30 or more needed			107	111	35	253
25 - 29 needed		65	192	51		309
20 - 24 needed		171	186	46	10	413
15 - 19 needed		500	190	66	13	769
10 - 14 needed	176	977	197	20		1,369
5 - 9 needed	581	1,229	249	31	10	2,100
1 - 4 needed	646	1,005	204	10		1,865
0 - 4 surplus	795	883	294	44		2,016
5 - 9 surplus	827	991	179	53	10	2,060
10 - 14 surplus	655	867	201	37	20	1,780
15 - 19 surplus	451	775	127	10		1,363
20 or more surplus	2,443	3,636	1,188	189	54	7,509
<i>Total</i>	<i>6,574</i>	<i>11,099</i>	<i>3,315</i>	<i>667</i>	<i>152</i>	<i>21,807</i>

Table 16 shows that larger households were more likely to have a basic needs expenditure deficit than smaller households. For households with 1 – 5 occupants, 5,171 or 79% had a daily basic needs expenditure surplus. There were 4,134 households with more than 10 occupants, and 1,728 or 42% of these had a daily basic needs expenditure deficit.



**Table 17: Daily household total expenditure (deficit or surplus) and main source of water**

Daily basic needs expenditure deficit / surplus (SAT)	Water supply			Rain	Other	Total
	Piped water exclusive	Piped water shared	River / lake / well			
30 or more needed	163	68	11	10		253
25 - 29 needed	163	98	25	22		309
20 - 24 needed	268	77	21	46		413
15 - 19 needed	491	75	76	128		769
10 - 14 needed	821	298	138	101	11	1,369
5 - 9 needed	1,230	427	230	213		2,100
1 - 4 needed	1,111	325	159	258	11	1,865
0 - 4 surplus	1,274	349	167	226		2,016
5 - 9 surplus	1,486	353	105	115		2,060
10 - 14 surplus	1,246	336	57	130	11	1,780
15 - 19 surplus	1,036	122	96	110		1,363
20 or more surplus	6,358	475	121	543	13	7,509
<i>Total</i>	<i>15,648</i>	<i>3,004</i>	<i>1,206</i>	<i>1,902</i>	<i>47</i>	<i>21,807</i>

Households with a basic needs deficit were more likely not to have exclusive piped water – 27% with exclusive piped water had a basic needs expenditure deficit compared with 32% for all types of water supply. Households with river, lake or well as their main source of water had the highest proportion with a daily basic needs expenditure deficit, with 660 households or 55%.

**Table 18: Daily household total expenditure (deficit or surplus) and main type of lighting**

Daily basic needs expenditure deficit / surplus (SAT)	Main type of lighting		Other	Total
	Electricity	Spirit / Kerosene		
30 or more needed	253			253
25 - 29 needed	299	10		309
20 - 24 needed	376	37		413
15 - 19 needed	720	49		769
10 - 14 needed	1,115	255		1,369
5 - 9 needed	1,679	422		2,100
1 - 4 needed	1,609	243	13	1,865
0 - 4 surplus	1,782	234		2,016
5 - 9 surplus	1,911	149		2,060
10 - 14 surplus	1,620	161		1,780
15 - 19 surplus	1,267	96		1,363
20 or more surplus	7,253	246	10	7,509
<i>Total</i>	<i>19,883</i>	<i>1,901</i>	<i>23</i>	<i>21,807</i>

There is a very clear relationship between the type of lighting and basic needs expenditure surplus or deficit from Table 18. Electric lighting is almost universal in Samoa. However, 53% or 1,016 of the households which used spirit or kerosene lighting had a daily basic needs expenditure deficit, whereas only 30% of those using electric lighting had a basic needs expenditure deficit. The proportion of households with spirit or kerosene lighting with a daily



basic needs expenditure deficit is very similar to the proportion with a daily food expenditure deficit. This implies that there is a correlation between spirit or kerosene lighting and poverty.

**Table 19: Daily household total expenditure (deficit or surplus) and main type of cooking fuel**

<i>Daily basic needs expenditure deficit / surplus (SAT)</i>	<i>Electricity</i>	<i>Main type of cooking fuel</i>				<i>Total</i>
		<i>Gas</i>	<i>Kerosene</i>	<i>Wood</i>	<i>Other</i>	
30 or more needed			10	243		253
25 - 29 needed			10	299		309
20 - 24 needed			10	402		413
15 - 19 needed			30	739		769
10 - 14 needed		21	116	1,219	13	1,369
5 - 9 needed		47	160	1,874	20	2,100
1 - 4 needed		30	194	1,631	10	1,865
0 - 4 surplus	31	20	222	1,742		2,016
5 - 9 surplus	63	61	263	1,629	42	2,060
10 - 14 surplus	32	108	294	1,335	10	1,780
15 - 19 surplus	20	179	218	935	11	1,363
20 or more surplus	410	1,270	1,590	4,145	95	7,509
<i>Total</i>	<i>557</i>	<i>1,736</i>	<i>3,118</i>	<i>16,193</i>	<i>202</i>	<i>21,807</i>

From Table 19 there is a clear pattern for households with a basic needs expenditure surplus to use electricity or gas as the main type of cooking fuel. All households using electricity had a basic needs expenditure surplus and 94% of households using gas had a surplus. A large majority of households using kerosene also had a basic needs surplus – 83%. Wood users were much less likely to have a surplus, at 60%.

Overall, this distribution is different from that found for daily food expenditure deficit or surplus, with the majority of households having a surplus in daily basic needs expenditure. However, the finding that wood users were more likely to have a daily basic needs expenditure deficit is similar to that found in the food poverty analyse.

Table 20 compares basic needs requirements expenditure with the household's type of toilet. For households with a basic needs requirements deficit, 1,623 households had a flush toilet (17% of households with a flush toilet), compared with 41% of households with a pisikoa toilet and 53% of households with a pit toilet. The proportion of households with a pit toilet and a daily basic needs expenditure deficit is similar to that with a daily food expenditure deficit.



**Table 20: Daily household total expenditure (deficit or surplus) and type of toilet**

<i>Daily basic needs expenditure deficit / surplus(SAT)</i>	<i>Flush type</i>	<i>Type of toilet</i>			<i>Total</i>
		<i>Pisikoa type*</i>	<i>Pit</i>	<i>Other</i>	
30 or more needed	53	158	43		253
25 - 29 needed	46	145	118		309
20 - 24 needed	122	205	86		413
15 - 19 needed	142	384	231	13	769
10 - 14 needed	332	567	456	13	1,369
5 - 9 needed	441	910	686	63	2,100
1 - 4 needed	487	792	562	25	1,865
0 - 4 surplus	633	951	432		2,016
5 - 9 surplus	1,039	702	309	10	2,060
10 - 14 surplus	776	674	319	11	1,780
15 - 19 surplus	588	527	227	21	1,363
20 or more surplus	5,073	1,756	669	11	7,509
<i>Total</i>	<i>9,732</i>	<i>7,771</i>	<i>4,136</i>	<i>168</i>	<i>21,807</i>

\* Water seal toilet

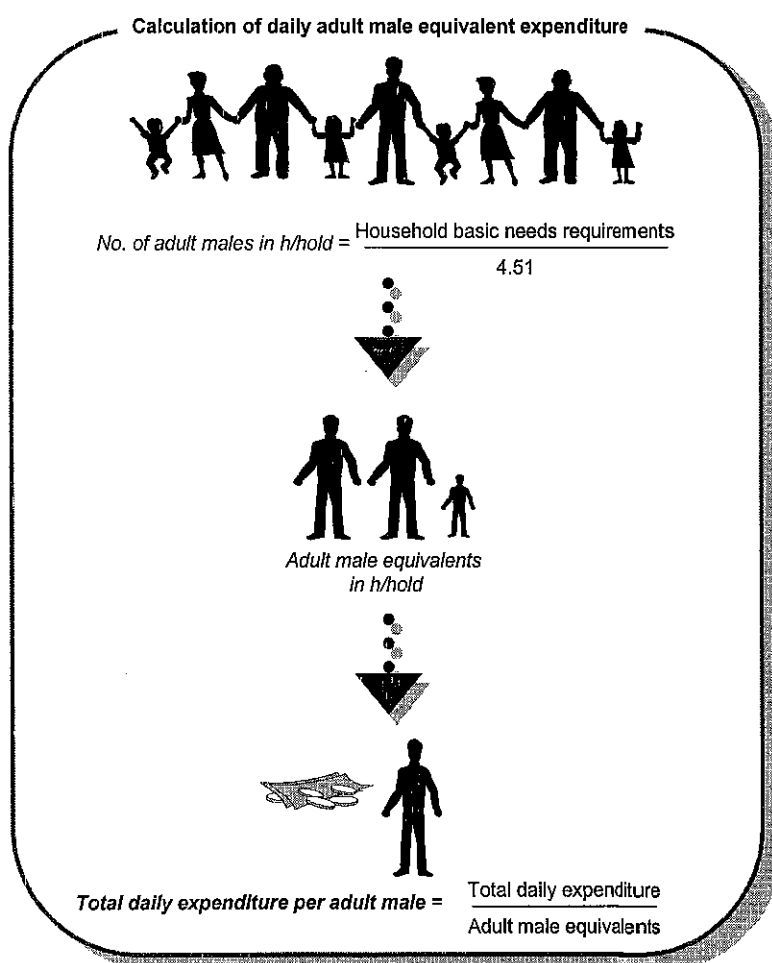


## Characteristics of lowest 20% total daily expenditure households

The characteristics of the poorest households in Samoa were based on standardised household expenditure data. Usually in relative poverty analysis the characteristics of the lowest 20% income or expenditure households are described. Note that this type of analysis assumes that household expenditure is for the equal benefit of all household members, which may or may not be the case in reality.

The household data used in this analysis has been converted to “total daily adult male equivalent expenditure” to control for household size affects. If the data was not adjusted, small households would have the lowest daily total expenditure because typically these households spend less than larger households. A more accurate analysis of household expenditure is obtained by ‘standardising’ the data using adult male equivalent expenditure. Total daily basic needs expenditure was divided by 4.51 (the cost of adult male daily food needs expenditure) to get the adult male equivalents in each household. Total daily expenditure for the household was then divided by the adult male equivalents to get the daily total expenditure for each adult male equivalent in the household. Future studies could refine the method used to derive person equivalents (by using all the person costs for daily food needs, not just adult males) to control for household size. Future analysis could examine the demographic, social and economic characteristics of these households using the HIES data.

The process to derive the total daily male equivalents has been summarised in the following diagram:



**Table 21: Total daily household expenditure for adult male equivalents by region**

<i>Daily adult equiv. Expenditure (SAT)</i>	<i>AUA</i>	<i>NWU</i>	<i>ROU</i>	<i>SAV</i>	<i>Total</i>
0.01 - 4.99	1,030	1,774	2,360	3,228	8,391
5.00 - 9.99	1,730	2,006	2,132	2,073	7,940
10.00 - 14.99	810	756	577	415	2,557
15.00 - 19.99	520	333	215	258	1,325
20.00 - 29.99	330	272	147	134	884
30.00 - 39.99	160	141	27	11	339
40.00 - 49.99	90	10	40	22	163
50.00 - 99.99	40	30	67	22	160
100.00 +		10	27	11	48
<i>Total</i>	<i>4,709</i>	<i>5,331</i>	<i>5,591</i>	<i>6,175</i>	<i>21,807</i>

Table 21 shows the distribution of total daily male adult equivalent expenditure across the regions. Three quarters of households (75% or 16,331 households) spent less than SAT 10.00 for every adult male equivalent in the household. The largest single group were the households spending less than SAT 5.00 per day which represented 38% of all households.

The median household total daily expenditure per adult male equivalent was SAT 6.12. That is, 50% of households had total daily expenditure per adult male equivalent above this, value and 50% were below this value.

The 20<sup>th</sup> percentile is the daily expenditure that separates the 20% of households with the lowest daily expenditure from the rest of the households. The 20<sup>th</sup> percentile was SAT 3.39, so we say that 20% of households had total daily adult male equivalent expenditure less than SAT 3.39.

*Note that in the following discussion 'total daily household expenditure' means 'total daily adult male equivalent household expenditure'.*

Figure 9 shows the regional distribution of the lowest 20% total daily household expenditure, and once again total daily household expenditure was lowest in the rural areas. Savaii had the largest number of households in the lowest 20% of total daily expenditure, with 1,860 households. This represents 42% of all households in the lowest 20%. A further 25% of these households were in the Rest of Upolu, 20% were in North West Upolu and 9% were in Apia Urban Area.



**Figure 9: Lowest 20% of total daily expenditure households by region**

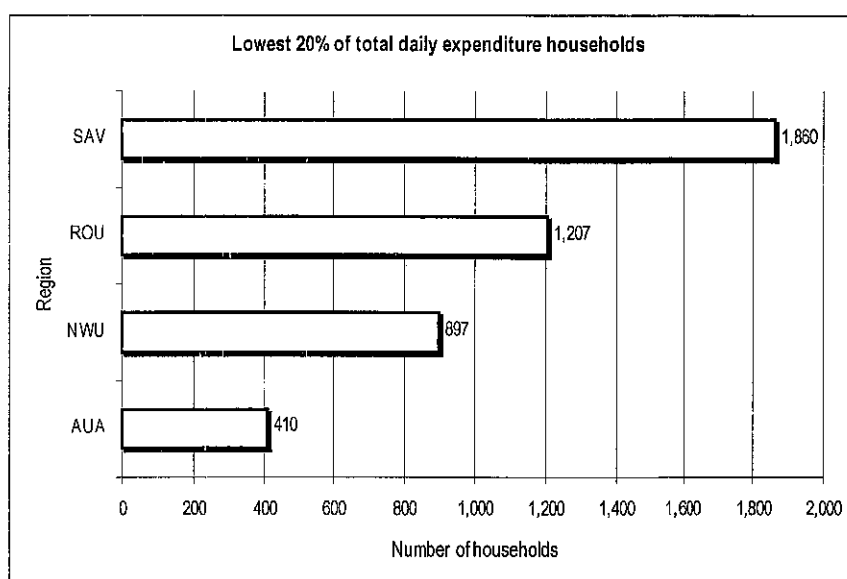
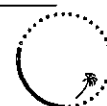


Table 22 shows the characteristics of the lowest 20% of total daily expenditure households in terms of household size and region. It shows that in Apia, North West Upolu and the Rest of Upolu approximately 50% of these lowest 20% households had between 6 – 10 occupants. In Savaii this increases to about 60%.

**Table 22: Lowest 20% of total daily household expenditure: total daily household expenditure by region and household size**

Total daily adult male equiv. /hold expenditure (SAT)	Household size and region														Total		
	1 - 5				6 - 10				11 - 15				16 +				
	AUA	NWU	ROU	SAV	AUA	NWU	ROU	SAV	AUA	NWU	ROU	SAV	AUA	NWU		ROU	SAV
T0.01 - T0.49	10																10
T0.50 - 0.99					10	50		34	20					11		11	137
T1.00 - 1.49	10	10	13	45	20	40		45	20	10	27	22		13	22	299	
T1.50 - 1.99	30 54 45				50 54 235				10	50	54	67	20	27	22	719	
T2.00 - 2.49	20	20	80	90	100	101	107	280	10	30	54	78	20	27	22	1,040	
T2.50 - 2.99	10	50	54	45	20	121	228	258	50	111	94	45		13	11	1,110	
T3.00 - 3.39	30	20	67	90	60	101	201	291	10	30	13	45	20	10	26	45	1,060
Total	80	131	268	314	210	464	590	1,143	100	252	241	269	20	40	80	123	4,374



**Table 23: Lowest 20% of total daily household expenditure: total daily household expenditure by water supply**

<i>Total daily adult male equiv. h/hold expenditure (SAT)</i>	<i>Water Supply</i>				<i>Rain</i>	<i>Other</i>	<i>Total</i>
	<i>Piped water exclusive</i>	<i>Piped water shared</i>	<i>River / lake / well</i>				
0.01 - 0.49					10		10
0.50 - 0.99	53	52			32		137
1.00 - 1.49	110	134	34		21		299
1.50 - 1.99	434	143	74		56	11	719
2.00 - 2.49	588	194	134		123		1,040
2.50 - 2.99	714	167	107		122		1,110
3.00 - 3.39	677	230	57		96		1,060
<i>Total</i>	<i>2,575</i>	<i>920</i>	<i>406</i>		<i>461</i>	<i>11</i>	<i>4,374</i>

Table 23 shows that (for the lowest 20% of total daily expenditure households) 46% of households with piped water exclusive spent less than SAT 2.50 per adult male equivalent per day. For households using rivers, lakes and wells as their source of water, 60% spent less than SAT 2.50 per adult male equivalent per day. Just over half of the households – 52% – which used rain water had total daily adult male equivalent expenditure of less than SAT 2.50.

**Table 24: Lowest 20% of total daily household expenditure: total daily household expenditure by main type of lighting**

<i>Total daily adult male equiv. h/hold expenditure (SAT)</i>	<i>Main type of lighting</i>		<i>Total</i>
	<i>Electricity</i>	<i>Spirit / Kerosene</i>	
0.01 - 0.49		10	10
0.50 - 0.99	127	10	137
1.00 - 1.49	274	25	299
1.50 - 1.99	621	97	719
2.00 - 2.49	785	255	1,040
2.50 - 2.99	969	141	1,110
3.00 - 3.39	893	168	1,060
<i>Total</i>	<i>3,668</i>	<i>706</i>	<i>4,374</i>

Table 24 shows that (for the lowest 20% of total daily expenditure households) about half of the households (49%) using electricity had total daily adult male equivalent expenditure less than SAT 2.50. For households using spirit or kerosene, 56% of households had total daily adult male equivalent expenditure less than SAT 2.50.





**Table 25: Lowest 20% of total daily household expenditure: total daily household expenditure by main type of cooking fuel**

<i>Total daily adult male equiv. h/hold expenditure (SAT)</i>	<i>Cooking fuel</i>				<i>Total</i>
	<i>Gas</i>	<i>Kerosene</i>	<i>Wood</i>	<i>Other</i>	
0.01 - 0.49			10		10
0.50 - 0.99		10	127		137
1.00 - 1.49		40	258		299
1.50 - 1.99		21	697		719
2.00 - 2.49		51	989		1,040
2.50 - 2.99	10	96	980	23	1,110
3.00 - 3.39	38	31	991		1,060
<i>Total</i>	<i>48</i>	<i>250</i>	<i>4,052</i>	<i>23</i>	<i>4,374</i>

From Table 25, over 90% of households (for the lowest 20% of total daily expenditure households) use wood as their main cooking fuel (note that no households use electricity). About half of the households using kerosene or wood had total daily adult male equivalent expenditure less than SAT 2.50.

**Table 26: Lowest 20% of total daily household expenditure: total daily household expenditure by type of toilet**

<i>Total daily adult male equiv. h/hold expenditure (SAT)</i>	<i>Type of toilet</i>				<i>Total</i>
	<i>Flush type</i>	<i>Pisikoa type*</i>	<i>Pit</i>	<i>Other</i>	
0.01 - 0.49			10		10
0.50 - 0.99	20	31	85		137
1.00 - 1.49	65	133	101		299
1.50 - 1.99	68	391	233	27	719
2.00 - 2.49	271	396	335	38	1,040
2.50 - 2.99	276	508	312	13	1,110
3.00 - 3.39	234	558	257	11	1,060
<i>Total</i>	<i>934</i>	<i>2,017</i>	<i>1,333</i>	<i>89</i>	<i>4,374</i>

\* Water seal toilet

Table 26 shows that (for the lowest 20% of total daily expenditure households) less than half the households with flush and pisikoa type toilets spend less than SAT 2.50 per adult male equivalent per day. However, for households with pit toilets, 57% spend less than this amount.



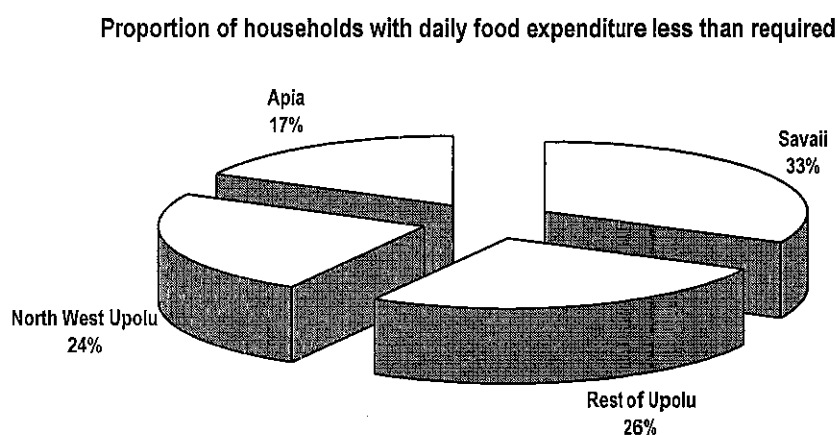
## Conclusions

### Food poverty

As with any poverty analysis, a number of assumptions were required to undertake this analysis, and these assumptions are critical to the analysis of results. In particular the diet provided by the Nutrition Centre, the costs of the items in the diet compared to the prices in the HIES data, the way the diet was based on proportions of energy requirements for a seven person household, and how these proportions affected the required food expenditure of each household. Future research could refine this method, and other studies (such as the proposed nutrition study) could be used to confirm the results of this study (or negate them).

According to this analysis, daily household expenditure on food was not sufficient to meet daily dietary requirements for 48.2% of households in Samoa. Figure 10 includes only the 10,501 households found to have insufficient daily food expenditure, one third or 33% were in Savaii; the Rest of Upolu and North West Upolu had approximately 25% each, and 17% were in Apia.

**Figure 10: Region of households with daily food expenditure less than that required**



The results of this analysis of daily food expenditure implies that policies and programmes should concentrate on basic food security in almost half the households in Samoa, but in particular in the rural areas and especially in Savaii. Also households headed by younger people (aged less than 35 years) were more likely to have a daily food expenditure surplus than households headed by older people. Finally, households where the household head had some form of gainful employment (paid work, self employed or farmers, planters or fishermen) were more likely to have a daily food expenditure surplus than household heads whose main daily activity was domestic duties or 'not applicable' (mostly retirees).

Overall, 48.2% of households were in food poverty. This is higher than the global average for absolute poverty measures – one third. However, the rural – urban distribution of food poverty is of more concern. The region with the largest proportion of households in basic needs poverty was Savaii with 15.6%, followed by the Rest of Upolu with 12.5%, North West Upolu with 11.6% and Apia with 8.4%.

Within Savaii 55% of households were in food poverty, within the Rest of Upolu 49% of households were in food poverty, within North West Upolu 48% were in food poverty, and 39%



of households in Apia were in food poverty. These proportions are higher than the global estimate for developing countries which is 37% for rural areas and 28% for urban areas (UNDP).

The main findings of the food poverty analysis were:

- ☐ Households headed by women were less likely to be in food poverty than those headed by men.
- ☐ Large households (more than 10 occupants) were more likely to be in food poverty than smaller households were.
- ☐ The majority of households which used piped water for their exclusive use as their main water source had daily food expenditure more than that required.
- ☐ Households which used electricity or gas as their main cooking fuel were more likely to have daily food expenditure surplus to requirements than households using kerosene or wood (particularly wood).
- ☐ Over half the households using pit toilets had daily food expenditure less than that required.
- ☐ The employment status of the household head indicated that if the household head was not in paid employment there was more chance that the household had daily food expenditure less than that required.
- ☐ 54% of households where the head was a farmer, planter or fisherman had a daily food expenditure deficit, implying that 'subsistence affluence' seems to be declining.

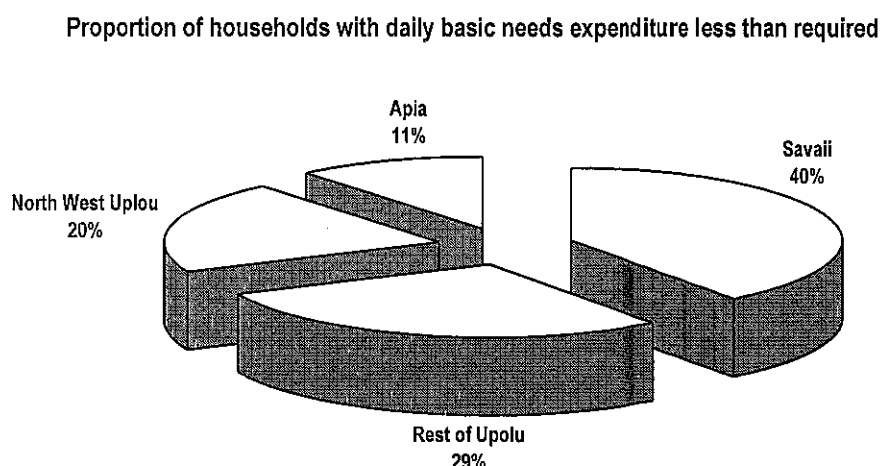
### **Basic needs poverty**

In addition to the concerns raised in the food poverty analysis, the basic needs poverty analysis has another warning – total household expenditure on ALL items was compared with basic needs requirements (food, transport, energy, health, education, water and housing). This means that expenditure on other items, such as entertainment, donations, furniture etc. has been included in total household expenditure. Future studies could compare actual basic needs expenditure with basic needs requirements.

According to this analysis, daily total household expenditure was not sufficient to meet daily basic needs requirements for 32.5% of households in Samoa. Figure 11 includes only the 7,079 households found to have insufficient daily basic needs expenditure; 40% were in Savaii (2,813 households); 29% were in the Rest of Upolu (2,025), 20% were in North West Upolu (1,451), and 11% were in Apia (790).



**Figure 11: Region of households with daily basic needs expenditure less than that required**



This implies that households in Savaii in particular are struggling for both food security and other essential household expenditures. However, there are a considerable number of households in rural Upolu which also need some sort of programme or policy assistance to increase money they have for food and basic needs expenditures. Other studies have highlighted ‘pockets of poverty’ in Apia, and while this study has found that Apia has the lowest incidence of basic needs poverty, more research is needed to define the characteristics of the ‘urban poor’ to target assistance.

Overall, 32.5% of households were in basic needs poverty. This is approximately the global average – one third. However, the rural – urban distribution of basic needs poverty is of more concern. The region with the largest proportion of households in basic needs poverty was Savaii with 12.9%, followed by the Rest of Upolu with 9.3%, North West Upolu with 6.7% and Apia with 3.6%.

Within Savaii 46% of households were in basic needs poverty, within the Rest of Upolu 36% of households were in basic needs poverty, within North West Upolu 27% were in basic needs poverty, and 17% of households in Apia were in basic needs poverty. All regions except Savaii were within the global estimates for developing countries, which is 37% for rural areas and 28% for urban areas (UNDP).

However, it is likely that the food poverty analysis provides a ‘truer’ picture of poverty in Samoa than the basic needs poverty analysis. This is because the basic needs analysis used total household expenditure rather than expenditure on food and other items essential for life. The household expenditure used here includes spending on items like church donations, the purchase of large items and consumer durables like cars etc. A more accurate basic needs poverty analysis would compare actual expenditure on the basic needs with the required spending.

The main findings of the basic needs poverty analysis were:

- ☐ Large households were more likely to have total daily household expenditure less than their basic needs requirements.
- ☐ Households with basic needs expenditure deficits were more likely not to have piped water for their exclusive use.

- ☐ Households which used electricity, gas or kerosene as their main cooking fuel were more likely to have daily total expenditure surplus to requirements than households using wood.
- ☐ Just over half the households with pit toilets had a daily basic needs expenditure deficit.
- ☐ Households using spirit or kerosene lighting were more likely to have a daily basic needs expenditure deficit compared with households using electric lighting.

### Relative poverty

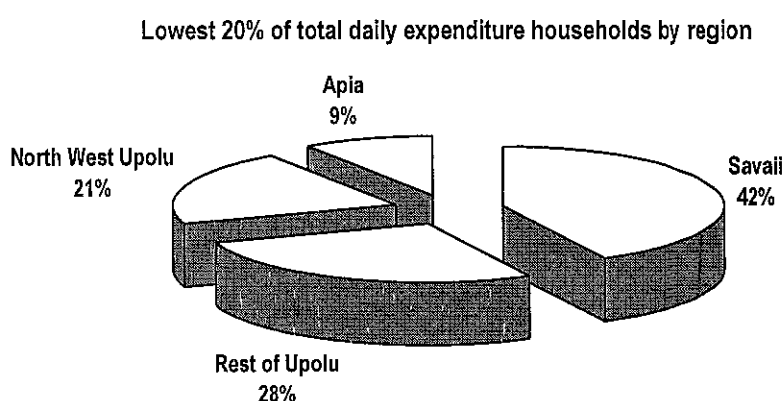
The characteristics of the poorest households in Samoa were based on standardised household expenditure data. Usually in relative poverty analysis the characteristics of the lowest 20% income or expenditure households are described, as stated in the method and results sections. This standard practise is somewhat arbitrary in that these households might not necessarily consider themselves to be poor, and some households with income or expenditures above this amount might consider themselves to be poor.

Total household expenditure data was standardised to take into account the different size of households – typically small households spend less than large households do. Note that this assumes that household expenditure is for all members because household expenditure was divided evenly all household members based on adult male equivalents.

The median total daily expenditure per adult equivalent using the standardised data was SAT 6.12 – that is 50% of households spent more than SAT 6.12 per day for each adult male equivalent, and 50% spent less. The lowest 20% of households spent SAT 3.39 per day for each adult male equivalent.

The relative poverty analysis once again highlighted the rural areas of Samoa as being vulnerable to poverty. Almost half of the households in the lowest 20% were in Savaii (42%), a further 28% were in the Rest of Upolu, 21% were in North West Upolu and 9% were in Apia urban area. This information is shown in Figure 12.

**Figure 12: Lowest 20% of total daily expenditure households**

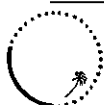


Once again the pattern was for the lowest expenditure households to use wood or kerosene as the main cooking fuel and have a pit toilet.

All three types of analysis undertaken have highlighted Savaii as the region of most concern in Samoa, followed by the Rest of Upolu, North West Upolu and Apia urban area. Poverty is of



concern in all regions, with levels of daily food expenditure in particular at lower levels than expected.



ATTACHMENT I  
***DIET USED FOR POVERTY ANALYSIS***

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**Diet used for poverty analysis in Samoa (all prices in Samoan Tala)**

Commodity	Amount (as purchased)	HIES home produce price	CPI/Retail (July – Aug av.)
Fish with bones (Atu)	2¾ lb		8.86
Fish (reef)	7 small		7
Tinned fish	11 cans		20.46
Mutton flaps	4¼ lb		7.14
Turkey tails	1½ lb		2.14
Milk, whole	7 litres		16.1 *
Bread	7 loaves		7.84
Rice	4¾ lb		3.28
Noodles	7 packets		4.2 *
Flour	1¾ lb		1.12
Sago	2½ oz		0.45 *
Breadfruit	20 (28kg)	8	\$20.00
Taamu	5 medium (38kg)	25	\$83.60
Bananas (green)	1 medium aufai (119 bananas)	7.5	\$12.38
Pawpaw (ripe)	11 medium	1.65	\$16.50
Guava	21 medium		2.1 *
Mango	21 medium		4.2 *
Ripe bananas (misiluki)	3 hands (39 bananas)	1.8	
Pumpkin	1 medium-large (5½kg)	5	\$11.02
Cucumber	5 medium	2	\$4.15
Pele	18 bunches (3¼ lb)		3.5 *
Salt	⅔ lb		0.3
Tea	½ lb		1.72
Sugar	1½ lb		0.78
Curry	6 scoops (0.16 lb)		0.48
Butter	1 lb		4.56
Coconuts (popo)	33 coconuts		3.3
Oil	300 ml bottle		1.83 *
Lemon grass	28g		0.12 *
	Subtotal:	\$50.95	\$101.48
<b>Total Food Cost</b>		<b>\$152.43</b>	

price for mangos too low in HIES (small ones)

\* = retail price of item not in CPI.  
Based on TCI price.

Other costs in basic needs poverty line

Basic Need	Weekly estimate
Transport	\$5.00
Energy	\$7.50
Health	\$3.00
Education	\$5.00
Water	\$2.80
Housing	\$8.00
<b>Total Needs Cost</b>	<b>\$31.30</b>

(includes electricity, lighting and cooking energy)

**Basic Needs + Diet Cost**

**\$183.73**



The diet is based on the following energy requirements:	Daily energy needs (kcal)	Proportion of energy needs:
Male, 65 years, light to moderate activity	2,690	0.148209366
Female, 65 years, light to moderate activity	1,997	0.110027548
Male, 30 years, heavy activity	3,759	0.207107438
Female, 30 years, moderate activity	2,403	0.132396694
Male, 16 years, heavy activity	3,980	0.219283747
Female, 7 years, moderate activity	1,768	0.097410468
Male, 3 years, moderate activity	1,553	0.085564738
	18,150	1

These proportions were then assigned to 'diet' in the Income 2 table and summed to get the amount of food required for each household.

The weights for the household were then summed and the total cost of the diet calculated:

Diet costs (4 adults, 3 children)	Age group in data
Male, 65 years, light to moderate activity	\$22.59 50 +
Female, 65 years, light to moderate activity	\$16.77 50 +
Male, 30 years, heavy activity	\$31.57 20 - 49
Female, 30 years, moderate activity	\$20.18 20 - 49
Male, 16 years, heavy activity	\$33.43 10 - 19
Female, 7 years, moderate activity	\$14.85 10 - 19
Male, 3 years, moderate activity	\$13.04 male and female 0 - 9
	\$152.43

Then, when the HOUSEHOLD TOTAL amounts are found, the BASIC NEEDS components can be added.

#### BASIC NEEDS

"Actual" basic needs costs (2 adults, 2 children)	
Male, 65 years, light to moderate activity	\$27.23
Female, 65 years, light to moderate activity	\$20.22
Male, 30 years, heavy activity	\$38.05
Female, 30 years, moderate activity	\$24.33
Male, 16 years, heavy activity	\$40.29
Female, 7 years, moderate activity	\$17.90
Male, 3 years, moderate activity	\$15.72
Household total	\$183.73

## Weekly Diet

Day	Breakfast	Lunch	Dinner
Day 1	Boiled breadfruit Ripe pawpaw Sweet tea	Tinned fish and vegetable soup Boiled taamu	Banana and coconut cream Guava Sweet tea
Day 2	Rice with coconut cream Ripe pawpaw Sweet tea	Lau pele palusami Boiled breadfruit Sweet tea	Tinned fish and vegetable soup Boiled bananas Mango
Day 3	Bread and butter Ripe pawpaw Sweet tea	Stir fry tinned fish and vegetables Bananas Guava	Chicken soup with vegetables Taamu Lemon grass tea
Day 4	Pancakes Sweet tea Ripe banana	Tinned fish Cucumber Boiled rice Lemongrass tea	Beef and vegetable soup Taamu Ripe banana
Day 5	Bread and butter Sweet tea Mango	Instant noodles with vegetables Bananas	Curried chicken with vegetables Breadfruit Ripe pawpaw Lemon grass tea
Day 6	Suafai Sweet tea	Tinned fish and vegetable soup Taamu	Sua ia with vegetables Breadfruit Ripe banana Lemon grass tea
Day 7	Bread and butter Sweet tea Ripe pawpaw	Umu – Baked taamu Baked banana Baked breadfruit Faiai eleni, Baked reef fish Pele palusami Guava	Baked taamu Baked bananas Baked breadfruit Faiai eleni Suaalaisa Mango Pele palusami Sweet tea

## **Characteristics of the Family for the Poverty Study**

The family consists of seven members:

Elderly male

Age: 65 years

Weight: 85kg; Height: 175 cm

Activity: light to moderate

Elderly female

Age: 65 years

Weight: 65 kg; Height: 160 cm

Activity: light to moderate

Adult male

Age: 30 years

Weight: 80 kg; Height: 180 cm

Activity: heavy

Adult female

Age: 30 years

Weight: 70 kg; Height: 170 cm

Activity: moderate

Teenage male

Age: 16 years

Weight: 70 kg; Height: 180 cm

Activity: heavy

Child - female

Age: 7 years

Weight: 22 kg; Height: 120 cm

Activity: moderate

Child - male

Age: 3 years

Weight: 15 kg; Height: 95 cm

Activity: moderate

### Nutrient Requirements for Family

Person	Energy (kcal)	Protein (g)	Iron (mg)	Total Vitamin A equivalents (ug)	Calcium (mg)	Vitamin C (mg)	Thiamine (mg)	Riboflavin (mg)	Niacin (mg)
<i>Requirements</i>									
For one day									
Male 65 years	2690	55	7	750	800	40	.9	1.3	16
Female 65 years	1997	45	6	750	1000	30	.7	1.0	11
Male 30 yrs	3759	55	7	750	800	40	1.1	1.7	19
Female 30 yrs	2403	45	14	750	800	30	0.8	1.2	13
Male 16 yrs	3980	67	11.5	750	1000	40	1.2	1.9	21
Female 7 yrs	1768	21	7	350	800	30	0.7	1.1	12
Male 3 yrs	1553	16	7	300	700	30	.5	.8	10
Total/one day	18,150	304	59.5	4400	5900	240	5.9	9	102
Total for the week	127,050	2,128	416.5	30,800	41,300	1,680	41.3	63	714
<i>Amount provided by the diet</i>									
Total for the week	127,078	3,815	868	57,015	45,507	18,683	51.0	77	1,085

### Energy ratios

Energy is provided by: Protein (12%), Fat (29%), Carbohydrate (59%)

## **Background information about the diet**

### *Family*

The diet is prepared for a family consisting of 7 people: 2 elderly people (65 year old male and a 65 year old female), 2 adults (a 30-year-old male and a 30-year-old female) and 3 children (a 16 year old male, a 7-year-old female and a 3-year-old male).

### *Dietary energy*

The diet provides 127,078 kcal of food energy a week. This is virtually identical to the requirement of the family for a week, which is 127,050 kcal.

### *Dietary guidelines*

The diet is consistent with the following dietary guidelines

1. Eat 5 servings of fruit and vegetables per day
2. Eat a low fat diet (Fat provides less than 30% of the dietary energy).
3. Eat sweet foods in moderation

### *Nutrients*

The diet provides adequate amounts of the main nutrients: protein, vitamin A, vitamin C, thiamine, riboflavin, niacin, iron, calcium.

### *Costs*

1. The kitchen is currently purchasing lemon grass at \$2 per 454g
2. The kitchen is currently purchasing pele at \$1 per lb
3. If guavas are not available in the market mangoes can be substitutes
4. I purchased a hand of *misiluki* bananas (14 bananas) for \$2 in the market recently

ATTACHMENT 2  
***STATISTICAL TABLES***

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## Tables

TABLE 1: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) AND NUMBER OF OCCUPANTS

TABLE 2: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) AND MAIN SOURCE OF WATER

TABLE 3: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) AND MAIN TYPE OF LIGHTING

TABLE 4: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) AND MAIN TYPE OF COOKING FUEL

TABLE 5: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) AND TYPE OF TOILET

TABLE 6: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) BY REGION AND SEX OF HOUSEHOLD HEAD

TABLE 7: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) BY SEX AND AGE GROUP OF HOUSEHOLD HEAD

TABLE 8: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) BY SEX AND MARITAL STATUS OF HOUSEHOLD HEAD

TABLE 9: DAILY HOUSEHOLD FOOD EXPENDITURE BY LEVEL OF EDUCATION AND SEX OF HOUSEHOLD HEAD

TABLE 10: DAILY HOUSEHOLD FOOD EXPENDITURE (DEFICIT OR SURPLUS) BY OCCUPATION AND SEX OF EMPLOYED HOUSEHOLD HEADS

TABLE 11: DAILY HOUSEHOLD BASIC NEEDS EXPENDITURE (DEFICIT OR SURPLUS) AND NUMBER OF OCCUPANTS

TABLE 12: DAILY HOUSEHOLD BASIC NEEDS EXPENDITURE (DEFICIT OR SURPLUS) AND MAIN SOURCE OF WATER

TABLE 13: DAILY HOUSEHOLD TOTAL EXPENDITURE (DEFICIT OR SURPLUS) AND MAIN TYPE OF LIGHTING

TABLE 14: DAILY HOUSEHOLD TOTAL EXPENDITURE (DEFICIT OR SURPLUS) AND MAIN TYPE OF COOKING FUEL

TABLE 15: DAILY HOUSEHOLD TOTAL EXPENDITURE (DEFICIT OR SURPLUS) AND TYPE OF TOILET

**Table 1: Number of households with daily food spending in deficit or surplus by household size**

**Region**

**All**

Daily food spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			184	194	58	436
T25 - 29 needed		32	221	11	10	275
T20 - 24 needed		291	322	76	10	699
T15 - 19 needed	10	655	395	67	10	1,138
T10 - 14 needed	99	1,368	444	73	20	2,003
T5 - 9 needed	584	1,952	412	85		3,033
T1 - 4 needed	1,099	1,485	296	23	13	2,917
T0 - 4 surplus	1,488	1,370	187			3,045
T5 - 9 surplus	1,024	1,247	217	30		2,518
T10 - 14 surplus	718	999	144	30		1,892
T15 - 19 surplus	577	383	101			1,061
T20 or more surplus	975	1,317	391	78	30	2,791
Total	6,574	11,099	3,315	667	152	21,807

**Region**

**AUA**

Daily food spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			50	20	10	80
T25 - 29 needed			30		10	40
T20 - 24 needed		70	50	30		150
T15 - 19 needed	10	120	90	10		230
T10 - 14 needed	10	190	90	30		320
T5 - 9 needed	100	290	90	20		500
T1 - 4 needed	240	220	40	10		510
T0 - 4 surplus	350	340	50			740
T5 - 9 surplus	230	280	30			540
T10 - 14 surplus	190	300	20	10		520
T15 - 19 surplus	210	90	10			310
T20 or more surplus	270	390	50	40	20	770
Total	1,610	2,290	600	170	40	4,709

**Region**

**NWU**

Daily food spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			60	30	10	101
T25 - 29 needed		10	71			81
T20 - 24 needed		71	111	10	10	202
T15 - 19 needed		121	91	30	10	252
T10 - 14 needed	10	423	81	20	20	554
T5 - 9 needed	121	454	101	40		716
T1 - 4 needed	181	383	71			635
T0 - 4 surplus	292	302	40			635
T5 - 9 surplus	232	242	50	30		554
T10 - 14 surplus	222	212	10	20		464
T15 - 19 surplus	181	60	10			252
T20 or more surplus	262	464	151		10	887
Total	1,502	2,741	847	181	60	5,331



**Region****ROU**

Daily food spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			40	54	27	121
T25 - 29 needed			54			54
T20 - 24 needed		27	94	13		134
T15 - 19 needed		134	147	27		308
T10 - 14 needed		295	94			389
T5 - 9 needed	161	536	121	13		831
T1 - 4 needed	375	389	107	13	13	898
T0 - 4 surplus	375	335	40			751
T5 - 9 surplus	282	322	80			684
T10 - 14 surplus	161	308	80			550
T15 - 19 surplus	107	121	80			308
T20 or more surplus	241	228	67	27		563
Total	1,703	2,695	1,006	147	40	5,591

**Region****SAV**

Daily food spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			34	90	11	134
T25 - 29 needed		22	67	11		101
T20 - 24 needed		123	67	22		213
T15 - 19 needed		280	67			347
T10 - 14 needed	78	459	179	22		740
T5 - 9 needed	202	672	101	11		986
T1 - 4 needed	303	493	78			874
T0 - 4 surplus	471	392	56			919
T5 - 9 surplus	280	403	56			740
T10 - 14 surplus	146	179	34			359
T15 - 19 surplus	78	112				191
T20 or more surplus	202	235	123	11		572
Total	1,760	3,373	863	168	11	6,175

**Table 2: Number of households with daily food spending in deficit or surplus by water supply**

**Region All**

Daily food spending deficit / surplus	Water supply					Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	Other	
T30 or more needed	288	88	25	35		436
T25 - 29 needed	198	45	21	11		275
T20 - 24 needed	511	95	11	82		699
T15 - 19 needed	848	110	70	110		1,138
T10 - 14 needed	1,268	362	175	198		2,003
T5 - 9 needed	1,927	497	239	358	11	3,033
T1 - 4 needed	1,883	602	148	273	11	2,917
T0 - 4 surplus	2,153	462	199	231		3,045
T5 - 9 surplus	1,945	252	160	160		2,518
T10 - 14 surplus	1,441	229	85	136		1,892
T15 - 19 surplus	773	114	35	128	11	1,061
T20 or more surplus	2,414	146	38	180	13	2,791
Total	15,648	3,004	1,206	1,902	47	21,807

**Region AUA**

Daily food spending deficit / surplus	Water supply				Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	
T30 or more needed	70	10			80
T25 - 29 needed	40				40
T20 - 24 needed	110	40			150
T15 - 19 needed	200	20	10		230
T10 - 14 needed	260	50	10		320
T5 - 9 needed	380	100	10	10	500
T1 - 4 needed	370	120		20	510
T0 - 4 surplus	590	150			740
T5 - 9 surplus	470	70			540
T10 - 14 surplus	510	10			520
T15 - 19 surplus	280	30			310
T20 or more surplus	710	50		10	770
Total	3,989	650	30	40	4,709

**Region NWU**

Daily food spending deficit / surplus	Water supply				Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	
T30 or more needed	50	40		10	101
T25 - 29 needed	50	20	10		81
T20 - 24 needed	161	30		10	202
T15 - 19 needed	212	40			252
T10 - 14 needed	403	131	10	10	554
T5 - 9 needed	464	212	10	30	716
T1 - 4 needed	524	91		20	635
T0 - 4 surplus	464	131		40	635
T5 - 9 surplus	443	71	10	30	554
T10 - 14 surplus	302	141		20	464
T15 - 19 surplus	151	71	10	20	252
T20 or more surplus	766	60		60	887
Total	3,991	1,038	50	252	5,331

**Region****ROU**

Daily food spending deficit / surplus	Water supply					Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	Other	
T30 or more needed	67	27	13	13		121
T25 - 29 needed	40	13				54
T20 - 24 needed	94	13		27		134
T15 - 19 needed	201	27	27	54		308
T10 - 14 needed	201	80	54	54		389
T5 - 9 needed	456	107	107	161		831
T1 - 4 needed	563	201	80	54		898
T0 - 4 surplus	483	80	121	67		751
T5 - 9 surplus	550	67	27	40		684
T10 - 14 surplus	349	67	40	94		550
T15 - 19 surplus	241	13	13	40		308
T20 or more surplus	456	13	27	54	13	563
Total	3,701	711	510	657	13	5,591

**Region****SAV**

Daily food spending deficit / surplus	Water supply					Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	Other	
T30 or more needed	101	11	11	11		134
T25 - 29 needed	67	11	11	11		101
T20 - 24 needed	146	11	11	45		213
T15 - 19 needed	235	22	34	56		347
T10 - 14 needed	403	101	101	134		740
T5 - 9 needed	628	78	112	157	11	986
T1 - 4 needed	426	191	67	179	11	874
T0 - 4 surplus	616	101	78	123		919
T5 - 9 surplus	482	45	123	90		740
T10 - 14 surplus	280	11	45	22		359
T15 - 19 surplus	101		11	67	11	191
T20 or more surplus	482	22	11	56		572
Total	3,967	605	616	953	34	6,175

Table 3: Number of households with daily food spending in deficit or surplus by main type of lighting

**Region All**

Daily food spending deficit / surplus	Main type of lighting			Total
	Electricity	Spirit / Kerosene	Other	
T30 or more needed	436			436
T25 - 29 needed	275			275
T20 - 24 needed	665	34		699
T15 - 19 needed	1,066	71		1,138
T10 - 14 needed	1,788	215		2,003
T5 - 9 needed	2,609	414	10	3,033
T1 - 4 needed	2,603	301	13	2,917
T0 - 4 surplus	2,642	402		3,045
T5 - 9 surplus	2,334	183		2,518
T10 - 14 surplus	1,737	154		1,892
T15 - 19 surplus	989	72		1,061
T20 or more surplus	2,737	55		2,791
Total	19,883	1,901	23	21,807

**Region AUA**

Daily food spending deficit / surplus	Main type of lighting		Total
	Electricity	Spirit / Kerosene	
T30 or more needed	80		80
T25 - 29 needed	40		40
T20 - 24 needed	150		150
T15 - 19 needed	210	20	230
T10 - 14 needed	300	20	320
T5 - 9 needed	490	10	500
T1 - 4 needed	490	20	510
T0 - 4 surplus	660	80	740
T5 - 9 surplus	490	50	540
T10 - 14 surplus	520		520
T15 - 19 surplus	300	10	310
T20 or more surplus	760	10	770
Total	4,489	220	4,709

**Region NWU**

Daily food spending deficit / surplus	Main type of lighting			Total
	Electricity	Spirit / Kerosene	Other	
T30 or more needed	101			101
T25 - 29 needed	81			81
T20 - 24 needed	181	20		202
T15 - 19 needed	252			252
T10 - 14 needed	494	60		554
T5 - 9 needed	615	91	10	716
T1 - 4 needed	585	50		635
T0 - 4 surplus	554	81		635
T5 - 9 surplus	504	50		554
T10 - 14 surplus	423	40		464
T15 - 19 surplus	202	50		252
T20 or more surplus	867	20		887
Total	4,858	464	10	5,331

**Region ROU**

Daily food spending deficit / surplus	Main type of lighting			Total
	Electricity	Spirit / Kerosene	Other	
T30 or more needed	121			121
T25 - 29 needed	54			54
T20 - 24 needed	121	13		134
T15 - 19 needed	268	40		308
T10 - 14 needed	322	67		389
T5 - 9 needed	630	201		831
T1 - 4 needed	711	174	13	898
T0 - 4 surplus	577	174		751
T5 - 9 surplus	657	27		684
T10 - 14 surplus	469	80		550
T15 - 19 surplus	308			308
T20 or more surplus	550	13		563
<b>Total</b>	<b>4,787</b>	<b>791</b>	<b>13</b>	<b>5,591</b>

**Region SAV**

Daily food spending deficit / surplus	Main type of lighting		Total
	Electricity	Spirit / Kerosene	
T30 or more needed	134		134
T25 - 29 needed	101		101
T20 - 24 needed	213		213
T15 - 19 needed	336	11	347
T10 - 14 needed	672	67	740
T5 - 9 needed	874	112	986
T1 - 4 needed	818	56	874
T0 - 4 surplus	852	67	919
T5 - 9 surplus	684	56	740
T10 - 14 surplus	325	34	359
T15 - 19 surplus	179	11	191
T20 or more surplus	560	11	572
<b>Total</b>	<b>5,749</b>	<b>426</b>	<b>6,175</b>

Table 4: Number of households with daily food spending in deficit or surplus by main type of cooking fuel

**Region All**

Daily food spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed				426	10	436
T25 - 29 needed			20	255		275
T20 - 24 needed		30	20	648		699
T15 - 19 needed	10	51	155	921		1,138
T10 - 14 needed	10	64	206	1,713	10	2,003
T5 - 9 needed	61	110	299	2,519	43	3,033
T1 - 4 needed	33	108	365	2,400	11	2,917
T0 - 4 surplus	103	201	613	2,106	22	3,045
T5 - 9 surplus	70	270	390	1,764	23	2,518
T10 - 14 surplus	103	236	278	1,230	45	1,892
T15 - 19 surplus	50	175	178	644	13	1,061
T20 or more surplus	117	491	593	1,567	23	2,791
Total	557	1,736	3,118	16,193	202	21,807

**Region AUA**

Daily food spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed				70	10	80
T25 - 29 needed			10	30		40
T20 - 24 needed		20		130		150
T15 - 19 needed	10	30	60	130		230
T10 - 14 needed	10	30	90	180	10	320
T5 - 9 needed	30	60	170	210	30	500
T1 - 4 needed	10	40	180	280		510
T0 - 4 surplus	60	80	360	240		740
T5 - 9 surplus	40	130	240	120	10	540
T10 - 14 surplus	60	130	180	130	20	520
T15 - 19 surplus	50	100	90	70		310
T20 or more surplus	70	260	270	160	10	770
Total	340	880	1,650	1,750	90	4,709

**Region NWU**

Daily food spending deficit / surplus	Main type of cooking fuel				Total
	Electricity	Gas	Kerosene	Wood	
T30 or more needed				101	101
T25 - 29 needed			10	71	81
T20 - 24 needed		10	20	171	202
T15 - 19 needed		10	71	171	252
T10 - 14 needed		20	81	454	554
T5 - 9 needed	20	50	71	574	716
T1 - 4 needed	10	30	111	484	635
T0 - 4 surplus	20	60	181	373	635
T5 - 9 surplus	30	91	60	373	554
T10 - 14 surplus	20	71	60	312	464
T15 - 19 surplus		50	50	151	252
T20 or more surplus	20	181	171	514	887
Total	121	574	887	3,749	5,331

**Region ROU**

Daily food spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed				121		121
T25 - 29 needed				54		54
T20 - 24 needed				134		134
T15 - 19 needed			13	295		308
T10 - 14 needed		13	13	362		389
T5 - 9 needed			13	804	13	831
T1 - 4 needed	13	27	40	818		898
T0 - 4 surplus		27	27	697		751
T5 - 9 surplus		27	67	577	13	684
T10 - 14 surplus		13	27	496	13	550
T15 - 19 surplus		13	27	255	13	308
T20 or more surplus	27	27	107	389	13	563
Total	40	147	335	5,001	67	5,591

**Region SAV**

Daily food spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed				134		134
T25 - 29 needed				101		101
T20 - 24 needed				213		213
T15 - 19 needed		11	11	325		347
T10 - 14 needed			22	717		740
T5 - 9 needed	11		45	930		986
T1 - 4 needed		11	34	818	11	874
T0 - 4 surplus	22	34	45	796	22	919
T5 - 9 surplus		22	22	695		740
T10 - 14 surplus	22	22	11	291	11	359
T15 - 19 surplus		11	11	168		191
T20 or more surplus		22	45	504		572
Total	56	134	247	5,693	45	6,175

Table 5: Number of households with daily food spending in deficit or surplus by type of toilet

**Region All**

Daily food spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed	129	233	74		436
T25 - 29 needed	106	104	65		275
T20 - 24 needed	205	332	161		699
T15 - 19 needed	441	491	192	13	1,138
T10 - 14 needed	613	881	508		2,003
T5 - 9 needed	1,068	1,160	745	60	3,033
T1 - 4 needed	1,195	1,034	651	38	2,917
T0 - 4 surplus	1,201	1,193	638	13	3,045
T5 - 9 surplus	1,156	879	461	21	2,518
T10 - 14 surplus	1,052	587	232	21	1,892
T15 - 19 surplus	656	245	160		1,061
T20 or more surplus	1,910	632	249		2,791
Total	9,732	7,771	4,136	168	21,807

**Region AUA**

Daily food spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed	60	20			80
T25 - 29 needed	30	10			40
T20 - 24 needed	80	40	30		150
T15 - 19 needed	140	60	30		230
T10 - 14 needed	180	120	20		320
T5 - 9 needed	330	120	50		500
T1 - 4 needed	380	90	40		510
T0 - 4 surplus	490	180	70		740
T5 - 9 surplus	430	40	60	10	540
T10 - 14 surplus	490	10	10	10	520
T15 - 19 surplus	270	20	20		310
T20 or more surplus	690	60	20		770
Grand Total	3,569	770	350	20	4,709

**Region NWU**

Daily food spending deficit / surplus	Type of toilet			Total
	Flush type	Pisikoa type	Pit	
T30 or more needed	20	40	40	101
T25 - 29 needed	40	20	20	81
T20 - 24 needed	60	111	30	202
T15 - 19 needed	131	111	10	252
T10 - 14 needed	212	222	121	554
T5 - 9 needed	353	171	191	716
T1 - 4 needed	302	171	161	635
T0 - 4 surplus	292	151	191	635
T5 - 9 surplus	212	161	181	554
T10 - 14 surplus	161	181	121	464
T15 - 19 surplus	131	50	71	252
T20 or more surplus	544	212	131	887
Total	2,459	1,602	1,270	5,331



**Region ROU**

Daily food spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed	27	94			121
T25 - 29 needed	13	40			54
T20 - 24 needed	54	80			134
T15 - 19 needed	80	174	40	13	308
T10 - 14 needed	121	147	121		389
T5 - 9 needed	228	375	201	27	831
T1 - 4 needed	322	335	215	27	898
T0 - 4 surplus	161	402	174	13	751
T5 - 9 surplus	268	375	40		684
T10 - 14 surplus	255	228	67		550
T15 - 19 surplus	188	107	13		308
T20 or more surplus	362	147	54		563
<b>Total</b>	<b>2,078</b>	<b>2,507</b>	<b>925</b>	<b>80</b>	<b>5,591</b>

**Region SAV**

Daily food spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed	22	78	34		134
T25 - 29 needed	22	34	45		101
T20 - 24 needed	11	101	101		213
T15 - 19 needed	90	146	112		347
T10 - 14 needed	101	392	247		740
T5 - 9 needed	157	493	303	34	986
T1 - 4 needed	191	437	235	11	874
T0 - 4 surplus	258	459	202		919
T5 - 9 surplus	247	303	179	11	740
T10 - 14 surplus	146	168	34	11	359
T15 - 19 surplus	67	67	56		191
T20 or more surplus	314	213	45		572
<b>Total</b>	<b>1,625</b>	<b>2,891</b>	<b>1,591</b>	<b>67</b>	<b>6,175</b>

Table 6: Households with daily food spending in deficit/surplus by region, sex and age group of household head

Region All

Daily food spending deficit / surplus	Sex and age group of household head														Total
	Male							Female							
	15-24	25-34	35-44	45-54	55-64	65+	Total	15-24	25-34	35-44	45-54	55-64	65+	Total	
T30 or more needed			33	65	135	115	349					20	67	87	436
T25 - 29 needed		10	20	77	69	44	221		10			23	21	55	275
T20 - 24 needed	10		163	143	117	143	577				20	58	43	122	699
T15 - 19 needed		31	197	191	265	269	953			23	25	72	65	184	1,138
T10 - 14 needed	20	120	372	567	395	299	1,772		10	23	58	86	53	230	2,003
T5 - 9 needed	13	347	662	513	508	496	2,539	10	44	30	63	124	223	494	3,033
T1 - 4 needed	10	430	548	535	541	408	2,472		20	82	69	143	131	445	2,917
T0 - 4 surplus	35	513	761	458	380	333	2,479		23	64	160	102	217	565	3,045
T5 - 9 surplus		389	510	465	343	309	2,015		55	82	134	115	117	503	2,518
T10 - 14 surplus	54	126	414	272	285	354	1,506		25	65	85	87	125	386	1,892
T15 - 19 surplus	10	189	213	132	213	93	850		13	21	34	52	90	211	1,061
T20 or more surplus	13	278	506	578	520	391	2,286		10	86	108	114	187	505	2,791
Total	165	2,432	4,400	3,996	3,772	3,254	18,020	10	210	476	755	996	1,340	3,787	21,807

Region AUA

Daily food spending deficit / surplus	Sex and age group														Total
	Male							Female							
	15-24	25-34	35-44	45-54	55-64	65+	Total	15-24	25-34	35-44	45-54	55-64	65+	Total	
T30 or more needed			10	10	20	20	60					10	10	20	80
T25 - 29 needed				10			10		10			10	10	30	40
T20 - 24 needed			30	30	30	20	110				20		20	40	150
T15 - 19 needed		10	20	40	50	50	170			10		10	40	60	230
T10 - 14 needed	10		80	90	60	40	280			10		30		40	320
T5 - 9 needed		60	40	120	80	90	390		10	20	10	10	60	110	500
T1 - 4 needed		80	80	120	60	90	430		20	10		30	20	80	510
T0 - 4 surplus	10	150	220	100	60	60	600		10	30	30	30	40	140	740
T5 - 9 surplus		120	120	100	50	20	410		30	20	30	20	30	130	540
T10 - 14 surplus	20	20	100	90	60	60	350			20	50	30	70	170	520
T15 - 19 surplus		50	120	30	50	10	260			10		20	20	50	310
T20 or more surplus		90	110	140	120	80	540		10	30	40	70	80	230	770
Total	40	580	930	880	640	540	3,609		90	160	180	270	400	1,100	4,709

Region NWU

Daily food spending deficit / surplus	Sex and age group														Total
	Male							Female							
	15-24	25-34	35-44	45-54	55-64	65+	Total	15-24	25-34	35-44	45-54	55-64	65+	Total	
T30 or more needed			10	30	30	10	81					10	10	20	101
T25 - 29 needed		10	20	20	20	10	81								81
T20 - 24 needed	10		50	30	40	40	171					20	10	30	202
T15 - 19 needed		10	60	30	40	60	202					50		50	252
T10 - 14 needed	10	30	111	161	91	71	474		10		20	20	30	81	554
T5 - 9 needed		81	222	111	101	71	585	10		10	30	40	40	131	716
T1 - 4 needed	10	111	161	71	141	20	514			20	20	30	50	121	635
T0 - 4 surplus		121	171	101	81	40	514				20	20	81	121	635
T5 - 9 surplus		101	81	121	101	40	443			10	50	10	40	111	554
T10 - 14 surplus	20	71	111	50	50	91	393			20	10	10	30	71	464
T15 - 19 surplus	10	40	30	50	60	20	212					10	30	40	252
T20 or more surplus		60	181	232	171	101	746			20	30	30	60	141	887
Total	60	635	1,209	1,008	927	574	4,414	10	10	81	181	252	383	917	5,331

Region ROU

Daily food spending deficit / surplus	Sex and age group														Total
	Male							Female							
	15-24	25-34	35-44	45-54	55-64	65+	Total	15-24	25-34	35-44	45-54	55-64	65+	Total	
T30 or more needed			13	13	40	40	107						13	13	121
T25 - 29 needed				13	27		40					13		13	54
T20 - 24 needed			27	27	13	27	94					27	13	40	134
T15 - 19 needed			94	54	40	80	268			13	13		13	40	308
T10 - 14 needed			80	80	121	54	335			13	27	13		54	389
T5 - 9 needed	13	94	188	147	147	134	724					40	67	107	831
T1 - 4 needed		161	161	188	161	107	778			40	27	27	27	121	898
T0 - 4 surplus	13	107	201	67	94	121	603		13		54	40	40	147	751
T5 - 9 surplus		67	107	121	80	147	523		13	40	54	40	13	161	684
T10 - 14 surplus	13	13	147	121	107	80	483		13	13	13	13	13	67	550
T15 - 19 surplus		54	40	40	80	40	255		13				40	54	308
T20 or more surplus	13	94	80	94	94	121	496			13	27	13	13	67	563
Total	54	590	1,140	965	1,006	952	4,706		54	134	215	228	255	885	5,591

Region SAV

Daily food spending deficit / surplus	Sex and age group														Total
	Male							Female							
	15-24	25-34	35-44	45-54	55-64	65+	Total	15-24	25-34	35-44	45-54	55-64	65+	Total	
T30 or more needed				11	45	45	101						34	34	134
T25 - 29 needed				34	22	34	90						11	11	101
T20 - 24 needed			56	56	34	56	202					11		11	213
T15 - 19 needed		11	22	67	134	78	314				11	11	11	34	347
T10 - 14 needed		90	101	235	123	134	684				11	22	22	56	740
T5 - 9 needed		112	213	134	179	202	841		34		22	34	56	146	986
T1 - 4 needed		78	146	157	179	191	751			11	22	56	34	123	874
T0 - 4 surplus	11	134	168	191	146	112	762			34	56	11	56	157	919
T5 - 9 surplus		101	202	123	112	101	639		11	11		45	34	101	740
T10 - 14 surplus		22	56	11	67	123	280		11	11	11	34	11	78	359
T15 - 19 surplus		45	22	11	22	22	123			11	34	22		67	191
T20 or more surplus		34	134	112	134	90	504			22	11		34	67	572
Total	11	628	1,121	1,143	1,199	1,188	5,290		56	101	179	247	303	885	6,175

Table 7: Number of households with daily food spending in deficit or surplus by region, sex and marital status of household head

Region All

Daily food spending deficit / surplus	Sex and marital status of household head										Total
	Male					Female					
	Never married	Married	Separated / divorced	Widowed	Total	Never married	Married	Separated / divorced	Widowed	Total	
T30 or more needed		324	13	11	349			35	52	87	436
T25 - 29 needed		209	11		221		10		45	55	275
T20 - 24 needed		522	31	23	577	10	23		88	122	699
T15 - 19 needed	21	866		66	953		10	37	137	184	1,138
T10 - 14 needed	25	1,664		84	1,772	10	72	10	139	230	2,003
T5 - 9 needed	51	2,344	10	134	2,539	21	81	76	315	494	3,033
T1 - 4 needed	67	2,280	44	82	2,472	20	88	115	221	445	2,917
T0 - 4 surplus	151	2,198	63	68	2,479	20	76	102	368	565	3,045
T5 - 9 surplus	83	1,795	30	107	2,015	45	169	75	215	503	2,518
T10 - 14 surplus	67	1,325	48	66	1,506	13	125	45	203	386	1,892
T15 - 19 surplus	51	788		10	850	10	72	10	120	211	1,061
T20 or more surplus	76	2,111	41	58	2,286	51	186	68	200	505	2,791
Total	592	16,426	292	710	18,020	201	912	572	2,102	3,787	21,807

Region AUA

Daily food spending deficit / surplus	Sex and marital status										Total
	Male					Female					
	Never married	Married	Separated / divorced	Widowed	Total	Never married	Married	Separated / divorced	Widowed	Total	
T30 or more needed		60			60				20	20	80
T25 - 29 needed		10			10		10		20	30	40
T20 - 24 needed		100	10		110	10	10		20	40	150
T15 - 19 needed		140		30	170		10		50	60	230
T10 - 14 needed		270		10	280	10	10		20	40	320
T5 - 9 needed	20	320	10	40	390	10	40		60	110	500
T1 - 4 needed	10	410		10	430	10	20	10	40	80	510
T0 - 4 surplus	40	550	10		600	20	20	20	80	140	740
T5 - 9 surplus	30	370	10		410	20	30	20	60	130	540
T10 - 14 surplus	20	330			350		80	20	70	170	520
T15 - 19 surplus	20	230		10	260	10		10	30	50	310
T20 or more surplus	20	510		10	540	30	100	10	90	230	770
Total	160	3,299	40	110	3,609	120	330	90	560	1,100	4,709

Region NWU

Daily food spending deficit / surplus	Sex and marital status										Total
	Never married	Male Married	Separated / divorced	Widowed	Total	Never married	Female Married	Separated / divorced	Widowed	Total	
T30 or more needed		81			81			10	10	20	101
T25 - 29 needed		81			81						81
T20 - 24 needed		151	10	10	171				30	30	202
T15 - 19 needed	10	191			202			10	40	50	252
T10 - 14 needed		433		40	474		10	10	60	81	554
T5 - 9 needed	20	544		20	585		30	40	60	131	716
T1 - 4 needed	10	474	30		514	10	10	40	60	121	635
T0 - 4 surplus	10	464	30	10	514		20	10	91	121	635
T5 - 9 surplus	30	373	20	20	443		20	30	60	111	554
T10 - 14 surplus		353	10	30	393		20		50	71	464
T15 - 19 surplus	20	191			212				40	40	252
T20 or more surplus	20	685	30	10	746	10	50	20	60	141	887
Total	121	4,021	131	141	4,414	20	161	171	564	917	5,331

Region ROU

Daily food spending deficit / surplus	Sex and marital status										Total
	Never married	Male Married	Separated / divorced	Widowed	Total	Never married	Female Married	Separated / divorced	Widowed	Total	
T30 or more needed		94	13		107			13		13	121
T25 - 29 needed		40			40				13	13	54
T20 - 24 needed		80		13	94		13		27	40	134
T15 - 19 needed		255		13	268			27	13	40	308
T10 - 14 needed	13	322			335		40		13	54	389
T5 - 9 needed		684		40	724			13	94	107	831
T1 - 4 needed	13	724	13	27	778		13	54	54	121	898
T0 - 4 surplus	67	523		13	603		13	27	107	147	751
T5 - 9 surplus		469		54	523	13	107	13	27	161	684
T10 - 14 surplus	13	429	27	13	483	13	13	13	27	67	550
T15 - 19 surplus		255			255		27		27	54	308
T20 or more surplus	13	456		27	496		13	27	27	67	563
Total	121	4,331	54	201	4,706	27	241	188	429	885	5,591

Daily food spending deficit / surplus	Sex and marital status										Total
	Male					Female					
	Never married	Married	Separated / divorced	Widowed	Total	Never married	Married	Separated / divorced	Widowed	Total	
T30 or more needed		90		11	101			11	22	34	134
T25 - 29 needed		78	11		90				11	11	101
T20 - 24 needed		191	11		202				11	11	213
T15 - 19 needed	11	280		22	314				34	34	347
T10 - 14 needed	11	639		34	684		11		45	56	740
T5 - 9 needed	11	796		34	841	11	11	22	101	146	986
T1 - 4 needed	34	672		45	751		45	11	67	123	874
T0 - 4 surplus	34	661	22	45	762		22	45	90	157	919
T5 - 9 surplus	22	583		34	639	11	11	11	67	101	740
T10 - 14 surplus	34	213	11	22	280		11	11	56	78	359
T15 - 19 surplus	11	112			123		45		22	67	191
T20 or more surplus	22	459	11	11	504	11	22	11	22	67	572
Total	191	4,774	67	258	5,290	34	179	123	549	885	6,175

Table 8: Number of households with daily food spending in deficit or surplus by region, sex and main daily activity of household head

Region	All	Sex and main daily activity of household head										Total
		Male					Female					
Daily food spending deficit / surplus		FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties student to work	FT Unable to work applicable	Total	FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties applicable	Not applicable Total
T30 or more needed		11	10	10	154	47	349				66	21 87
T25 - 29 needed		41			81	20	221				55	55
T20 - 24 needed		83		20	309	57	577	13			98	10 122
T15 - 19 needed		196		41	347	117	953				173	11 184
T10 - 14 needed		332	21	92	768	145	1,772	10		10	178	32 230
T5 - 9 needed		466	30	44	1,175	190	2,539	30			361	103 494
T1 - 4 needed		721	11	114	1,054	88	2,472	44		10	361	30 445
T0 - 4 surplus		846	30	152	958	61	2,479	51			504	10 565
T5 - 9 surplus		674	21	65	855	127	2,015	85		10	350	45 503
T10 - 14 surplus		517		64	465	121	1,506	61	13	21	280	10 386
T15 - 19 surplus		302	20	61	281	37	850	22		10	159	20 211
T20 or more surplus		821	10	188	697	137	2,286	101		30	344	30 505
Total		5,008	154	850	7,105	13	1,149 18,020	418	13	81	2,928	323 3,787

## Region AUA

Region	AUA	Sex and main daily activity										Total
		Male					Female					
Daily food spending deficit / surplus		FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties student to work	FT Unable to work applicable	Total	FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties applicable	Not applicable Total
T30 or more needed				10	40	10	60				20	20
T25 - 29 needed					10		10				30	30
T20 - 24 needed		30		10	50		110				40	40
T15 - 19 needed		50		20	60	10	170				60	60
T10 - 14 needed		110		20	100	20	280				30	40
T5 - 9 needed		130	30	10	150	40	390	10		10	80	20 110
T1 - 4 needed		190		40	70	20	430	10			60	10 80
T0 - 4 surplus		350	30	50	40	10	600	20			120	140
T5 - 9 surplus		300		10	50	30	410	50		10	70	130
T10 - 14 surplus		210		10	20	20	350	50			110	10 170
T15 - 19 surplus		130	10	50	40		260			10	40	50
T20 or more surplus		310		70	40	40	540	60		20	140	10 230
Total		1,810	70	300	370	10	3,609	200		50	800	50 1,100

4,709

Region

NWU

Daily food spending deficit / surplus	Sex and main daily activity												Total
	Male						Female						
	FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties student	FT Unable to work applicable	Not applicable	Total	FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties applicable	Not applicable	Total
T30 or more needed		10	40	20	10	81	81			10	10	20	101
T25 - 29 needed	30		20	10	20	81	81						81
T20 - 24 needed	30		101	20	10	171	171			20	20	10	202
T15 - 19 needed	60		30	40	60	202	202			50	50	50	252
T10 - 14 needed	81	10	151	91	81	474	474	10		60	60	10	554
T5 - 9 needed	181		252	91	40	585	585	20		91	91	20	716
T1 - 4 needed	202		202	40	10	514	514	20		71	71	20	635
T0 - 4 surplus	151		242	30		514	514	20		91	91	10	635
T5 - 9 surplus	141	10	232	20	10	443	443	10		81	81	20	554
T10 - 14 surplus	141		161	30	20	393	393		10	60	60	71	464
T15 - 19 surplus	81	10	91	20	10	212	212			20	20	40	252
T20 or more surplus	262	10	272	121	10	746	746	30		10	81	20	887
Total	1,361	50	393	1,794	534	282	4,414	111		20	635	141	5,331

Region

ROU

Daily food spending deficit / surplus	Sex and main daily activity										Total		
	Male					Female							
	FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties student	FT Unable to work applicable	Not applicable	Total	FT paid employment	PT paid employment	Self- Farm/plant/ fish	Domestic duties applicable	Not applicable	Total
T30 or more needed			54	27		27	107				13		13
T25 - 29 needed			27	13			40				13		13
T20 - 24 needed			54	27		13	94	13			27		40
T15 - 19 needed	40		174	40		13	268				40		40
T10 - 14 needed	40		228	67			335				54		54
T5 - 9 needed	54		456	147		54	724				67	40	107
T1 - 4 needed	161		536	40	13	13	778	13			107		121
T0 - 4 surplus	121		362	80		40	603				147		147
T5 - 9 surplus	121		282	54		54	523	13		13	121	13	161
T10 - 14 surplus	121		228	107		13	483		13		54		67
T15 - 19 surplus	80		94	54		27	255				54		54
T20 or more surplus	80		228	121		54	496				67		67
Total	818	67	2,722	778	13	308	4,706	40	13	13	764	54	885
													5,591





Table 9: Number of households with daily food spending in deficit or surplus by region, sex and education level of household head

Region All

Daily food spending deficit / surplus	Sex and education level of household head										Total
	Male			Female			Total				
	None	Primary	Secondary	Tertiary	Total	None	Primary	Secondary	Tertiary	Total	
T30 or more needed		291	47	11	349		76	11		87	436
T25 - 29 needed		120	101		221		45	10		55	275
T20 - 24 needed		398	159	20	577		78	43		122	699
T15 - 19 needed	21	573	324	35	953		131	54		184	1,138
T10 - 14 needed	13	869	867	23	1,772		142	75	13	230	2,003
T5 - 9 needed	43	1,333	1,078	86	2,539	13	255	226		494	3,033
T1 - 4 needed	10	1,254	1,092	116	2,472		240	181	23	445	2,917
T0 - 4 surplus	27	946	1,350	156	2,479	35	258	232	40	565	3,045
T5 - 9 surplus	13	804	1,070	128	2,015		236	222	45	503	2,518
T10 - 14 surplus	25	636	722	123	1,506		183	190	13	386	1,892
T15 - 19 surplus		254	486	110	850		103	65	44	211	1,061
T20 or more surplus	23	841	1,236	185	2,286	10	231	181	83	505	2,791
Total	176	8,318	8,531	995	18,020	58	1,977	1,490	262	3,787	21,807

Region AUA

Daily food spending deficit / surplus	Sex and education level										Total
	Male					Female					
	None	Primary	Secondary	Tertiary	Total	None	Primary	Secondary	Tertiary	Total	
T30 or more needed		50	10		60		20			20	80
T25 - 29 needed		10			10		20	10		30	40
T20 - 24 needed		80	10	20	110		10	30		40	150
T15 - 19 needed		120	40	10	170		50	10		60	230
T10 - 14 needed		130	140	10	280		30	10		40	320
T5 - 9 needed		230	130	30	390		60	50		110	500
T1 - 4 needed		210	180	40	430		50	20	10	80	510
T0 - 4 surplus		170	380	50	600		60	60	20	140	740
T5 - 9 surplus		110	230	70	410		40	80	10	130	540
T10 - 14 surplus		80	170	100	350		100	70		170	520
T15 - 19 surplus		60	140	60	260		20	20	10	50	310
T20 or more surplus		190	250	100	540		80	80	70	230	770
Total		1,440	1,680	490	3,609		540	440	120	1,100	4,709

**NWU**

Daily food spending deficit / surplus	Sex and education level										Total
	Male			Female			Total				
	None	Primary	Secondary	Tertiary	Total	None	Primary	Secondary	Tertiary	Total	
T30 or more needed		71	10		81		20			20	101
T25 - 29 needed		40	40		81						81
T20 - 24 needed		81	91		171		30			30	202
T15 - 19 needed	10	91	101		202		20	30		50	252
T10 - 14 needed		262	212		474		40	40		81	554
T5 - 9 needed	20	292	252	20	585		60	71		131	716
T1 - 4 needed	10	232	252	20	514		60	60		121	635
T0 - 4 surplus		191	272	50	514	10	50	40	20	121	635
T5 - 9 surplus		181	242	20	443		71	30	10	111	554
T10 - 14 surplus		171	212	10	393		20	50		71	464
T15 - 19 surplus		71	131	10	212		20	20		40	252
T20 or more surplus	10	262	413	60	746	10	91	40		141	887
Total	50	1,945	2,227	191	4,414	20	484	383	30	917	5,331

## ROU

[illegible]

## Region

## SAV

Daily food spending deficit / surplus	Sex and education level										Total
	Male					Female					
	None	Primary	Secondary	Tertiary	Total	None	Primary	Secondary	Tertiary	Total	
T30 or more needed		90		11	101		22	11		34	134
T25 - 29 needed		56	34		90		11			11	101
T20 - 24 needed		157	45		202		11			11	213
T15 - 19 needed		202	90	11	314		34			34	347
T10 - 14 needed		303	381		684		45	11		56	740
T5 - 9 needed		448	347	22	841		67	78		146	986
T1 - 4 needed		437	258	56	751		90	34		123	874
T0 - 4 surplus		303	403	56	762	11	67	78		157	919
T5 - 9 surplus		258	370	11	639		45	45	11	101	740
T10 - 14 surplus	11	157	112		280		22	56		78	359
T15 - 19 surplus		56	67		123		22	11	34	67	191
T20 or more surplus		202	291	11	504		34	34		67	572
Total	45	2,667	2,398	179	5,290	11	471	359	45	885	6,175



Table 11: Number of households with daily basic needs spending in deficit or surplus by household size

**Region All**

Daily basic needs spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			107	111	35	253
T25 - 29 needed		65	192	51		309
T20 - 24 needed		171	186	46	10	413
T15 - 19 needed		500	190	66	13	769
T10 - 14 needed	176	977	197	20		1,369
T5 - 9 needed	581	1,229	249	31	10	2,100
T1 - 4 needed	646	1,005	204	10		1,865
T0 - 4 surplus	795	883	294	44		2,016
T5 - 9 surplus	827	991	179	53	10	2,060
T10 - 14 surplus	655	867	201	37	20	1,780
T15 - 19 surplus	451	775	127	10		1,363
T20 or more surplus	2,443	3,636	1,188	189	54	7,509
Total	6,574	11,099	3,315	667	152	21,807

**Region AUA**

Daily basic needs spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			20			20
T25 - 29 needed			10			10
T20 - 24 needed		40	10	10	10	70
T15 - 19 needed		50	30	20		100
T10 - 14 needed	30	70	30	10		140
T5 - 9 needed	40	140	30	10	10	230
T1 - 4 needed	60	80	70	10		220
T0 - 4 surplus	140	160	30	10		340
T5 - 9 surplus	180	200	40	10		430
T10 - 14 surplus	170	160	40			370
T15 - 19 surplus	130	140	10	10		290
T20 or more surplus	860	1,250	280	80	20	2,490
Total	1,610	2,290	600	170	40	4,709

**Region NWU**

Daily basic needs spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			40	30	10	81
T25 - 29 needed		20	50			71
T20 - 24 needed		50	50			101
T15 - 19 needed		60	50	10		121
T10 - 14 needed	40	202	71	10		322
T5 - 9 needed	91	232	60	10		393
T1 - 4 needed	101	242	20			363
T0 - 4 surplus	151	242	81	20		494
T5 - 9 surplus	121	252	40	20	10	443
T10 - 14 surplus	171	242	60	10	20	504
T15 - 19 surplus	151	191	30			373
T20 or more surplus	675	1,008	292	71	20	2,066
Total	1,502	2,741	847	181	60	5,331

**Region****ROU**

Daily basic needs spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			13	13	13	40
T25 - 29 needed			54	40		94
T20 - 24 needed		13	80	13		107
T15 - 19 needed		121	54	13	13	201
T10 - 14 needed	27	201	40			268
T5 - 9 needed	215	375	80			670
T1 - 4 needed	295	268	80			644
T0 - 4 surplus	201	201	94	13		510
T5 - 9 surplus	201	282	54			536
T10 - 14 surplus	134	241	67	27		469
T15 - 19 surplus	80	241	54			375
T20 or more surplus	550	751	335	27	13	1,676
Total	1,703	2,695	1,006	147	40	5,591

**Region****SAV**

Daily basic needs spending deficit / surplus	Household size					Total
	1 - 5	6 - 10	11 - 15	16 - 20	21 +	
T30 or more needed			34	67	11	112
T25 - 29 needed		45	78	11		134
T20 - 24 needed		67	45	22		134
T15 - 19 needed		269	56	22		347
T10 - 14 needed	78	504	56			639
T5 - 9 needed	235	482	78	11		807
T1 - 4 needed	191	415	34			639
T0 - 4 surplus	303	280	90			672
T5 - 9 surplus	325	258	45	22		650
T10 - 14 surplus	179	224	34			437
T15 - 19 surplus	90	202	34			325
T20 or more surplus	359	628	280	11		1,278
Total	1,760	3,373	863	168	11	6,175

Table 12: Number of households with daily basic needs spending in deficit or surplus by water supply

**Region All**

Daily basic needs spending deficit / surplus	Water supply					Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	Other	
T30 or more needed	163	68	11	10		253
T25 - 29 needed	163	98	25	22		309
T20 - 24 needed	268	77	21	46		413
T15 - 19 needed	491	75	76	128		769
T10 - 14 needed	821	298	138	101	11	1,369
T5 - 9 needed	1,230	427	230	213		2,100
T1 - 4 needed	1,111	325	159	258	11	1,865
T0 - 4 surplus	1,274	349	167	226		2,016
T5 - 9 surplus	1,486	353	105	115		2,060
T10 - 14 surplus	1,246	336	57	130	11	1,780
T15 - 19 surplus	1,036	122	96	110		1,363
T20 or more surplus	6,358	475	121	543	13	7,509
Total	15,648	3,004	1,206	1,902	47	21,807

**Region AUA**

Daily basic needs spending deficit / surplus	Water supply				Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	
T30 or more needed	10	10			20
T25 - 29 needed	10				10
T20 - 24 needed	50	20			70
T15 - 19 needed	80	20			100
T10 - 14 needed	80	50		10	140
T5 - 9 needed	160	60	10		230
T1 - 4 needed	180	30		10	220
T0 - 4 surplus	260	70	10		340
T5 - 9 surplus	330	100			430
T10 - 14 surplus	240	130			370
T15 - 19 surplus	260	30			290
T20 or more surplus	2,330	130	10	20	2,490
Total	3,989	650	30	40	4,709

**Region NWU**

Daily basic needs spending deficit / surplus	Water supply				Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	
T30 or more needed	50	20		10	81
T25 - 29 needed	10	60			71
T20 - 24 needed	71	10	10	10	101
T15 - 19 needed	91	30			121
T10 - 14 needed	202	101	10	10	322
T5 - 9 needed	242	121	10	20	393
T1 - 4 needed	222	121		20	363
T0 - 4 surplus	363	111		20	494
T5 - 9 surplus	353	81		10	443
T10 - 14 surplus	393	81	10	20	504
T15 - 19 surplus	292	81			373
T20 or more surplus	1,703	222	10	131	2,066
Total	3,991	1,038	50	252	5,331



**Region ROU**

Daily basic needs spending deficit / surplus	Water supply					Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	Other	
T30 or more needed	13	27				40
T25 - 29 needed	54	27	13			94
T20 - 24 needed	80	13		13		107
T15 - 19 needed	107	13	54	27		201
T10 - 14 needed	147	80	27	13		268
T5 - 9 needed	335	134	121	80		670
T1 - 4 needed	362	107	80	94		644
T0 - 4 surplus	282	67	67	94		510
T5 - 9 surplus	389	94	27	27		536
T10 - 14 surplus	322	80	13	54		469
T15 - 19 surplus	282		40	54		375
T20 or more surplus	1,327	67	67	201	13	1,676
Total	3,701	711	510	657	13	5,591

**Region SAV**

Daily basic needs spending deficit / surplus	Water supply					Total
	Piped water exclusive	Piped water shared	River / lake / well	Rain	Other	
T30 or more needed	90	11	11			112
T25 - 29 needed	90	11	11	22		134
T20 - 24 needed	67	34	11	22		134
T15 - 19 needed	213	11	22	101		347
T10 - 14 needed	392	67	101	67	11	639
T5 - 9 needed	493	112	90	112		807
T1 - 4 needed	347	67	78	134	11	639
T0 - 4 surplus	370	101	90	112		672
T5 - 9 surplus	415	78	78	78		650
T10 - 14 surplus	291	45	34	56	11	437
T15 - 19 surplus	202	11	56	56		325
T20 or more surplus	997	56	34	191		1,278
Total	3,967	605	616	953	34	6,175

**Table 13: Number of households with daily basic needs spending in deficit or surplus by main type of lighting**

**Region All**

Daily basic needs spending deficit / surplus	Main type of lighting			Total
	Electricity	Spirit / Kerosene	Other	
T30 or more needed	253			253
T25 - 29 needed	299	10		309
T20 - 24 needed	376	37		413
T15 - 19 needed	720	49		769
T10 - 14 needed	1,115	255		1,369
T5 - 9 needed	1,679	422		2,100
T1 - 4 needed	1,609	243	13	1,865
T0 - 4 surplus	1,782	234		2,016
T5 - 9 surplus	1,911	149		2,060
T10 - 14 surplus	1,620	161		1,780
T15 - 19 surplus	1,267	96		1,363
T20 or more surplus	7,253	246	10	7,509
Total	19,883	1,901	23	21,807

**Region AUA**

Daily basic needs spending deficit / surplus	Main type of lighting		Total
	Electricity	Spirit / Kerosene	
T30 or more needed	20		20
T25 - 29 needed	10		10
T20 - 24 needed	70		70
T15 - 19 needed	100		100
T10 - 14 needed	100	40	140
T5 - 9 needed	230		230
T1 - 4 needed	210	10	220
T0 - 4 surplus	310	30	340
T5 - 9 surplus	410	20	430
T10 - 14 surplus	300	70	370
T15 - 19 surplus	270	20	290
T20 or more surplus	2,460	30	2,490
Total	4,489	220	4,709

**Region NWU**

Daily basic needs spending deficit / surplus	Main type of lighting			Total
	Electricity	Spirit / Kerosene	Other	
T30 or more needed	81			81
T25 - 29 needed	60	10		71
T20 - 24 needed	91	10		101
T15 - 19 needed	121			121
T10 - 14 needed	282	40		322
T5 - 9 needed	302	91		393
T1 - 4 needed	322	40		363
T0 - 4 surplus	433	60		494
T5 - 9 surplus	413	30		443
T10 - 14 surplus	474	30		504
T15 - 19 surplus	333	40		373
T20 or more surplus	1,945	111	10	2,066
Total	4,858	464	10	5,331

**Region ROU**

Daily basic needs spending deficit / surplus	Main type of lighting			Total
	Electricity	Spirit / Kerosene	Other	
T30 or more needed	40			40
T25 - 29 needed	94			94
T20 - 24 needed	80	27		107
T15 - 19 needed	174	27		201
T10 - 14 needed	161	107		268
T5 - 9 needed	429	241		670
T1 - 4 needed	483	147	13	644
T0 - 4 surplus	456	54		510
T5 - 9 surplus	483	54		536
T10 - 14 surplus	442	27		469
T15 - 19 surplus	362	13		375
T20 or more surplus	1,582	94		1,676
Total	4,787	791	13	5,591

**Region SAV**

Daily basic needs spending deficit / surplus	Main type of lighting		Total
	Electricity	Spirit / Kerosene	
T30 or more needed	112		112
T25 - 29 needed	134		134
T20 - 24 needed	134		134
T15 - 19 needed	325	22	347
T10 - 14 needed	572	67	639
T5 - 9 needed	717	90	807
T1 - 4 needed	594	45	639
T0 - 4 surplus	583	90	672
T5 - 9 surplus	605	45	650
T10 - 14 surplus	403	34	437
T15 - 19 surplus	303	22	325
T20 or more surplus	1,266	11	1,278
Total	5,749	426	6,175

Table 14: Number of households with daily basic needs spending in deficit or surplus by main type of cooking fuel

## Region

## All

Daily basic needs spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed			10	243		253
T25 - 29 needed			10	299		309
T20 - 24 needed			10	402		413
T15 - 19 needed			30	739		769
T10 - 14 needed		21	116	1,219	13	1,369
T5 - 9 needed		47	160	1,874	20	2,100
T1 - 4 needed		30	194	1,631	10	1,865
T0 - 4 surplus	31	20	222	1,742		2,016
T5 - 9 surplus	63	61	263	1,629	42	2,060
T10 - 14 surplus	32	108	294	1,335	10	1,780
T15 - 19 surplus	20	179	218	935	11	1,363
T20 or more surplus	410	1,270	1,590	4,145	95	7,509
Total	557	1,736	3,118	16,193	202	21,807

## Region

## AUA

Daily basic needs spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed			10	10		20
T25 - 29 needed				10		10
T20 - 24 needed				70		70
T15 - 19 needed			20	80		100
T10 - 14 needed			40	100		140
T5 - 9 needed		10	60	140	20	230
T1 - 4 needed		10	110	90	10	220
T0 - 4 surplus	10	10	70	250		340
T5 - 9 surplus	40	30	140	200	20	430
T10 - 14 surplus		30	170	160	10	370
T15 - 19 surplus	20	60	120	90		290
T20 or more surplus	270	730	910	550	30	2,490
Total	340	880	1,650	1,750	90	4,709

## Region

## NWU

Daily basic needs spending deficit / surplus	Main type of cooking fuel				Total
	Electricity	Gas	Kerosene	Wood	
T30 or more needed				81	81
T25 - 29 needed			10	60	71
T20 - 24 needed			10	91	101
T15 - 19 needed			10	111	121
T10 - 14 needed		10	40	272	322
T5 - 9 needed		10	30	353	393
T1 - 4 needed		20	50	292	363
T0 - 4 surplus	10	10	101	373	494
T5 - 9 surplus	10	20	60	353	443
T10 - 14 surplus	10	40	111	343	504
T15 - 19 surplus		81	60	232	373
T20 or more surplus	91	383	403	1,189	2,066
Total	121	574	887	3,749	5,331

**Region ROU**

Daily basic needs spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed				40		40
T25 - 29 needed				94		94
T20 - 24 needed				107		107
T15 - 19 needed				201		201
T10 - 14 needed			13	241	13	268
T5 - 9 needed		27	13	630		670
T1 - 4 needed				644		644
T0 - 4 surplus			40	469		510
T5 - 9 surplus	13		40	483		536
T10 - 14 surplus		27	13	429		469
T15 - 19 surplus		27	27	322		375
T20 or more surplus	27	67	188	1,341	54	1,676
Total	40	147	335	5,001	67	5,591

**Region SAV**

Daily basic needs spending deficit / surplus	Main type of cooking fuel					Total
	Electricity	Gas	Kerosene	Wood	Other	
T30 or more needed				112		112
T25 - 29 needed				134		134
T20 - 24 needed				134		134
T15 - 19 needed				347		347
T10 - 14 needed		11	22	605		639
T5 - 9 needed			56	751		807
T1 - 4 needed			34	605		639
T0 - 4 surplus	11		11	650		672
T5 - 9 surplus		11	22	594	22	650
T10 - 14 surplus	22	11		403		437
T15 - 19 surplus		11	11	291	11	325
T20 or more surplus	22	90	90	1,065	11	1,278
Total	56	134	247	5,693	45	6,175

Table 15: Number of households with daily basic needs spending in deficit or surplus by type of toilet

**Region****All**

Daily basic needs spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed	53	158	43		253
T25 - 29 needed	46	145	118		309
T20 - 24 needed	122	205	86		413
T15 - 19 needed	142	384	231	13	769
T10 - 14 needed	332	567	456	13	1,369
T5 - 9 needed	441	910	686	63	2,100
T1 - 4 needed	487	792	562	25	1,865
T0 - 4 surplus	633	951	432		2,016
T5 - 9 surplus	1,039	702	309	10	2,060
T10 - 14 surplus	776	674	319	11	1,780
T15 - 19 surplus	588	527	227	21	1,363
T20 or more surplus	5,073	1,756	669	11	7,509
Total	9,732	7,771	4,136	168	21,807

**Region****AUA**

Daily basic needs spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed	10	10			20
T25 - 29 needed		10			10
T20 - 24 needed	50	10	10		70
T15 - 19 needed	60	40			100
T10 - 14 needed	50	40	50		140
T5 - 9 needed	110	80	40		230
T1 - 4 needed	150	50	20		220
T0 - 4 surplus	190	90	60		340
T5 - 9 surplus	310	90	20	10	430
T10 - 14 surplus	230	90	50		370
T15 - 19 surplus	180	70	30	10	290
T20 or more surplus	2,230	190	70		2,490
Total	3,569	770	350	20	4,709

**Region****NWU**

Daily basic needs spending deficit / surplus	Type of toilet			Total
	Flush type	Pisikoa type	Pit	
T30 or more needed	20	40	20	81
T25 - 29 needed	10	10	50	71
T20 - 24 needed	20	60	20	101
T15 - 19 needed	10	91	20	121
T10 - 14 needed	101	131	91	322
T5 - 9 needed	141	101	151	393
T1 - 4 needed	151	91	121	363
T0 - 4 surplus	202	191	101	494
T5 - 9 surplus	232	111	101	443
T10 - 14 surplus	242	121	141	504
T15 - 19 surplus	171	101	101	373
T20 or more surplus	1,159	554	353	2,066
Total	2,459	1,602	1,270	5,331

**Region****ROU**

Daily basic needs spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed		40			40
T25 - 29 needed	13	80			94
T20 - 24 needed	40	67			107
T15 - 19 needed	27	107	54	13	201
T10 - 14 needed	80	94	80	13	268
T5 - 9 needed	67	349	215	40	670
T1 - 4 needed	107	282	241	13	644
T0 - 4 surplus	107	322	80		510
T5 - 9 surplus	228	255	54		536
T10 - 14 surplus	215	228	27		469
T15 - 19 surplus	147	188	40		375
T20 or more surplus	1,046	496	134		1,676
Total	2,078	2,507	925	80	5,591

**Region****SAV**

Daily basic needs spending deficit / surplus	Type of toilet				Total
	Flush type	Pisikoa type	Pit	Other	
T30 or more needed	22	67	22		112
T25 - 29 needed	22	45	67		134
T20 - 24 needed	11	67	56		134
T15 - 19 needed	45	146	157		347
T10 - 14 needed	101	303	235		639
T5 - 9 needed	123	381	280	22	807
T1 - 4 needed	78	370	179	11	639
T0 - 4 surplus	134	347	191		672
T5 - 9 surplus	269	247	134		650
T10 - 14 surplus	90	235	101	11	437
T15 - 19 surplus	90	168	56	11	325
T20 or more surplus	639	516	112	11	1,278
Total	1,625	2,891	1,591	67	6,175

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