



**GOVERNMENT OF SAMOA**  
**SAMOA BUREAU OF STATISTICS**  
**AND**  
**UNDP PACIFIC CENTRE**



**SAMOA**

**A REPORT ON THE ESTIMATION OF**  
**BASIC NEEDS POVERTY LINES, AND**  
**THE INCIDENCE AND CHARACTERISTICS OF HARDSHIP**  
**& POVERTY**

**ANALYSIS OF THE 2008 HOUSEHOLD INCOME AND**  
**EXPENDITURE SURVEY**

**August 2010**

**Foreword**

I am very pleased to present this National Report on Poverty and Hardship Indicators for Samoa based on an analysis of the 2008 household income and expenditure survey. This report is very timely as the government and the economy struggle to overcome the challenges posed by the recent rapid increases in food and fuel prices, and the loss of employment and revenues that have occurred as a consequence of the global economic recession over the past two years. Samoa has been particularly badly hit by the impacts of the global economic situation and many households in Samoa are now experiencing increased levels of hardship in meeting their daily basic needs.

Poverty as measured by national poverty lines is here considered as a measure of the relative level of hardship or well-being experienced by households in similar circumstances. Its essence however lies within the context in which it is defined. While this report includes discussions on poverty in Samoa within the Pacific context, its primary focus is to assess and define poverty within the context of the basic costs of a minimum standard of living in Samoa and its sub-regions of Apia, North-west Upolu, Rest of Upolu and Savai'i.

An estimation of National Food and Basic Needs Poverty Lines for Samoa is provided to enable determination of those living above and those living below the two poverty lines. Accordingly, in the face of a changing global economic environment it would seem that an increasing number of families in Samoa are facing hardship and poverty. The report and its findings are an important guide to the government's policy-makers and community leaders alike in planning and formulating appropriate policies that would improve the lives and well being of the people especially those living below the national basic needs poverty line.

The challenge for Samoa is to fully embrace the need to deal with the increasing levels of hardship and poverty that exist in the country and ensure that the aspirations of people of Samoa for better standards of living are met.

The Government of Samoa is grateful to the UNDP Pacific Centre for its support to the Bureau of Statistics in the production of this report. It is our hope that this, the second report on poverty in Samoa, will be part of a continuing series of such reports to assess poverty and gauge Samoa's progress in addressing the needs of the people. To this end, the continued assistance of UNDP and of other donor agencies and partners is essential.



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**GOVERNMENT STATISTICIAN**

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It is hoped that the analysis contained in this report will stimulate policy makers and users in government and the international community to seek more detailed analysis to be conducted on specific issues relating to food consumption patterns, specific areas of expenditure, gender, children in poverty and the nature of poverty at the regional levels. The further and more detailed analysis of the broader socio-economic aspects of the survey data which can be done on the survey data will add policy substance to the key poverty indicators. It will also assist in developing the various conclusions and hypotheses relating to poverty and hardship in Samoa which are highlighted in this report.

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## Table of Contents

Foreword	i
Acknowledgements	iii
Table of Contents	iv
Executive Summary	1
<b>1. Purpose of Paper</b>	<b>8</b>
<b>2. Introduction</b>	<b>9</b>
2.1 Background	9
2.2 Human Development Status	10
2.3 Economic Performance	10
<b>3. Defining Hardship and Poverty in the Samoa Context</b>	<b>11</b>
3.1 Background	11
3.2 Poverty = Hardship: A Pacific Definition of Poverty	13
3.3 What is the National Poverty Line	15
3.4 Estimating the Poverty Line for Samoa	17
<b>4. The Household Income and Expenditure Survey</b>	<b>18</b>
4.1 Introduction & Survey Methodology	18
4.2 Overview of HIES Results	20
4.2.1 Household Size and Composition	20
4.2.2 Household Expenditure	22
<b>5. The Food Poverty Line</b>	<b>25</b>
<b>6. The Basic Needs Poverty Line</b>	<b>28</b>
6.1 Non-Food Basic Needs Expenditure	28
6.2 Basic Needs Poverty Lines	29
<b>7. The Incidence and Depth of Poverty in Samoa</b>	<b>30</b>
7.1 Head Count Ratio	30
7.2 Incidence of Food Poverty	30
7.3 Incidence of Basic Needs Poverty	31
7.4 Vulnerability of Households to Falling into Poverty	32
7.5 Depth and Severity of Poverty	33
<b>8. Income Distribution and Inequality</b>	<b>34</b>
<b>9. Who Are the Poor and What are their Characteristics?</b>	<b>35</b>
9.1 Location of Poor Households	35
9.2 Gender	35
9.3 Children in Poverty	35
9.4 Activity Status of Households	36
9.5 Educational Attainment	37
9.6 Energy Access and Use	37
9.7 Access to Water and Sanitation	38
<b>10. Conclusions</b>	<b>39</b>
10.1 Poverty of Income/Expenditure or Opportunity?	39

10.2	How Does Poverty Affect People	40
10.3	Policy Considerations	41
	<b>APPENDIX TABLES</b>	<b>46</b>

## ABBREVIATIONS

ABS	Australian Bureau of Statistics
ADB	Asian Development Bank
a.e.	Adult equivalent
AUA or APW	Apia Urban Area
BNPL	Basic Needs Poverty Line
CGER	Combined Gross Enrolment Rate
CPI	Consumer Price Index
CSO	Civil Society Organisation
CVI	Composite Vulnerability Index
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FPL	Food Poverty Line
FSM	Federated States of Micronesia
GDP	Gross Domestic Product
GNP	Gross National Product
HCI	Head Count Index
HDI	Human Development Index
HDR	Human Development Report
HH	Household
HHH	Head of Household
HIES	Household Income and Expenditure Survey
HPI	Human Poverty Index
IMF	International Monetary Fund
IP	Incidence of Poverty
LFPR	Labour Force Participation Rate
L3D	Lowest Three Deciles
MDG	Millennium Development Goals
NCD	Non-communicable Disease
NDS	National Development Strategies
NGO	Non Government Organisation
NWU	North-west Upolu
PACER	Pacific Agreement on Closer Economic Relations
PAH	Participatory Assessment of Hardship
p.c.	per capita
p.c.a.e	per capita adult equivalent
PGI	Poverty Gap Index (Depth of Poverty)
PHDR	Pacific Human Development Report
PIC	Pacific Island Country
PICTA	Pacific Islands Trade Agreement
PNG	Papua New Guinea

PPA	Poverty Partnership Agreement
PPP	Purchasing Power Parity
PPS	Probability Proportional to Size
PRS	Poverty Reduction Strategies
RMI	Republic of Marshall Islands
RoU	Rest of Upolu
SAT	Samoa Tala
SAV	Savai'i
SBS	Samoa Bureau of Statistics
SDS	Strategies for the Development of Samoa
SOE	State Owned Enterprise
SPC	Secretariat of the Pacific Community
SPGI	Squared Poverty Gap Index (Severity of Poverty)
STI	Sexually Transmitted Infections
STR	Student Teacher Ratio
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
WHO	World Health Organization
WTO	World Trade Organisation

## Executive Summary

### 1. Introduction

1. Poverty analysis is primarily concerned with identifying within each society those households and individuals that are least well-off or most disadvantaged, where they live and what characteristics they might have that set them apart from those that are better-off. In order to be able to develop targeted pro-poor poverty reduction or poverty alleviation strategies it is necessary to try to understand why some are poor and others are not. Is the lack of education a common characteristic? Is the age, gender or employment status of the head of household a common factor? By analysing household income and/or expenditure data and the characteristics of each HH it is possible to begin to gain a better understanding of these issues and how they might be addressed in order to reduce hardship and poverty.

### 2. Purpose of the Paper

2. The purpose of this paper is therefore to provide estimates of National Food and Basic Needs Poverty Lines for Samoa based on an analysis of the household data from the 2008 Household Income and Expenditure Survey (HIES). From these data regional and national level poverty lines and the incidence of poverty have been estimated.

3. The 2008 HIES contains a wealth of information. This paper analyses the expenditure data to estimate the incidence of poverty and the Head Count Index (HCI)<sup>1</sup> by comparing food and basic needs poverty lines to recorded levels of expenditure.

4. It also provides an analysis of the broad characteristics of low-expenditure households in terms of their socio-economic status, demographics and level of household access to basic services. Together with the poverty indicators these provide a good indication of which households are the most disadvantaged in Samoa, what common characteristics they might share and why they might be in this situation. Such information will be useful for government to define targeted policies and interventions to assist in alleviating their poverty and hardship.

5. Poverty as measured by national poverty lines is here considered as a measure of the relative level of hardship or well-being experienced amongst households in similar parts of the country and in similar circumstances. It assesses the basic costs of an acceptable minimum standard of living in a particular society and measures the number of households and/or the proportion of the population that are deemed not to be able to meet these basic needs. The costs and basic-needs for individual households are likely to differ between the urban and rural areas of a particular country. It is therefore necessary to analyse the data from each sub-region; in the case of Samoa the country has been divided into four sub-regions; Apia Urban Area, North-west Upolu, Rest of Upolu and Savai'i. Each of these is assessed to provide an understanding of the relative costs and standards of living of households and people living in the different parts of Samoa.

6. Every country experiences some incidence of poverty, but the levels of incidence measured by national poverty lines are not directly comparable across countries. Thus, two countries may have similar levels of relative poverty measured by national poverty lines but very different

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<sup>1</sup> The Head Count Ratio is not the same as the Poverty Indicator in Millennium Development Goal 1. The MDG 1 indicator, based on US\$1 per day, is not yet available for Samoa, or any other Pacific Islands Countries, as estimates of the Purchasing Power Parity exchange rates required to calculate the MDG indicator have not yet been finalised by SPC and the Australian Bureau of Statistics (ABS). The MDG 1 indicator, when available, will enable direct comparisons of 'absolute' poverty levels to be made between countries. National poverty lines, which are used in this analysis, enable assessments of *relative* poverty within countries.



levels of absolute or extreme poverty. The measurement of absolute or extreme poverty, enabling cross-country comparisons of the extent of poverty, is usually done through the estimation of the US\$1 per day PPP value used in Goal 1 of the Millennium Development Goals (MDGs). Presently this measure of poverty cannot be estimated since PPP indices are not yet available.

7. For the analysis of hardship and poverty in Samoa the household income and expenditure data from the 2008 HIES has therefore been used to estimate Food and Basic Needs Poverty Lines. These then provide the basis for estimating the relative poverty and hardship experienced by the poorest households in the country. From these, incidence levels, depth and severity of poverty have also been measured. Estimates have also been made of Gini coefficients on levels of inequality in expenditure by households. An analysis of the characteristics of the poorest 30% (bottom three deciles) of households has also been assessed.

### **3. Food and Basic Needs Poverty Lines**

8. The Food Poverty Lines (FPL) for Samoa and households/families have been estimated from the actual food expenditure patterns recorded in survey diaries for households in the lowest four-deciles of expenditure, measured in per-capita terms. An FPL measures the cost of a minimally nutritious diet, based on an average adult daily food-energy intake of 2100/2200 calories<sup>2</sup>.

9. To estimate the cost of the FPL in Samoa, CPI prices were used to measure the costs of purchased items. The actual values recorded in the household daily-diaries were used to estimate the notional costs of items that were produced for home consumption (subsistence production). This is important because in the rural areas subsistence production accounts for just over half of all food consumed by the poorest households. In comparison, in Apia and NWU the proportion of own food consumed by those in the bottom thirty percent of households was 17% and 40% respectively.

10. The weighted average household FPL in 2008 for HH in the bottom three deciles was estimated to be SAT290.36 (SAT31.56 per capita per week). For NWU, which had the largest average HH size in the bottom three deciles, the weekly food cost to meet the FPL was estimated to be SAT305.35. For Apia the weekly HH FPL was estimated to be SAT281.10, for RoU SAT297.81 and for Savai'i, with the smallest HH size the FPL amounted to SAT285.61.

11. For the purposes of calculating the BNPL the average actual amount of expenditure incurred by households in the lowest three deciles was taken as the basis for non-food basic needs. Applying these actual expenditure amounts to the FPL gives the non-food basic-needs component as illustrated in Table ES1. This table also summarises the weekly per capita poverty lines and the average cost per bottom-three-decile household in per capita terms.

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<sup>2</sup> This is the minimum food-energy intake recommended by the Food and Agricultural Organisation of the UN, and the World Health Organisation.

12. The Basic Needs Poverty Line (BNPL), including this allowance for essential non-food expenditure has been estimated as a national average household expenditure of SAT493.01 per household, SAT53.59 per capita per week. North-west Upolu had the highest BNPL at SAT559.23 for an average size family in the lowest three expenditure deciles, followed by the Apia urban area at SAT533.97 per household per week. The BNPL for the RoU was lower, at SAT466.76 for an average low-income HH, and for Savai'i the BNPL was SAT459.96. The lower rural BNPL derives largely from the lower demand for non-food expenditure in rural communities where opportunities for such expenditure are limited.

Table ES1				
Weekly Per Capita Poverty Lines				
SAT per capita per week	Food Poverty Line	Estimated Non-Food Expenditure	Basic Needs Poverty Line	Weekly cost per HH in L3D
	A	B	C = A+B	D
National average	31.56	22.03	53.59	493.02
Apia Urban Area	31.56	28.39	59.95	533.97
North-West Upolu	31.56	26.24	57.80	559.23
Rest of Upolu	31.56	17.90	49.46	466.76
Savai'i	31.56	19.27	50.83	459.96

13. The per capita costs of the BNPL are estimated at SAT59.95 for Apia, SAT57.80 for NWU, SAT49.46 for RoU and SAT50.83 for Savai'i. These are the amounts of expenditure/ consumption (cash and/or the value of own production consumed) required each week, to meet the estimated costs of a minimum standard of living in Samoa based on the results of the household survey.

14. The amounts actually reported by households as being spent on non-food essentials varies between the regions. In Apia and NWU poor households (bottom three deciles) reported spending just about as much on non-food items each week as they spent on food. In the rural areas of RoU and Savai'i the ratio was, on average, 56:44 in favour of food. This pattern of higher non-food expenditure in the urban centres is commonly observed in most other Pacific countries.

#### 4. Incidence of Poverty

15. The Incidence of Poverty in Samoa has been estimated by calculating: a) the proportion of households, and b) the proportion of the population, which reported weekly per capita expenditure less than the relevant food or basic needs poverty lines, see Section 7.3 and Table ES2.

Table ES2		
Incidence of Poverty		
Proportion of HH and Population with Weekly Per Capita Expenditure less than the Basic Needs Poverty Line		
%	Households	Population
	Basic Needs	Basic Needs
National average	20.1	26.9
Apia Urban Area	17.2	24.4
North-West Upolu	19.4	26.8
Rest of Upolu	20.5	26.6
Savai'i	21.9	28.8

16. The level of serious or extreme poverty, as measured by the proportion of households and population falling below the food poverty line is very low; only about three-percent of households and five-percent of the population. But as seen elsewhere the level of basic needs poverty is rather higher as households struggle to meet the demand for cash to cover the costs of essential non-food basic needs.

17. The average incidence of basic needs poverty, as measured by the Head Count Index (HCI) over all households nationally, is estimated at 20.1%, accounting for 26.9% of the population. Within this national average, the North-west Upolu and Apia urban areas recorded incidence of basic needs poverty of 19.4% and 17.2% of households and 26.8% and 24.4% of the population respectively. The rural areas of RoU and Savai'i are estimated to have had slightly higher levels of basic-needs poverty incidence 20.5% and 21.9% of households and 26.6% and 28.8% of population respectively.

18. For Apia and NWU the incidence of basic needs poverty amongst the population is little changed from that observed in the 2002 survey. The increase in basic needs poverty that is seen is concentrated in the rural areas, in RoU the proportion of population falling below the BNPL is estimated to have risen from 15.1% to 26.6% and on Savai'i from 16.1% to 28.8%. These significant increases are largely due to the fall in employment at Yazaki which has affected many rural households on RoU particularly, and also to the increasing demands for cash to meet non-food needs that are being felt by all households as society becomes more monetised.

19. Notwithstanding this these relative levels of national basic needs poverty are broadly in line with what is seen in other countries around the Pacific region. With food and fuel prices having risen sharply in the period during and after the 2008 survey many more households are becoming increasingly vulnerable to falling below the poverty lines. This is discussed further in Section 7.4.

## 5. Depth and Severity of Poverty

20. The Poverty Gap Index (PGI), measuring the depth of poverty<sup>3</sup> in Samoa has been estimated at a national average of 8.2. This is lower for example than Fiji (11.2) and FSM (9.3) and suggests that those HH falling below the BNPL have, on average, expenditure about eight-percent below the level of the basic needs poverty line. In other words the real incomes of these HH would need to rise by about eight-percent for them to move above the poverty line. In Apia and NWU the index was 8.8 and 8.0 respectively and 8.7 and 8.3 in RoU and Savai'i respectively.

21. The Squared Poverty Gap Index (SPGI), which measures the severity of poverty<sup>4</sup> being experienced, is estimated at 2.9 nationally. This is a lower poverty severity index than estimated in FSM 4.0, and less than the recent estimate for Fiji, 5.1. In Apia the SPGI was estimated at 3.4, and 2.6 in NWU. The indices for the rural areas of RoU and Savai'i were 3.2 and 3.0 respectively. This suggests that Samoa experiences a somewhat lower level of poverty severity than most other regional countries. The PGI and SPGI indices are a reflection of the variations in expenditure levels between the poor and non-poor households. Measured in per capita terms the average weekly household expenditure for all HH was 9.4 times higher in those households in the highest decile compared to those in the lowest decile. In Apia the ratio was 11.8. In rural Samoa the ratio was lower at 7.1 in RoU and 8.9 in Savai'i. These indices reflect the differences that occur between those who are in formal employment compared to those who are primarily engaged in the informal and subsistence sectors.

22. In both the PGI and SPGI the indices were slightly higher in 2008 compared to those estimated for 2002. This therefore suggests that both the depth and severity of poverty in Samoa have also risen slightly over the period; meaning in effect, the growth in the economy that has been achieved has not been especially pro-poor but rather broad-based benefiting everyone equally.

## 6. Income Distribution and Inequality

23. The Gini Coefficient is a measure of income/expenditure inequality where a higher index, maximum 1.0, would signify total inequality, and an index of zero would indicate total equality. At the national level the Gini Coefficient in 2008 was estimated at 0.47, with Apia and NWU

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<sup>3</sup> PGI: An index of the percentage by which the average expenditure of poor households falls below the BNPL, thus in Samoa the average expenditure of poor households is 8.2% below the BNPL.

<sup>4</sup> SGI: An index based on the PGI which by "squaring" the amount that a household's expenditure is below the BNPL gives additional weight to the poorest households; the higher the index the greater the severity of poverty experienced.

being 0.48 and 0.46 respectively and RoU and Savai'i being 0.44 and 0.46. These Gini coefficients are somewhat higher than those estimated for other Pacific countries; they are also higher than the coefficients estimated for 2002 when the national average Gini was calculated as 0.43 and the Ginis for the various regions of the country were all around 0.4. The higher estimates for the Gini are consistent with the slightly higher PGI and SPGI indices outlined in the previous section. A "reasonable" level of equality would be signified by a Gini of between 0.30 and 0.35, so therefore Samoa is bordering on an unreasonable level of inequality.

## **7. Who are the Poor and What are Their Characteristics?**

### **Gender and Hardship**

24. The gender of the head of household appears to play a relatively small role in determining the likelihood of a household being in poverty in Samoa. Nationally about one-in-five HH was headed by a female, however in Apia the proportion was almost one-in-four. For HH in the bottom three deciles the proportion was around one-in-five in all areas except Savai'i, where the proportion of female headed HH was only one-in-ten in the bottom three deciles. It was however almost one-third in the top quintile. The status of females is discussed further in Section 9.2.

### **Children in Hardship**

25. The survey indicated that there were a total of 72,865 children less than 15 years in the country, representing 39.9% of the total estimated population, with an average of 2.9 children per household. In the lowest three deciles the number of children per HH was significantly higher at 4.2 and while in the top quintile the number of children per HH was only 1.4 on average.

26. Overall female headed households were responsible for 20.7% of all children (approximately 15,000 in total), however almost forty-percent of these children (5567) were living in households in the lowest three deciles; thus children living in female headed HH had a significantly higher chance of being poor.

### **Poverty Characteristics**

27. Samoa's generally high status in the Pacific HDI and HPI indices and its relatively good level of progress towards the achievement of the Millennium Development Goals (MDGs) mean that there are few stand-out characteristics of poor households. Access to safe water is almost universal, as is access to electricity for lighting, even if it is not widely used for cooking purposes. Improved sanitation is also almost universal in its availability throughout the country.

28. Education is generally acknowledged as being one of the most critical factors in influencing whether a household is likely to be in poverty, and whether it will be able to rise out of such a condition. Samoa is in the fortunate position of having very few people reporting not having completed even primary level; less than five-percent of females (both urban and rural) and ten percent of males (urban and rural). Of those living in the urban areas approximately sixty-percent overall reported having completed at least primary level; however for those in the bottom three deciles the proportion achieving only primary level was over seventy-percent for females and two-thirds for males. The low progression rates from primary to secondary and beyond for both males and females is however an area for concern. The implication of this being that those who have only achieved primary education have a greater chance of being in the bottom three deciles.

29. The challenge for those in the bottom three deciles is to find income earning opportunities that will provide them with a source of cash to meet the increasing demands of Samoan society. Those with lower educational attainment are the ones that will struggle most to find these employment opportunities.

## 8. Conclusions

30. Despite the six-years of relatively good economic growth that was achieved in the period between the household surveys of 2002 and 2008, the level of hardship and poverty being experienced by the least well-off in Samoa society has not improved. The increase in the level of inequality as measured by the Gini coefficient and the accompanying increase in the depth of poverty as measured by the poverty gap index, suggest that the economic growth did not really benefit the most disadvantaged. The results of this household survey, held in the middle of the global economic slowdown, also reflect the impact of the global situation on the Samoa economy.

31. However poverty in Samoa does not mean hunger or destitution in the traditional sense of its understanding.. Families constantly have to make choices basis between the competing demands for household expenditure and the limited availability of cash income to meet that expenditure; trade-offs are made between one bill and another, food or fees. Households deemed to be experiencing basic-needs poverty are therefore facing hardship on a daily basis. They struggle to pay bills and to purchase adequate and suitably nutritious food. They might need to borrow regularly from informal loan providers who may charge very high interest rates for small unsecured loans to meet family commitments and community obligations. Many households borrow from the local store ahead of pay-day or in anticipation of a remittance from overseas. They are thus frequently, and occasionally constantly, in debt.

32. Drift of population to the urban centre of Apia and to North-west Upolu, especially amongst young men, leads to higher levels of urban unemployment and growing numbers of people living in overcrowded and sometimes poor quality housing conditions. Such conditions inevitably lead to social tensions and contribute to further weakening in the traditional social structures and safety nets.

33. This analysis seeks to provide government with clearer, evidence-based indications of the extent and nature of poverty and hardship in Samoa. It suggests policy issues for further consideration and identifies possible policy options to address these issues. Increased opportunities for employment or economic opportunity, not only in the rural areas where poverty has increased but also in the urban centres where existing jobs are now being lost.

34. Samoa like many PICs is facing serious challenges in coping with the impact of the current period of global recession. Over the past decade the country has been one of the best performing economies in the Pacific region. It has enjoyed high growth rates with increasing real incomes for many, fiscal stability, and a high standard of governance. The economic growth has now come to an abrupt halt and real incomes are falling, the fiscal situation is no longer quite so stable but governance structures are being sustained.

35. When faced with a similar set of challenges in the mid 1990s Samoa embarked on a period of radical reforms that provided the launching pad for the period of sustained growth just ended. It is time again for bold measures to be put forward to launch the economy back onto a path of renewed economic growth and to reverse the increase in hardship and poverty now being experienced.

36. The following Table ES3 summarises the key MDG poverty indicators derived from the HIES.

Table ES3					
Millennium Development Goal Indicators					
	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
1.1 Proportion of Population below Basic Needs Poverty Lines % (Note 1)	26.9	24.4	26.8	26.6	28.8
Proportion of Population vulnerable to falling into poverty; per capita expenditure <10% above BNPL %	4.4	3.9	5.7	6.0	4.5
1.2 Proportion of households with per capita expenditure below the minimum level of dietary energy consumption (FPL) %	3.3	2.3	2.0	5.6	3.6
1.3 Poverty Gap Index (PGI) - Depth of Poverty	8.2	8.8	8.0	8.7	8.3
Squared PGI - Severity of Poverty	2.9	3.4	2.6	3.2	3.0
1.4 Share of poorest quintile (20%) in consumption by region %	9.3	8.1	10.0	10.0	9.0
Ratio of Share of poorest quintile (20%) to highest quintile	4.3	5.0	3.8	3.7	4.4
HH Gini Coefficient: (0 = perfect equality 1 = perfect inequality)	0.47	0.48	0.46	0.44	0.46
Note 1: Proportion of Population below US\$1 (PPP) per day not yet available, awaiting PPP indices to be finalised.					

## National Poverty Lines and Estimates of the Incidence in of Poverty in Samoa

### 1. Purpose of Paper

1. The purpose of this paper is to provide updated estimates of National Food and Basic Needs Poverty Lines and the incidence of poverty for Samoa based on an analysis of the household data from the 2008 Household Income and Expenditure Survey (HIES). The paper also attempts to assess the likely future impact of the global economic and financial crisis on the incidence of hardship and poverty in Samoa.

2. This is the second poverty analysis to be conducted for Samoa, the first having been done in 2003 based on the 2002 HIES. Wherever possible a comparison between the analyses and indicators derived from the two surveys is provided to enable progress towards reducing hardship and poverty in Samoa to be assessed.

3. The HIES contains a wealth of information on household income and expenditure and on household characteristics. Analysis of this data enables a picture to be developed of the overall status of either well-being or hardship being experienced by the people of Samoa. Specifically this paper analyses the expenditure data to estimate the incidence of poverty and the Head Count Index (HCI)<sup>5</sup> by comparing food and basic needs poverty lines to recorded levels of expenditure. The analysis uses the “Cost of Basic Needs” methodology which is explained in the Sections 4 and 5 of the main report.

4. The report also provides an analysis of the broad characteristics of low-expenditure households (those in the lowest thirty-percent of weekly per capita expenditure); this analysis assesses their socio-economic status, demographics and levels of household access to basic services. Together with the poverty indicators these provide a good indication of which households are the most disadvantaged in Samoa; what common characteristics they might share; and why they might be in this situation. Such information will be useful for the government to define targeted policies and interventions to assist in alleviating their poverty and hardship.

5. Specifically the paper will:

- Discuss the definition and context of poverty in the Pacific and Samoa in particular, Section 3;
- Outline the poverty analysis methodology used and provide an overview of some of the key household and socio-economic indicators from the HIES, Section 4;
- Estimate food and basic needs poverty lines for households<sup>6</sup> in Samoa as a whole and each of the four regions, Apia, North-west Upolu, Rest of Upolu and Savai'i; Sections 5 & 6;
- Provide indications of the incidence of poverty amongst households in the regions, estimates of the depth and severity of poverty by region, and estimates of the

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<sup>5</sup> The Head Count Ratio is not the same as the Poverty Indicator in Millennium Development Goal 1. The MDG 1 indicator, based on US\$1 per day, is not yet available for Samoa, or any other Pacific Islands Countries, as estimates of the Purchasing Power Parity exchange rates required to calculate the MDG indicator have not yet been finalised by SPC and the Australian Bureau of Statistics (ABS). The MDG 1 indicator, when available, will enable direct comparisons of ‘absolute’ poverty levels to be made between countries. National poverty lines, which are used in this analysis, enable assessments of *relative* poverty within countries.

<sup>6</sup> The survey defined households as units “where normal family or household living arrangements are exercised”; and therefore excludes institutional housing such as schools, hospitals etc.

vulnerability of HH falling below the poverty lines in the face of rising prices and declining real incomes; Section 7;

- Estimate the extent of inequality in income (or expenditure) amongst households, Section 8;
- An outline of some of the characteristics of poor households; section 9; and
- Provide a summary of key policy issues arising from the analysis, section 10.

6. This report is the second occasion that national poverty lines have been estimated for Samoa. The previous analysis was undertaken in 2003 on data from the 2002 HIES<sup>7</sup>. Samoa is therefore one of the few Pacific countries that, so far, is able to begin to assess changes in the levels of hardship and poverty over time and to determine whether development policies and initiatives have had any noticeable impact on the level of hardship and poverty experienced by the people.

## 2. Introduction

### 2.1 Background

7. Samoa is a relatively small Pacific nation with a total population of around 182,000 (end 2008 estimate from HIES). The country consists of two main islands Upolu and Savai'i and three smaller inshore islands. The islands are primarily mountainous and volcanic. Although fertile these volcanic islands, being very rugged and dissected by many steep river valleys, frequently have limited potential for large scale agricultural development. Notwithstanding this there is still considerable potential for the development of small-scale niche-market agricultural products. This potential has been recognised and in mid-2009 the government and private sector agreed on a strategy for the development of increased fruit and vegetable production, serving the tourism industry as well as the local market, and potentially exports, providing a source of incomes and livelihoods for many small-scale as well as commercial growers.

8. Samoa has a relatively good level of food security with agriculture and fishing, primarily subsistence-based, contributing an estimated 12% to GDP. Trend growth in this sector has however been low at less than 0.4% per annum. At the household level the HIES data indicates that food produced by households for own consumption accounted on average for just under 30% of all food consumed. The proportion was however significantly higher in the rural parts of the country and amongst the poorer households.

9. The climate is tropical with the high islands experiencing heavy year-round rainfall. Occasional cyclones cause severe damage to property, crops and infrastructure. The population is almost entirely Polynesian with a small number of Chinese and Europeans. The social system is based on the typical Pacific community and family structures seen elsewhere in the region, and in Samoa the chiefly *Matai* system and the social structure known as *Fa'a Samoa* are still very strong and play an important role in the daily life of all Samoans. Samoa has a very strong cultural identity and a large diaspora of Samoans living in Australia, New Zealand, USA and elsewhere who provide substantial remittance flows to their *aiga* in the home country.

10. Samoa's principal resources are the fish stocks in its small but important exclusive economic zone (EEZ) and its agricultural and tourism potential. There is little remaining commercially exploitable natural forest but areas of both of the main islands have forestry plantations. These plantations and the remaining natural forests offer some prospect for a continuing small-scale forest product industry.

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<sup>7</sup> Hardship and Poverty Status Discussion Paper; ADB RETA 6047, presented to a national workshop in September 2003.



11. While the people of Samoa have experienced a higher level of growth in per capita GDP than most of their Pacific neighbours, the rapidly increasing cost of living in the country is adversely affecting the overall living standards of those without regular cash incomes (or those reliant on remittances) and especially the most vulnerable. However, whilst many families might not be especially well-off in financial or material terms, their strong family and community ties have traditionally provided social safety nets for the most disadvantaged and vulnerable. But in recent years the increasing monetisation of Pacific economies, and of Samoa in particular with its high level of remittances and the need for cash gifts as part of *fa'alavelave*, together with increasing rural/urban and overseas migration have begun to undermine these traditional structures. In many ways these features are now being seen to a greater or lesser extent, in all Pacific countries.

12. Samoa has long enjoyed a special relationship with New Zealand, with an annual quota of around 11,000 migrants being permitted, together with the normal family-linked migration. The large Samoan diaspora in USA and elsewhere has also served to provide a safety valve, which on the one hand has kept population growth to a very low level (around 1% per annum), but on the other, has led to an out-migration of many young people with better education and valuable skills, who might otherwise find themselves unemployed in the domestic economy, especially in the current global economic downturn. This migration has nevertheless deprived the domestic economy of scarce and needed skills.

## 2.2 Human Development Status

13. The human capital status is generally good with a high proportion of students (by Pacific regional standards) proceeding into secondary school and many then proceed for tertiary education at the National University of Samoa or overseas. The links between educational attainment and poverty are analysed further in Section 9 of the report. The issues facing Samoa are not so much a lack of resources, either natural or human, but rather the difficulty in exploiting those resources in an economic and sustainable way that is also sympathetic to the social structure.

14. In 2008 Samoa ranked 4<sup>th</sup> (out of 15) on the UNDP Pacific Human Development Index (HDI) (up from 7<sup>th</sup> in 1998) and top of the Human Poverty Index (HPI) (up from 4<sup>th</sup> in 1998). In both cases the index values showed significant improvements between the two years. Globally Samoa was ranked 96<sup>th</sup> in 2006 on the new HDI series. In the new series Samoa's global revised HDI index values rose from 0.682 in 1985 to 0.760 in 2006. Thus over recent years Samoa has generally seen a steady improvement in its composite human development and human poverty indices and rankings. This is reflected in the detailed analyses of the HIES data that follows.

15. Consequent on its generally high level of human development and its recent growth in GDP per capita, Samoa has been put on the LDC graduation list. However the government has challenged the graduation process arguing that the country is extremely vulnerable to natural disasters, including the impact of climate change, and that LDC status should be retained.

## 2.3 Economic Performance

16. Like most PICs Samoa's economy is very open and highly integrated into the global economic system through trade, tourism, and employment, as well as through the remittances of the large Samoan diaspora.

17. In the six years since the previous HIES in 2002 Gross Domestic Product (GDP) growth in Samoa has been positive averaging 2.4% per annum<sup>8</sup>; with the relatively high rate of out-

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<sup>8</sup> Samoa Bureau of Statistics and Asian Development Outlook, 2009, Asian Development Bank, Manila

migration the overall annual population growth rate has been kept to around 1%, resulting in per capita GDP increasing by around 1.5% per annum. However with an estimated 70%<sup>9</sup> of GDP being generated in the Apia urban area and north-west Upolu the benefits of this growth may not have been shared equally throughout the country.

18. Samoa has been, and still is being, impacted by the affects of the global fuel and food price increases of 2008, followed now by the impact of the global economic downturn. Over the course of the survey period in 2008 a significant number of jobs were lost in Yazaki the car-wiring-harness manufacturer, (once the largest private sector employer in the country); more jobs will be lost in the latter part of 2009 as one of the major tuna canneries based in neighbouring American Samoa closes its operations. Many Samoans have been employed in this venture and the closure will impact jobs directly as well as remittances to families. The impact of these job and income losses will therefore be keenly felt by many households. The tourism sector has however remained buoyant but there are signs that remittances, excluding special gifts of vehicles as the switch to driving on the left approaches, are now beginning to decline as those Samoans living overseas are themselves struggling to meet the higher costs of living in the face of rising unemployment in their host countries.

19. The annual inflation rate reached around 18% in 4Q08 easing to 12.4% in the first quarter 2009 and declining further to 9.2% in the June quarter; although the rate of increase is getting less these high rates of inflation are having a serious impact on the real incomes of those who are also experiencing job losses and declines in remittances.

20. With household incomes under threat from domestic job losses and declining remittances from overseas, a sensitivity analysis has been conducted to assess the possible increase in the level of poverty incidence that may even now be occurring, see Section 7.

### **3. Defining Hardship and Poverty in the Samoa Context**

#### **3.1 Background**

21. Traditional Samoan society, as with Pacific societies generally, embraces caring for, and sharing with, the extended family. As a result, there has been a strong belief that poverty could not and should not be a part of normal life. This has been particularly true in Samoa. The suggestion that there might be poverty in some form is not, therefore, something that, until recently, many Pacific Islanders generally, or Samoans in particular, have been prepared to accept. However starvation and destitution are not images found in the Pacific. Poverty in the region is largely *relative* rather than *absolute* or *extreme* although the recent impact of the food and fuel price rises and the employment and income losses from the current global economic situation are causing hardship and poverty to deepen.

22. With all the changes that are happening in socio-economic structures through “globalisation” in its broadest sense, and the impact that these changes are having on the ability of households to continue to lead traditional lifestyles, as a consequence poverty and hardship, as now defined and understood in the Pacific, (see Section 3.3 following), are being increasingly accepted as concerns which need greater attention from the development community. Some countries in the Pacific region, including Fiji Islands, Papua New Guinea (PNG), and Timor-Leste, have for many years fully embraced the need to deal with increasing levels of hardship and poverty and the consequent societal implications. Other countries, though perhaps not yet fully acknowledging hardship and poverty as serious issues, are nevertheless accepting that there are growing numbers of disadvantaged people who are being left behind as economic and social structures change in response to both external and internal developments.

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<sup>9</sup> Working Paper No 6 Apia Urban Management Study, ADB , October 2001

23. However, poverty and hardship must be seen as issues that are best dealt with before they become serious. This has become especially relevant in the past year or so as the impact of rising fuel and food prices have begun to have serious implications for both governments and households alike. Everyone has begun to experience declines in their real incomes as price rises have not been matched by increased earnings. As a consequence many more people have begun to experience hardship as they try to balance their daily living needs with their often very limited income resources. Those with access to food gardens have been able to cope more effectively with rising prices, but those living in the urban centres with less access to food gardens have become more vulnerable. These food price-related developments have become a catalyst focusing greater attention on emerging hardship and poverty in many households.

24. Poverty and hardship have to be defined in ways which are more easily understood in Pacific societies. Poverty means different things to different people at different times and in different places. This has given rise to much misunderstanding and some confusion. Poverty can be either absolute or extreme, where families struggle to even provide adequate food for themselves, as in the MDG1 indicator of US\$1 per day, or it can be relative, where people are disadvantaged compared to their neighbours in terms of individual national, or localised poverty lines and where they struggle to meet the needs of a minimum standard of living in their own society.

25. Poverty and hardship may be caused by a natural disaster or a conflict situation, as may have been the case with many people being displaced in Solomon Islands during “the tensions” of the period 1999 through 2002, or as a result of the tsunami in Solomon Islands’ Western Province (2006) or the floods in Fiji early in 2009. More recently the tsunamis in Tonga and Samoa in October 2009 caused considerable hardship and poverty for many households who lost their possessions and livelihoods. It may also be personal due to such causes as unemployment, sickness or disability. In yet other situations it can be the result of discrimination or specific policy choices as in the case of Fiji where the leases on many sugar farms have not been renewed and farmers have lost their livelihoods.

26. Most discussions of poverty centre on its most extreme manifestations: absolute poverty and destitution. There are, however, many other ways in which people can be poor or can suffer hardship. Indeed people can be reasonably well fed and moderately healthy but still live in relative poverty and suffer varying degrees of hardship. Their incomes might be just sufficient to meet their food needs but they may struggle to meet other basic-needs expenditure. Additionally, they might lack access to basic services, such as water and sanitation or health and education facilities, freedom of choice, or socio-economic opportunities. This “poverty of opportunity”<sup>10</sup> is just as important in defining the extent of poverty and hardship in a society as the lack of income. In fact, often the conditions and circumstances that give rise to poverty of opportunity (poor access to, or standards of, service delivery, poor governance, poor education and health, limited employment opportunities, and social exclusion) are the underlying causes of income poverty.

27. It is recognised that defining poverty by level of cash income or expenditure alone might not be appropriate in the Pacific where most economies include high levels of subsistence production and consumption of own-produced food. The current analysis takes account of this subsistence production/consumption by valuing it as part of both income and expenditure, thus providing a better picture of overall well-being, see Section 4.2.

28. Household survey data on subsistence production also provides a sounder basis for estimating the non-monetary sector in national accounts. Historically in many countries,

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<sup>10</sup> First used in the Pacific context in the UNDP 1999 Pacific Human Development Report, defined as “the inability of people to lead the kind of lives they aspire to.”

calculating the value of such subsistence production in the national income (gross domestic product) has not been complete; it may have been inadequately assessed in GDP estimates or occasionally it is missing entirely.

29. Overall in the past, data from censuses and HIES has often not been collected with the analysis of poverty and hardship in mind, or has not been fully analysed for poverty indicators. The quantitative analyses have not been integrated with qualitative assessments to gauge the views of the people themselves. In Samoa the Participatory Assessment of Hardship (PAH) conducted in 2003 helps to validate the data from the HIES and vice versa. There is a growing recognition of the importance of the data generated by HIES, both in terms of the information it can provide on poverty, but also the importance of accurately capturing subsistence production and consumption for national accounts purposes. HIES data can provide valuable insights into food consumption patterns and nutrition at various income levels and can also provide information for policy formulation purposes in relation to education and health expenditure and to many other aspects of household basic needs.

30. As a result of the Millennium Declaration endorsed at the UN Summit in 2000 and the subsequent adoption of Millennium Development Goals (MDGs) at the World Summit in 2000, there has been a growing awareness of the need to increase both understanding and knowledge of the extent of poverty and hardship in society. The integration of the MDGs as part of a core hardship alleviation and poverty reduction focus in national development priorities and strategies is an overarching goal of all the agencies that have contributed to this analysis. A summary of the key MDG1 indicators derived from the HIES is at Table 1.

### 3.2 Poverty = Hardship: A Pacific Definition of Poverty

31. After extensive consultations through a series of Participatory Assessments of Hardship (PAH) conducted by ADB<sup>11</sup> in ten PICs (including Samoa) over 2001 – 2005, a working definition of Pacific poverty, or perhaps more correctly “Hardship”, was defined in Human Development terms as:

*An inadequate level of sustainable human development, manifested by:*

Table 1					
Millennium Development Goal Indicators					
	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
1.1 Proportion of Population below Basic Needs Poverty Lines % (Note 1)	26.9	24.4	26.8	26.6	28.8
Proportion of Population vulnerable to falling into poverty; per capita expenditure <10% above BNPL %	4.4	3.9	5.7	6.0	4.5
1.2 Proportion of households with per capita expenditure below the minimum level of dietary energy consumption (FPL) %	3.3	2.3	2.0	5.6	3.6
1.3 Poverty Gap Index (PGI) - Depth of Poverty	8.2	8.8	8.0	8.7	8.3
Squared PGI - Severity of Poverty	2.9	3.4	2.6	3.2	3.0
1.4 Share of poorest quintile (20%) in consumption by region %	9.3	8.1	10.0	10.0	9.0
Ratio of Share of poorest quintile (20%) to highest quintile	4.3	5.0	3.8	3.7	4.4
HH Gini Coefficient: (0 = perfect equality 1 = perfect inequality)	0.45	0.47	0.43	0.41	0.44
Note 1: Proportion of Population below US\$1 (PPP) per day not yet available, awaiting PPP indices to be finalised.					

<sup>11</sup> RETAs 6002 , 6047 and 6157 covering FSM, Kiribati, Fiji, PNG, RMI, Samoa, Solomon Islands, Tonga ,Tuvalu and Vanuatu

- *a lack of access to basic services such as health care, education and clean water;*
- *a lack of opportunities to participate fully in the socio-economic life of the community; and*
- *a lack of access to productive resources and income generation support systems (rural credit ,capital, markets, skill) to meet the basic needs of the household, and/or customary obligations to the extended family, village community and/or the church.*

32. The findings of the participatory assessments highlighted hardship and poverty as real issues in the lives of many people in both urban and rural areas, and on outer islands and atolls. The concerns of the people showed remarkable consistency not only between the urban and rural areas within each country, but also across the region as a whole. In other words, despite the wide differences in geography and resource endowments among the atolls of Micronesia and parts of Polynesia, and the high islands of Melanesia and most of Polynesia, the concerns of the people themselves were very similar.

33. The causes of hardship and poverty centre around the lack of regular and sufficient cash income; poor access to or the poor quality of basic services; and the lack of skills to meet opportunities and challenges as they become available. These are the challenges which face governments and policy makers in framing national, sector and community level interventions aimed at alleviating the causes of hardship and poverty and achieving the MDGs. These concerns, although expressed widely at the regional level, were specifically mentioned in the consultations in Samoa, see Box 1.

34. This situation is now changing as planners, policy makers and statisticians come to realise the importance and benefits of both sound evidence-based policy making and the engagement of communities in the policy process.

Box 1		
Priorities of the People of Samoa		
Characteristics of Hardship		
Area	Characteristics of Hardship	
Upolu (Urban/Rural)	Unemployment Increased school fees, school drop-out rates Increased drug use (marijuana), alcohol, robberies Increased domestic violence, child abuse, teenage pregnancies, and suicides Lack or limited access to basic services and infrastructure (e.g. school facilities, transportation) Erosion of respect for village authorities/parents Increased number of people in families	
Savaii (Rural)	Limited land cultivation due to lack of able-bodied men to work on the plantations Continued land disputes Limited market for agriculture production Poor access to basic services and infrastructure Increased teenage pregnancies rate	
Characteristics of Hardship amongst different Groups in Society		
Group	Characteristics	Causes
Children	Poor nutrition	Low level of nutritional 'know how' and lack of cash of parents
	Low level & poor quality of education	Church and village obligations take precedence over children's educational needs ( <i>faalavelave</i> ) Lack of access to reliable transport service particularly among isolated villages, e.g., Uafato, Upolu island
	Physical abuse	Poor parenting
Youth	Lack employment opportunities	Laziness, unskilled, low educational level
	Involvement in criminal activities, alcohol and drug abuse	Unemployment
	Disobedience of authorities	Poor parental guidance, 'culture shock' or modernization
	Urban drift	Need for employment & access to opportunities
Women	Lack of employment	Lack of skills
	Lack or limited access to education	Lack of cash
	Lack of cash	Unemployment

### 3.3 What is the National Poverty Line

35. Poverty as measured by national basic-needs poverty lines is here considered as a measure of relative hardship. It assesses the basic per capita costs of a minimum standard of living in a particular country/society, or region within a society, and estimates the number of households and the proportion of the population that are deemed unable to meet these needs. Every country experiences some level of relative poverty incidence, this is true of developed as well as developing countries. However levels of incidence of relative poverty as measured by

national poverty lines are not directly comparable across countries. Thus, two countries may have similar levels of relative poverty incidence as measured by their respective national (domestic) poverty lines, but have very different levels of overall costs and general standards of living.

36. The measurement of absolute/extreme poverty, enabling cross-country comparisons of the extent of poverty, is usually done through the estimation of the US\$1 per day PPP value used in Goal 1 of the MDGs (this is currently estimated to be about US\$1.50 per day in 2008 PPP terms). Presently this measure of poverty cannot be estimated for Pacific Island countries since PPP indices are not yet available.

37. Poverty is measured at the household level; it is not generally possible to disaggregate poverty on an intra-household basis. Thus if the average per capita expenditure/income of a household falls below the basic-needs poverty line then all members of that household are deemed to be equally poor. Similarly if a household has an average per capita income/expenditure above the poverty line then none of the members of that household are considered to be poor. Culture, demographics and many other factors affect the actual distribution of wealth and access to food and resources within each HH; however such detail is not available from broad-based HIES.

38. National Basic Needs Poverty Lines (BNPL) are estimated from the cost of a minimally-nutritious, low-cost diet which delivers a minimum of around 2100/2200 calories (Kcal) per average adult per day, plus adequate additional nutrition to provide a sound and balanced, but basic diet, (this is the minimum daily calorie intake required for basic human survival, it is internationally benchmarked by FAO/WHO<sup>12</sup> at this level). To this must be added an amount for essential non-food expenditure (e.g. housing, transport, education, health, clothing, utilities) which is required to provide an overall basic needs standard of living. Households which have per capita incomes or expenditure below the "basic-needs" poverty line are then deemed to be living in poverty.

39. This will not be a condition of starvation or destitution. It will be a condition where difficult choices about household expenditure priorities have to be made on a daily basis. A situation in which all the basic needs of family members cannot be met all the time.

40. For Pacific Island Countries (PICs) data for estimating national basic needs poverty lines at the household level are becoming available as more household surveys and poverty analyses are undertaken. From the work done to date it is estimated that, on average across the Pacific region (but excluding PNG where the rate is much higher), approximately one-in-four households have per capita expenditure/incomes below what would be considered as the basic needs poverty line in their respective countries. On the basis of the BNPL the proportion of the population being in poverty is estimated to be highest in PNG (53%, 2006), Fiji (34.4%, 2002/03), Funafuti, Tuvalu (27.6%, 2005), Port Vila, Vanuatu (27.2%, 2006) and Honiara, Solomon Islands (32.2% 2006) with Samoa (22.9%, 2002) and Tonga (22.3% 2001) amongst the lowest. In general the proportion of the population falling below the respective national poverty lines is somewhat higher than the proportion of households falling below the poverty lines due to the larger size of poor HH. On average about 30% of the population (excluding PNG) fall below the respective national poverty lines.

41. However the estimation of poverty lines and the incidence, depth and severity of poverty in society is not an exact science. There is considerable academic as well as empirical debate about the "best" methodology for measuring poverty in society. Box 2 summarises the view of the World Bank, one of the leaders in the debate on global poverty, its measurement and the

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<sup>12</sup> This is the FAO/WHO recommended daily minimum adult calorie intake for a moderately active adult.

development of policies and strategies to alleviate the hardship experienced by those who are poor. The "Cost of Basic Needs" method as outlined by the World Bank has been used in undertaking this analysis for Samoa. This method was also used for the analysis of the 2002 HIES in Samoa as well as for similar analyses in other PICs<sup>13</sup> and elsewhere in the world. It provides a sound and well-tested methodology.

### 3.4 Estimating the Poverty Line for Samoa

42. Following the "Cost of Basic Needs" methodology, the estimation of poverty lines and, from them, the extent or Incidence of Poverty (IP) in Samoa has been a four step process:

- a) calculating the Food Poverty Line (FPL);
- b) estimating a non-food basic-needs component;
- c) combining the FPL with the non-food basic needs component to give an estimate of the Basic Needs Poverty Line (BNPL); and finally,
- d) estimating the Incidence of Poverty against the BNPL benchmark from the HIES data; the Head Count Index (HCI) and other poverty indicators.

43. The Basic Needs Poverty Line is made up of two components, the cost of food and an amount of expenditure for essential non-food basic needs. It is therefore intended to represent the **minimum expenditure** per week, month or year that is required by an individual, household or family; firstly, to provide a basic, low-cost, minimally nutritious diet, termed the "**Food Poverty Line**" (FPL). Secondly, an additional amount which is required to meet the costs of purchasing essential **non-food basic needs** (e.g. housing/shelter, clothing, utilities, school fees and other education related costs, health, and transport) and to meet family/community/church obligations. Most of these non-food costs require cash payments and are often the underlying cause of the greatest financial hardship.

44. Together the FPL and the non-food component make up the benchmark "**Basic Needs Poverty Line**" (BNPL). The **Incidence of Poverty** is then measured against the BNPL by estimating the proportion of households or population which have an expenditure (including the value of subsistence production consumed) less than the BNPL value, referred to as the Head Count Index. Households with per capita expenditure below the FPL are deemed to be in absolute or "severe" poverty since their expenditure is below that required to meet basic food needs. Those with expenditure below the BNPL are deemed to be in "basic-needs" poverty.

45. In the Pacific region as a whole and in Samoa in particular, many households, especially those in the rural areas, are able to provide a high proportion of their daily food needs from their own subsistence production (Tables 8 & 9). However, their ability to generate cash income for non-food basic needs is often very limited, albeit that in the rural areas the need for non-food expenditure may itself be lower due to lack of access to services. This, as the following analysis will illustrate, means that low rates of incidence of absolute/severe poverty (income/expenditure below the food poverty line) are seen along side higher levels of basic needs poverty.

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<sup>13</sup> Poverty analyses are now available for FSM, Palau, Tuvalu, Fiji, Solomon Islands, Cook Islands, Vanuatu, Samoa and Tonga. These were supported variously by UNDP Pacific Centre, ADB Regional Poverty Programme and World Bank for PNG.



**Box 2**

**What makes a good poverty line?**

We define a *poverty line* as the monetary cost of achieving a standard of living above which one is not deemed to be poor. A *poverty comparison* assesses which of two distributions (of an agreed indicator of living standards among members of a group) has more poverty on average. The *groups* can be regions or sectors of a country, the same population at different dates, or the same population observed with and without a policy change. A special case of a poverty comparison is a *poverty profile*, in which groups of households defined by some common characteristic (such as where they live) are compared at one date.

The guiding principle in making a poverty comparison to inform policy is that it should be *consistent* with the policy objective. When that objective is to reduce poverty by increasing people's command over basic consumption needs, any two individuals (at one date or at different dates) with the same command over those needs should be treated identically. This requires that the poverty line should have a fixed purchasing power over relevant commodities.

**The cost-of-basic-needs method**

The *cost-of-basic-needs method* bases poverty lines on purchasing power over basic consumption needs. This achieves the desired consistency for the purposes of Bank Poverty Assessments. But putting this method into practice with imperfect data can be difficult. Once "basic needs" are defined, we need to be able to measure their cost over time and location. Setting basic needs requires an inherent value judgment, which often leads to disagreements. Also price data are often inadequate.

World Bank, 1994

46. The depth and severity of poverty between households and population is then estimated by using the Poverty Gap Index (PGI) and the Squared Poverty Gap Index (SPGI), Section 7.5. Estimates of inequality are made using and Gini Coefficients, Section 8.

## **4. The Household Income and Expenditure Survey**

### **4.1 Introduction & Survey Methodology**

47. The 2008 Samoa HIES was conducted in two rounds in April/May and August/September 2008. The final survey comprised a total of 2012 households made up of samples<sup>14</sup> of 396 HH in Apia (7.2% of all HH), 648 in North-west Upolu (8.2%), 498 in the Rest of Upolu (8.6%) and 470 HH in Savai'i (7.9%).

48. The survey results indicate a total estimated population of 182,488 in 25123 households throughout the country. The total population was made-up of 37,268 in Apia, 57614 in North-west Upolu, 44,314 in the Rest of Upolu and 43,293 in Savai'i. These population estimates compare with the most recent population census (2006) which recorded a population of 180,741, suggesting that there has been a fairly stable population in the two years from 2006 through 2008.

49. Information was collected on both household income and expenditure, and included information on the production and consumption of home produced foods and other commodities. In the survey the value of subsistence production/consumption was estimated on the basis of householders' valuations of what the items might be worth if sold locally. Since there are only a few roadside shops selling local produce outside the markets of Apia and Salelologa there is no established rural price mechanism, and produce is often exchanged or

<sup>14</sup> A stratified probability proportional to size (PPS) sample selection methodology was used based on national enumeration areas. Full details are available in the main survey report; Household Income and Expenditure Survey 2008, Analysis Report, Bureau of Statistics, Samoa.

given as gifts rather than sold. This tends to result in variations in estimated values. Items purchased in stores or in markets were valued at the actual prices paid or at the CPI price.

50. The survey also collected information on household demographics, employment/activity, education attainment, and household characteristics including access to water and sanitation, and energy utilisation for cooking and lighting.

51. Whether data on income or expenditure is used as the basis for the calculation of the poverty line and incidence of poverty depends primarily on the perceived accuracy and reliability of the two data sources. In most cases expenditure data is usually more comprehensive and is generally regarded as the more reliable, see Box 3. For Samoa the aggregate recorded income figure was some 28% less than that given by the expenditure records. Since the household diary and other expenditure records are more detailed, and are used as the basis for assessing the food and non-food expenditure components, expenditure has been taken as the basis for the poverty analysis.

52. The analysis of the 2008 HIES for Samoa therefore uses the per capita<sup>15</sup> household expenditure as the basis for the estimation of the poverty lines, levels of poverty incidence and other poverty related indicators. All analysis in this paper, unless otherwise indicated, is therefore based on a **household's per capita weekly expenditure** as recorded by the survey. This is consistent with the approach taken for the 2002 analysis in Samoa and is also consistent with the approach taken in most other Pacific poverty analyses, the use of adult equivalence (a.e) elsewhere notwithstanding.

53. The detailed calculation of poverty lines and the estimation of poverty incidence has therefore been conducted on the basis of: a) per capita household expenditure, and b) the proportion of households and population deemed to have per capita expenditure below the food and basic needs poverty line levels. Households have been split into deciles ranked according to the level of per capita expenditure. For the broader analysis of poverty characteristics and vulnerability, the lowest two-deciles (first quintile) represent those that are poor and the lowest three deciles (L3D) of households ranked in this manner being those that are poor and the vulnerable-to-poverty households in the third decile, have been used as the basis for more detailed scrutiny. For comparison purposes the highest two decile (fifth quintile) figures are also provided.

Box 3:

National Poverty Lines; Income or Consumption

There are two basic ingredients in measuring poverty. The first is a poverty line that refers to a benchmark level of consumption (or income) that enables a person to attain a threshold standard of living. A person whose consumption is below this benchmark level does not attain the threshold standard of living and is thereby defined as poor. The poverty line is said to be absolute, as opposed to relative, when the threshold standard of living is held fixed both over time and space. Given that absolute poverty lines, and the poverty measures derived from these, are widely believed to be the appropriate bases on which to inform antipoverty policies in developing countries, the discussion focuses on these.

The second ingredient in measuring poverty is a survey that collects data on income and/or consumption levels from a sample of household's representative of a given population. The choice of

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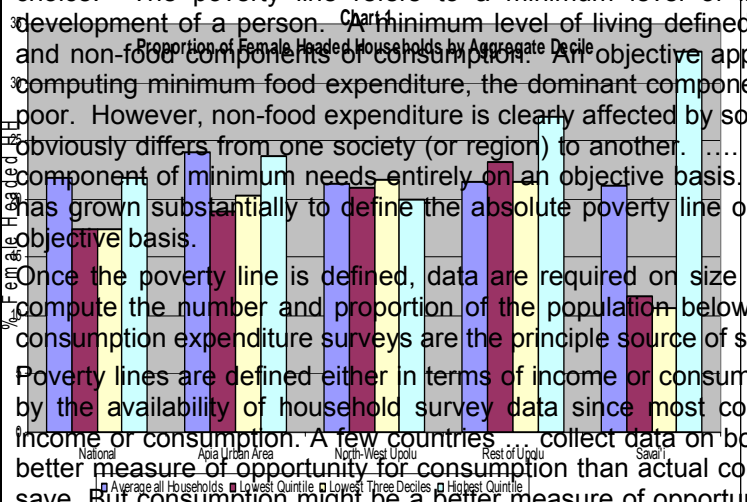
<sup>15</sup> In most other Pacific analyses the per capita adult equivalent expenditure has been used. However since the earlier analysis for Samoa was done using the unadjusted per capita figure this has been used again for consistency. However the per capita adult equivalent (pcae) poverty indicators are also provided for comparison purposes. Adult equivalents are derived from "equivalence factors" where children under the age of 15 years are counted as half an adult, thus a household with two adults and two children would be equivalent to 3 adult equivalents. This methodology takes account of the downward bias that otherwise occurs in households with more children.

income or consumption as an indicator of household welfare is often determined by the availability of data. Where choice is available, researchers have normally preferred consumption to income on the basis that the former is a better indicator of permanent income and standard of living of people due to consumption smoothing through savings and insurance opportunities. It has also been argued that it is easier to collect information from respondents on consumption than on income. Once a poverty line has been set and survey data are available, it is a simple matter to determine how many households or people are poor.'

Unfortunately, the setting of poverty lines always involves some element of subjective methodological choice. The poverty line refers to a minimum level of living necessary for physical and social development of a person. A minimum level of living defined in monetary terms comprises both food and non-food components of consumption. An objective approach could, in principle, be adopted for computing minimum food expenditure, the dominant component in the total consumption bundle of the poor. However, non-food expenditure is clearly affected by social needs and the minimum on this count obviously differs from one society (or region) to another. ... it is difficult to consider even the physical component of minimum needs entirely on an objective basis. Despite such problems, recent literature has grown substantially to define the absolute poverty line on a reasonably, although not completely, objective basis.

Once the poverty line is defined, data are required on size distribution of income or consumption to compute the number and proportion of the population below the poverty line. Household income or consumption expenditure surveys are the principle source of such data..... ADB 2004b, pp 7 & 8

Poverty lines are defined either in terms of income or consumption. In practice, this choice is restricted by the availability of household survey data since most countries collect data on either household income or consumption. A few countries collect data on both income and consumption. Income is a better measure of opportunity for consumption than actual consumption in the case of households that save. But consumption might be a better measure of opportunity for poor households that save little or in fact dis-save. Most practitioners also prefer to define poverty in terms of total consumption expenditure because income data collection faces a wider range of measurement problems. Consumption is less affected by short-term fluctuations due to the consumption smoothing opportunities available to a household. Hence, total consumption expenditure is thought to be a better indicator of the permanent income of a household, particularly in an agrarian economy..... ADB 2004b, p 41



## 4.2 Overview of HIES Results

### 4.2.1 Household Size and Composition

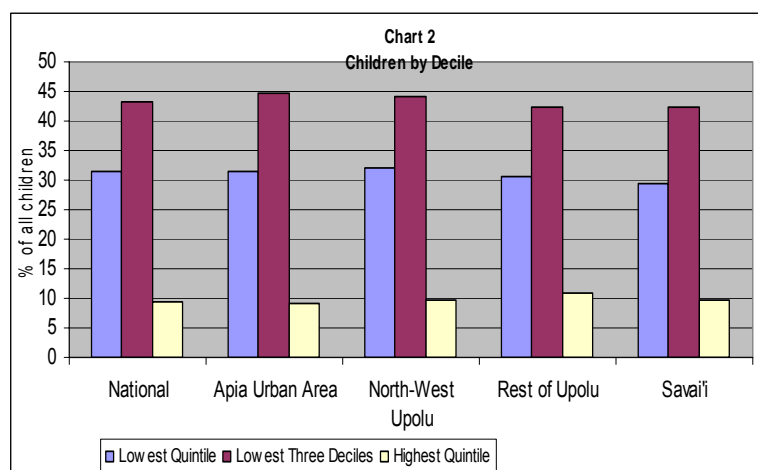
54. In the survey the overall national average household size was reported as 7.3 (5.8 a.e). However, for poor, very-low-expenditure (bottom-two-decile) households the average HH size was 9.8 (7.5 a.e), see Table 2. The largest average household size was to be found in North-west Upolu (NWU) where the lowest quintile HH had an average of 10.1 persons (7.8 a.e), implying an average of 4.6 children per household. This is a large HH size even by Pacific regional standards. The table illustrates that over all regions the size of household declines as household expenditure increases such that the national average HH size in the highest quintile was 4.6 (3.9 a.e), and even in NWU the size of HH in the highest quintile was only 4.6 (3.9 a.e). This is a trend that is consistent with the situation in other parts of the region. Low-expenditure, poor HH tend to be the largest and therefore most disadvantaged.

55. Across the regions there is not much difference overall in the size of the poorest HH (lowest three deciles, L3D), all being between 9.7 (NWU) and 9.0 in Savai'i (7.6 and 6.9 a.e). Similarly, HH in the highest three expenditure deciles are all significantly smaller; 4.1 in Apia and 4.8 in Savai'i.

Ranked by per capita HH expenditure deciles	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
Average all Households	21.9	24.0	21.3	21.5	21.1
Lowest Quintile	17.4	19.0	20.9	23.2	11.7
Lowest Three Deciles	17.5	20.3	21.6	21.5	10.6
Highest Quintile	21.8	23.8	20.0	27.0	32.6

56. The proportions of female headed households are shown in Table 3 and Chart 1. Overall, approximately one-fifth of households (21.9%) were reported as being headed by women, a high of 24.0% of households in Apia and a low of 21.1% in Savai'i. The poverty status of these households is discussed further in Section 9.2 below. It is however interesting to note that 32.6% of the highest quintile households in Savai'i were reportedly headed by females, compared with only 11.7% in the lowest quintile.

57. According to the survey, there were 72,865 children under the age of 15 years, accounting for 39.9% of the population. The distribution of children through the regions is shown in Chart 2 and Appendix Table A8. The number of children per household, averaged 2.9 nationally with a high of 3.1 per household in Rest of Upolu (RoU) and Savai'i. Consistent with findings elsewhere in the region the number of children per household was higher in the bottom two and three deciles compared with those in the higher deciles. Further analysis of the poverty status of children is provided in Section 9.3 below.



Ranked by per capita HH expenditure deciles	National		Apia Urban Area		North-West Upolu		Rest of Upolu		Savai'i	
	All Persons	Adult Equivalent	All Persons	Adult Equivalent	All Persons	Adult Equivalent	All Persons	Adult Equivalent	All Persons	Adult Equivalent
Average all Households	7.3	5.8	6.8	5.5	7.3	5.9	7.7	6.1	7.3	5.7
Lowest Quintile	9.8	7.5	9.3	7.3	10.1	7.8	9.9	7.6	9.3	7.1
Lowest Three Deciles	9.2	7.1	8.9	7.0	9.7	7.6	9.4	7.3	9.0	6.9
Highest Quintile	4.6	3.9	4.1	3.5	4.6	3.9	5.5	4.6	4.8	4.1
Total Population; survey est	182488	146055	37268	30210	57614	46300	44314	35465	43293	34080

Table 6					
Weekly Household Non-Food Expenditure					
	SAT per week				
Ranked by per capita HH expenditure deciles	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
Average all Households	547.08	698.10	592.26	416.84	474.20
Lowest Quintile	181.03	207.92	222.65	154.18	155.75
Lowest Three Deciles	201.41	244.04	252.28	169.30	175.83
Highest Quintile	1279.91	1607.10	1325.43	956.40	1094.90
	SAT per capita per week				
Average all Households	75.32	102.96	81.12	54.33	65.28
Lowest Quintile	18.62	22.94	22.16	15.54	16.63
Lowest Three Deciles	22.41	28.22	26.53	18.21	19.59
Highest Quintile	292.37	419.74	304.15	187.88	235.89

58. Average household expenditure by region is summarised in Table 4. Chart 3 shows the change in weekly HH expenditure between 2002 and 2008. Details of food and non-food expenditure and a comparison of total expenditure between 2002 and 2008 by decile are shown in Appendix Tables A1 through A3. These tables also indicate average weekly household and per capita expenditure as recorded by the survey.

Table 4					
Weekly Household Expenditure					
	SAT per week				
Ranked by per capita HH expenditure deciles	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
Average all Households	852.33	1017.13	889.28	712.66	786.79
Lowest Quintile	394.55	412.61	446.71	356.64	354.53
Lowest Three Deciles	424.61	472.37	489.29	388.23	389.17
Highest Quintile	1674.83	2054.04	1683.00	1320.22	1565.06
	SAT per capita per week				
Average all Households	117.34	150.01	121.80	92.88	108.32
Lowest Quintile	40.55	45.42	44.38	35.95	37.89
Lowest Three Deciles	47.03	54.47	51.27	41.71	43.31
Highest Quintile	381.12	537.38	385.32	256.17	335.62
Ratio H20/L20	9.4	11.8	8.7	7.1	8.9

At the national level average per capita expenditure for the poorest quintile was only about one-tenth of that of the highest quintile HH, SAT40.55 compared to SAT381.12. This captures the wide difference between those who are in formal employment, and thus earning relatively high cash incomes, and those who are in the rural or informal sectors where opportunities for earning income are low. The national average weekly HH expenditure amounted to SAT852.33, equivalent to SAT117.34 per capita. This compares with a figure of SAT584.88 per HH (SAT76.13 per capita) as recorded by the 2002 HIES, an increase of about 58%. It is estimated that the Samoa CPI rose by about 50% between 2002 and 2008, suggesting an increase in average real income/consumption of about 8-10% or approximately 1% per annum.

Table 5					
Weekly Household Food Expenditure					
	SAT per week				
Ranked by per capita HH expenditure deciles	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
Average all Households	305.26	319.03	297.02	295.82	312.59
Lowest Quintile	213.52	204.70	224.05	202.46	198.78
Lowest Three Deciles	223.20	228.32	237.01	218.93	213.34
Highest Quintile	394.92	446.94	357.57	363.82	470.16
	SAT per capita per week				
Average all Households	42.02	47.05	40.68	38.55	43.03
Lowest Quintile	21.92	22.48	22.22	20.41	21.26
Lowest Three Deciles	24.62	26.25	24.74	23.51	23.72
Highest Quintile	88.75	117.64	81.17	68.28	99.74

59. For households in the lowest quintile, average weekly household expenditure amounted to SAT394.55, equivalent to SAT40.55 per capita. The Apia urban area had the widest gap between the highest and lowest per capita expenditure, the highest quintile per capita expenditure being 11.8 times greater than that of the lowest quintile. The smallest gap was in

% of total expenditure	National		Apia Urban Area		North-West Upolu		Rest of Upolu		Savai'i	
	Food	Non-Food	Food	Non-Food	Food	Non-Food	Food	Non-Food	Food	Non-Food
Average all Households	35.8	64.2	31.4	68.6	33.4	66.6	41.5	58.5	39.7	60.3
Lowest Quintile	54.6	45.4	49.7	50.3	50.5	49.5	57.7	42.3	56.8	43.2
Lowest Three Deciles	53.1	46.9	48.7	51.3	49.0	51.0	57.1	42.9	55.5	44.5
Highest Quintile	24.4	75.6	21.6	78.4	21.6	78.4	28.6	71.4	31.8	68.2
Food:Non-Food Ratio L3D		0.88		1.05		1.04		0.75		0.80

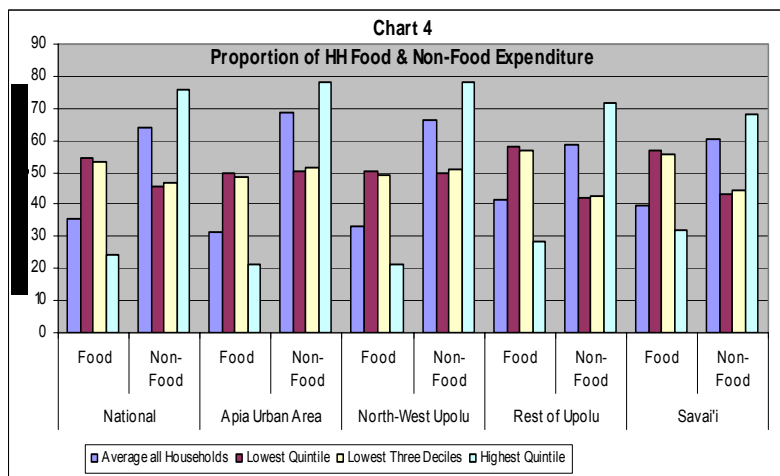
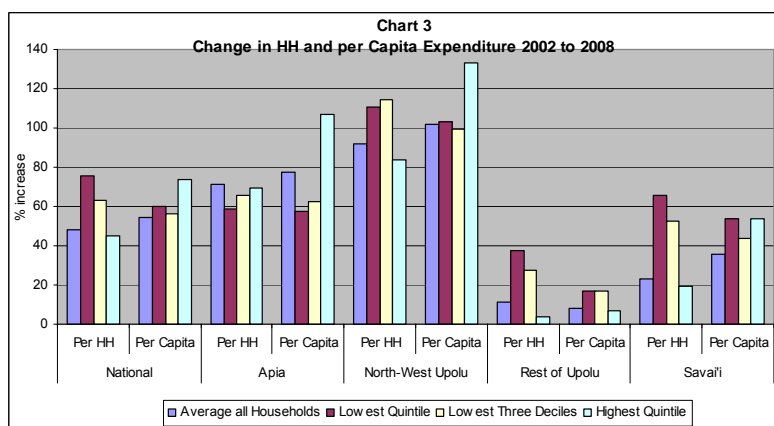
RoU where the ratio between the top and bottom quintiles in weekly per capita expenditure was 7.1. The corresponding ratios were 8.8 in both NWU and Savai'i. Across all regions those in the lowest three deciles had an average per capita weekly expenditure of only around SAT47.03.

60. Food and non-food expenditure are summarised in Tables 5 and 6. These show a familiar pattern of increasing non-food expenditure as a proportion of total weekly expenditure as both total expenditure and proximity to the Apia urban centre increases. Thus, the figures show that for all households average weekly food expenditure amounted to SAT42.02, however for those in the lowest quintile in RoU the amount was only SAT20.41 compared with SAT 22.48 in Apia. For those in the lowest three deciles the corresponding figures were SAT23.51 in RoU, SAT26.25 in Apia and SAT24.62 across all HH in the lowest three deciles.

61. For non-food items the average weekly per capita expenditure per HH amounted to SAT75.32. For those HH in the lowest three deciles non-food expenditure amounted to

only SAT22.41 per capita per week. In the regions, Apia had the highest average non-food expenditure of SAT28.22 per capita per week, while RoU had the lowest at SAT18.21 and Savai'i at SAT19.59.

62. The relative proportions of food and non-food expenditure are summarised in Table 7, and in Chart 4. Nationally, household expenditure was broadly one-third food and two-thirds non-food. This compares with a 50:50 ratio recorded in 2002, implying that non-food expenditure has become significantly more important in total HH expenditure. In 2008 in RoU and Savai'i food



was on average more important, accounting about 40% of HH expenditure whereas in Apia food made up slightly less than one-third of weekly HH expenditure.

63. The pattern changes significantly in the lower deciles where, in Savai'i, food accounted for 57% of weekly expenditure of HH in the lowest two deciles in 2008. In Savai'i and RoU HH in the poorest quintiles spent almost sixty per cent of their weekly budget on food; in Apia and NWU the comparable figures for HH in the lowest quintiles was just over 50%. In all cases the proportions between food and non-food expenditure have changed markedly since the previous survey 2002. In that survey the ratio of food to non-food was 75:25 in the poorest quintile in Savai'i and even in Apia the ratio was 62:38.

64. This illustrates clearly the growing extent of the monetization of the economy and the increasing importance of non-food items in the weekly expenditure budget of all HH. Further it supports the findings of the participatory assessment of hardship conducted by ADB in 2003 which highlighted one of the top priorities of the people for more income earning opportunities in order to enable them to meet the growing demands for cash in HH daily living costs. More generally it illustrates the differing food and non-food expenditure patterns between HH that are predominantly urban (Apia and NWU) and those that are primarily rural (RoU and Savai'i), with higher non-food costs being associated with more urban environments.

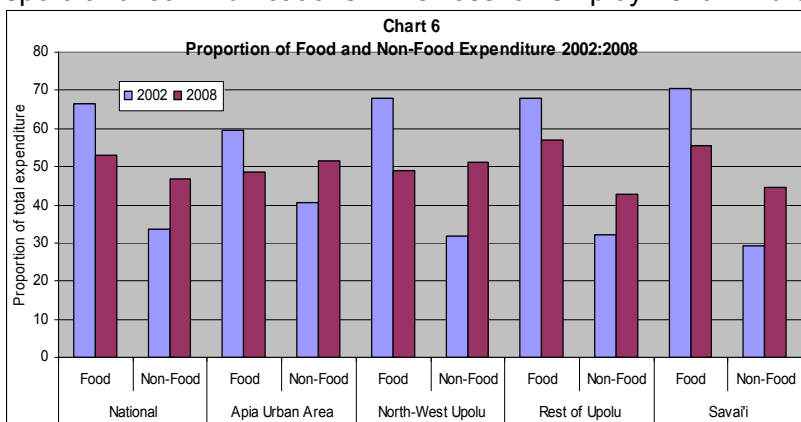
Table 8										
Food Purchases & Home Production for Own Consumption										
SAT per capita per HH per week										
Ranked by per capita HH expenditure deciles	National		Apia Urban Area		North-West Upolu		Rest of Upolu		Savai'i	
	Purchased	Own Production	Purchased	Own Production	Purchased	Own Production	Purchased	Own Production	Purchased	Own Production
Average all Households	30.10	11.93	42.24	4.81	30.74	9.95	22.40	16.15	26.68	16.36
Lowest Quintile	11.72	10.21	18.21	4.27	12.90	9.33	8.76	11.65	9.57	11.69
Lowest Three Deciles	13.58	11.05	21.84	4.41	15.20	9.54	10.86	12.65	10.67	13.04
Highest Quintile	76.84	11.91	112.08	5.56	71.46	9.71	48.50	19.79	76.55	23.18

65. The pattern of higher proportional food expenditure in HH in the more rural areas compared to those that are more urban is common to other regional countries. Urban living normally involves greater non-food expenditure; in many Pacific countries rural or outer-island households do not have power, water or communications bills to pay. They also often spend less on transport and housing costs. Thus their need for non-food expenditure is less. Moreover, since rural cash incomes are lower the resources available to meet non-food expenditure is also less.

66. In many respects Samoa does not fit this regional pattern since both the main islands (Upolu and Savai'i) and two of the smaller islands (Manono and Apolima) are connected to the mains power and communications networks and the transport system covers almost all villages. Thus the differences in the proportions of food/non-food expenditure in the Samoa data are generally smaller than in other countries, and, as already noted, the proportions have changed significantly, with non-food expenditure becoming increasingly important, in the period since the 2002 survey.

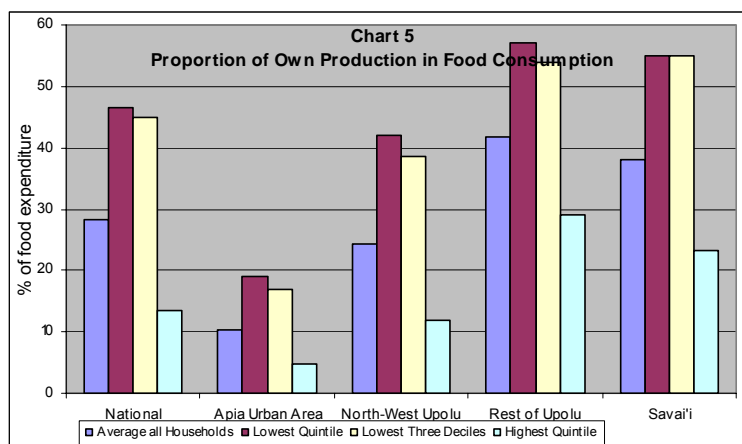
Table 9					
Proportion of Own Production in Food Consumption					
% of total food consumed					
Ranked by per capita HH expenditure deciles	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
Average all Households	28.4	10.2	24.4	41.9	38.0
Lowest Quintile	46.6	19.0	42.0	57.1	55.0
Lowest Three Deciles	44.9	16.8	38.6	53.8	55.0
Highest Quintile	13.4	4.7	12.0	29.0	23.2

67. On the one hand this indicates an increasing level of access to services for all HH, but at the same time it increases the demand for cash to meet the associated costs of using those services, especially power, transport and communications. The loss of employment in rural-based HH is therefore felt particularly keenly, and this will have been the case with the loss of jobs in Yazaki over the last year or so. The full extent of the loss of cash incomes to rural HH is probably now being felt quite severely as remittances also begin to decline.



68. The patterns of the value and proportions of food purchases and food produced for own consumption are summarised in Tables 8 and 9, and in Chart 5. Details by decile are provided at Appendix Table A4 and A5.

69. The importance of subsistence agriculture in the economies of the different regions is shown clearly in these tables. Chart 5 illustrates the proportion of own production in total food consumed from table 9. Chart 6 illustrates how the pattern of food/non-food expenditure has changed between the two surveys, this shows clearly the increasing proportion of non-food expenditure across all regions.



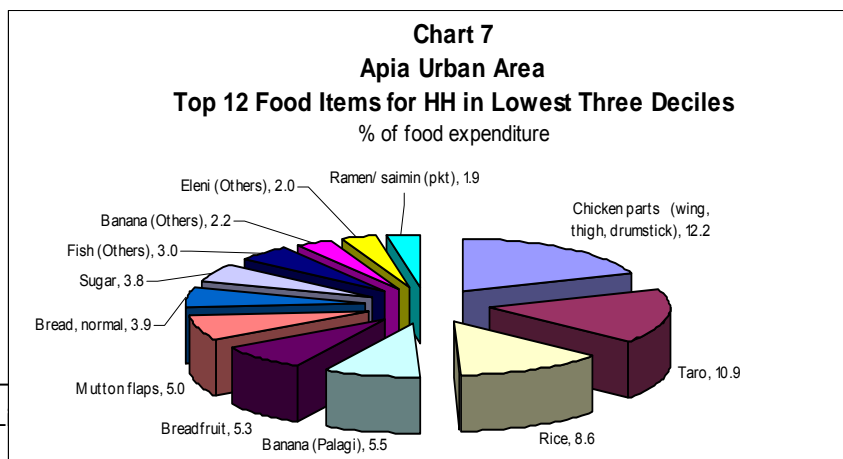
70. Maintaining healthy subsistence agriculture is essential for food security in the event of a natural disaster and provides an important coping strategy for households in the face of rising prices for imported foods. According to the Samoa CPI the rate of price inflation for domestically produced food items has been less than half the rate for imported food items over the last five years.

71. For HH in the lowest quintile in RoU and Savai'i consumption of own production accounted for about 55% of all food consumed, this compared with only about 19% for lowest quintile HH in Apia. The lowest quintile HH in NWU were roughly between the two levels with about 42% of food consumed coming from own production. The relative proportions of own food are broadly similar to those recorded in the 2002 survey indicating that subsistence farming for own consumption is still an important component in rural lifestyles, as well as being an important source of food even for urban HH. The need for food security in times of natural disaster, as a coping strategy in the face of rising prices and as a basis for a healthier diet all support the need for priority to be given to strengthening the rural sector of the Samoan economy.

## 5. The Food Poverty Line



72. The first step in measuring poverty is the estimation of the Food Poverty Line (FPL). Two methods may typically be used to derive food poverty lines: either by using a “model diet” or using the actual food expenditure and consumption patterns of the lowest three decile households as recorded in the daily expenditure diaries from the survey. The one method can be used to validate the results of the other since they approach the same issue, a basic diet, from



**Box 4: The Food Poverty Line**

The food component of the poverty line is universally anchored to nutritional requirements for good health. This does not generate a unique monetary poverty line, since many bundles of food goods yield the same nutrition. In practice, a diet is chosen which accords with prevailing consumption patterns, about which one might expect to arrive at a consensus in most settings. Ravallion 1998

different perspectives. The model diet approaches from the nutrition perspective, while the other approaches from actual consumption patterns. From the estimate of FPL we need to be comfortable that actual food expenditure could meet basic nutrition needs, see Boxes 4

and 5.

73. For Samoa the “model diet” approach has been used. This is consistent with the method used in the analysis of the 2002 survey. The basic diet developed by the nutrition team in the Ministry of Health with support from the national nutrition committee, and the costing of the Food Poverty Line, is at Appendix 1. This model diet is based on the requirement that an average adult requires a minimum intake of food providing between 2100/2000 calories per day for a moderately active lifestyle. In many cases it is very possible that food consumption may exceed this minimum and unless the excess calories are “burnt-off” through some form of exercise then the individual may become overweight or obese, and may ultimately suffer some diet related health problems.

74. Comparative analyses in other Pacific countries has shown that while there is generally little difference in using the “model diet” approach and the actual food expenditure the former tend, on average, to

**Box 5**

**Step one: the food component**

To construct a poverty line using the cost-of-basic-needs method, one begins by defining the “basic needs” food bundle. This is a normative judgment, though some judgments are more defensible than others. Nutritional requirements for good health are a widely accepted anchor for determining basic food needs. A defensible approach is to set the food component of the poverty line according to the local cost of a bundle of food goods that meet the pre-determined minimum food-energy requirements in a way that is consistent with prevailing food tastes.

How should food-energy requirements be determined? Nutritionists have estimated requirements for maintaining body weight when a person is resting, processing food, and doing various activities. The food-energy requirements needed to maintain *each* person's actual activity level should not be considered binding when setting poverty lines. The poorest are often underweight, which often constrains their activity levels. In such a setting, incorporating existing differences in activity levels (and indeed weights) into sub-group poverty lines will bias the poverty comparison, in that the poverty lines need not be clearly anchored to a fixed standard of living. A better practice is to use the average food-energy requirement for each age group.

World Bank, 1994

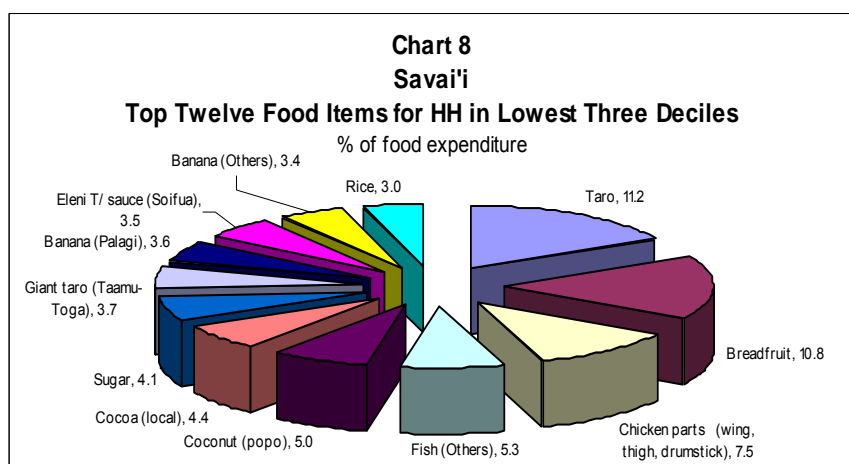
give a slightly higher cost than the actual food expenditure from the household diaries. Since the model diets address not just the calorie value of the diet but broader nutritional parameters this is to be expected.

75. The model diet used for the estimation of the FPL comprises a balance of imported foods and locally produced items that are broadly in line with the actual expenditure patterns recorded in the daily diaries. From the diaries it may be observed that about 80% of food expenditure was accounted for by 40 or so items.

76. These top dozen items are illustrated for Apia and Savai'i in Charts 7 & 8. In both cases the top twelve items account for about two-thirds of total food expenditure/

Table 10			
Weekly Per Capita Food Poverty Lines			
	Food Poverty Line		
	per capita per day	per capita per week	per HH per week
	average for HH in lowest three deciles		
SAT			
National average	4.51	31.56	290.36
Apia Urban Area	4.51	31.56	281.10
North-West Upolu	4.51	31.56	305.35
Rest of Upolu	4.51	31.56	297.81
Savai'i	4.51	31.56	285.61

consumption, however in Apia over half of the items by value are purchased/imported while for Savai'i imported items account for only about one quarter of the value. In the context of the recent big price increases for imported food, notably of rice and flour products, this highlights the higher degree of food security in Savai'i and the pressure that food price increases put on households in Apia who



are more reliant on purchases rather than home production. It further highlights the difference in consumption patterns of own production and imported purchases between the urban and rural areas of the country.

77. From the model diet the FPL for Samoa is estimated to be SAT31.56 per capita per week, this compares with SAT24.68 per week for the same diet in 2002. This suggests that the cost of the basic diet rose by 28% over the period. This is less than the general rise in the CPI as the prices of basic local food items rose by only about half as much as the cost of imported items. Although there are differences in consumption patterns between the urban and rural parts of the country no adjustment is made for this in the FPL as prices and diet preferences are averaged across the country.

78. Applying the average household size for HH in the lowest three deciles to the basic diet cost indicates that a HH would need to “spend” approximately SAT281 per week in Apia and SAT286 in Savai'i compared with and SAT298 and SAT305 per week in RoU and NWU respectively on food to meet basic nutrition requirements, Table 10. The differences in weekly costs relate to the varying household sizes between the regions. The amounts required to be “spent” include both purchased items and those non-cash items of consumption of own produce.

79. Adjusting for the changes in household size between the two survey dates indicates that the weekly cost of meeting basic food needs increased by about one-third across all the regions, except RoU where the cost rose by about 40% as this region saw the largest increase in household size. In 2002 the average cost of the FPL basic diet was estimated at SAT216 per HH per week, with the estimated cost by region being SAT214 in Apia, SAT210 in RoU and Savai'i and SAT226 in NWU.

## 6. The Basic Needs Poverty Line

### 6.1 Non-Food Basic Needs Expenditure

80. The FPL is the core of the Basic Needs Poverty Line (BNPL) calculation. However, in practice even a low-income or low-expenditure family cannot be expected to survive on food alone; there are always other minimum costs of basic needs for survival. Therefore an allowance for **non-food basic needs expenditure** is added to the value of the Food Poverty Line to arrive at the "Basic Needs Poverty Line".

81. The allowance for basic non-food expenditure is estimated from the HIES based on the level or proportion of non-food costs reported by households at defined levels of total expenditure. The costs of non-food basic-needs might include expenditure for housing/shelter, essential transport and communications, school fees and other education related costs, medical expenses and clothing.

82. There are a number of generally accepted methods of calculating non-food expenditures for the poverty lines. The World Bank suggests that a "non-food factor" should be applied to the Food Poverty Line based on the proportion of non-food expenditure actually incurred by households which have an average total income/expenditure equal to or less than the Food Poverty Line, see Box 6. This is intended to represent the bare minimum additional expenditure required to meet non-food basic needs. Households whose total income/expenditure is equal only to the Food Poverty Line have to choose very carefully between food and non-food items; any expenditure on non-food items can be seen as being an essential trade-off between basic food and basic non-food.

#### Box 6

##### Step two: the non-food component

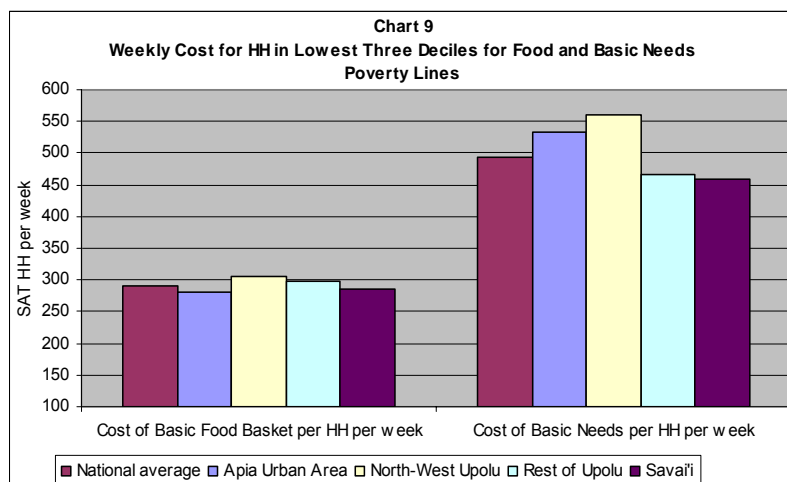
The next problem is making an allowance for nonfood consumption. In principle, one could proceed the same way for non-food goods--identify a normative bundle of such goods, and cost that bundle separately in each region, sector or date. However, anchoring the nonfood part of the poverty line is often difficult. There is even less agreement on the normative standard (comparable to food requirements). And comparable data on nonfood prices are rarely available.

Consistency with the consumption behavior of those who are found to be "food poor" is a defensible guide. A "basic nonfood good" can be defined as one that a person wants enough to forgo a "basic food". One can thus measure the nonfood component of the poverty line as the expected value of nonfood spending by a household that is just capable of affording the food component of the poverty line. This value constitutes the minimum allowance for nonfood goods consistent with being able to afford the bundle of food goods needed to reach food-energy requirements by prevailing diets. But again, that choice is a value judgment, and in some settings a more generous allowance might be considered appropriate. The key point is that the allowance should be equally "generous" for different groups if the poverty comparison is to be of use in guiding policies for fighting absolute poverty. World Bank, 1994

83. Alternative methods may be used to calculate an absolute amount of non-food expenditure for a particular category of households. This could be for the lowest income/expenditure quintile, the lowest three or four deciles or for any particular decile as may be chosen. The higher-up the income deciles that the reference point is chosen, so the greater will be the level of non-food expenditure.

84. With the FPL the amount required is anchored in the food energy needs which are essentially the same for everyone. For non-food basic needs the variety is almost infinite since every HH is different, there is no similar

	Food Poverty Line	Estimated Non-Food Expenditure	Basic Needs Poverty Line	Weekly cost per HH in L3D
SAT per capita per week	A	B	C = A+B	
National average	31.56	22.03	53.59	493.02
Apia Urban Area	31.56	28.39	59.95	533.97
North-West Upolu	31.56	26.24	57.80	559.23
Rest of Upolu	31.56	17.90	49.46	466.76
Savai'i	31.56	19.27	50.83	459.96



normative “anchor”. The observed amount of expenditure thus becomes the anchor.

85. For this analysis, consistent with other analyses undertaken for Pacific Island countries, the average actual level of non-food expenditure for HH in the lowest three deciles is taken as the basis for the non-food factor. The amounts of basic non-food expenditure from the survey indicate that the bottom-three deciles HH in Apia would need to spend SAT28.39 per capita

per week for non-food items. The amounts for the other regions were SAT26.24 for NWU, SAT17.90 for RoU and SAT19.27 for Savai'i, see Table 11 and Chart 9. Thus the pattern of higher non-food expenditure the greater the degree of urbanisation holds true in Samoa as elsewhere. In Apia and NWU poor HH spend around 90% and 84% as much on non-food items respectively as they did on food, whereas in RoU and Savai'i the proportion of non-food expenditure to food was 58% and 62% respectively.

86. Compared to the corresponding figures from the 2002 survey all regions saw a significant increase in the proportion of non-food expenditure relative to food. In Apia the non-food/food factor was 55% previously and was only 32% in NWU. For RoU the 2002 non-food/food ratio was 47% and for Savai'i was 34%.

87. The actual average non-food expenditure recorded by households with per capita expenditure in the lowest three expenditure deciles therefore provides the essential non-food basic needs component which is added to the food poverty line to give the Basic Needs Poverty Line. The BNPL is calculated by adding this non-food basic needs expenditure to the food poverty line.

## 6.2 Basic Needs Poverty Lines

88. Applying these non-food factors to the respective FPL gives the cost of non-food basic needs for Apia as SAT59.95 per capita per week, equivalent to SAT533.97 per household in the lowest three deciles; for NWU SAT57.80 per capita or SAT559.23 per HH per week. In RoU and

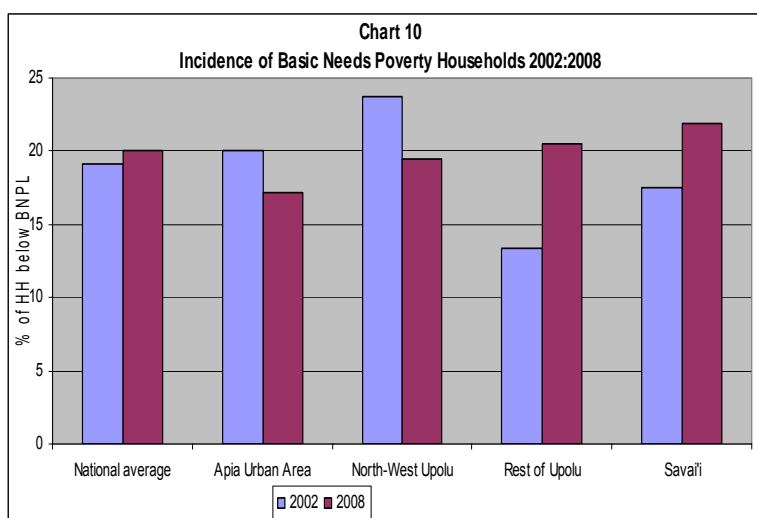
Savai'i the corresponding BNPL are estimated at SAT49.46 and SAT50.83 per capita per week respectively and SAT466.76 and SAT459.96 per household per week. These are the Basic Needs Poverty Lines that are used to estimate the level of poverty incidence in Samoa in the next Section.

89. The need for higher basic needs non-food expenditure in the more urban centres is an extremely important factor in determining relative poverty. For instance, a rural household with a relatively high level of expenditure might be relatively poor with the same expenditure in an urban situation where there is a need to meet a wide range of non-food essentials, often unavailable in the rural areas. It is therefore important to remember that national, and more particularly regional based poverty lines, measure relative poverty in a specific set of local circumstances with particular food costs and specific non-food “essentials”. Benchmark poverty lines will therefore vary depending on these circumstances.

## 7. The Incidence and Depth of Poverty in Samoa

### 7.1 Head Count Ratio

90. On the basis of the per capita Food and Basic Needs Poverty Lines in Table 11, the incidence of poverty observed from the household per capita expenditure in the HIES data is summarised in Tables 12 & 13: Incidence of Poverty for Population and Households. The incidence of poverty is measured by the "Head Count Index" which indicates the proportion of either households or population which had expenditure less than the relevant poverty line.



### 7.2 Incidence of Food Poverty

91. Table 12 shows that the level of food poverty, those households with per capita expenditure less than the Food Poverty Line (generally referred to as “absolute” or severe poverty), the poorest of the poor, is low. The data suggests that on average over the whole country only about 3% of households, representing 5% of the population have expenditure which would be insufficient to meet basic food needs as defined by the food poverty line. The region RoU has the highest rate of households and population with expenditure below the FPL, 5.6% and 8.1% respectively.

92. The data indicates that in all regions, except RoU the proportion of HH falling below the FPL declined between 2002 and 2008.

93. Even those HH falling below the FPL may not necessarily be going hungry. Rather, they may be consuming a poor diet with inadequate nutrition and may thus be more likely to experience health problems as a result. These health problems may then translate into lowered learning abilities in children at school and less likelihood of adults getting employment; a perpetuation of the cycle of hardship and poverty. The reported increases in non-communicable diseases, many of which are related to diet (diabetes, hypertension, and high blood-pressure), suggest that many households do indeed have a poor level of nutrition whilst at the same time having plenty to eat, and often not enough exercise.

### 7.3 Incidence of Basic Needs Poverty

94. The estimated incidence of basic needs poverty is also shown in Table 13 and Charts 10 & 11. Nationally it is estimated that 20.1% of households, representing 26.9% of the population, had weekly per capita expenditure less than the basic needs poverty line. In both Apia and NWU the proportion of both HH and population falling below the BNPL declined between 2002 and 2008. In Apia the proportion of HH falling below the BNPL declined from 20.1% in 2002 to 17.2% in 2008, and in NWU fell from 23.8% to 19.4%. In RoU and Savai'i on the other hand the proportions of both rose over the period, up from 13.4% to 20.5% and 17.6% to 21.9% respectively. The small proportion of HH falling below the FPL coupled with the higher proportion of those falling below the BNPL suggest that it is the lack of cash resources that is the greatest cause of hardship and poverty. The data suggests that meeting food needs is not an issue. But it is the need for cash to meet the costs of the many non-food basic needs and contributions to customary obligations that place the greatest burdens on households.

95. Charts 10 and 11 illustrate how the level of basic needs poverty has changed between the regions and amongst households and the population since 2002. The data suggests that more households in the rural parts of the country, RoU and Savai'i, are experiencing hardship than

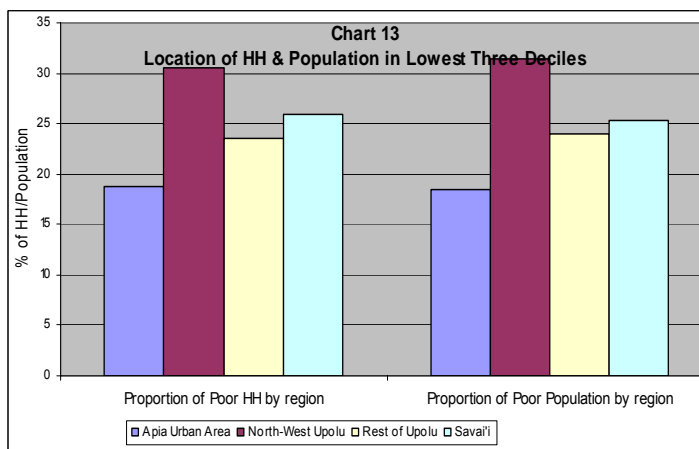
was the situation in 2002. The non-food components in their HH expenditure has risen and this is placing stress on household budgets. Since the completion of the road sealing around the main islands, the provision of power to all villages and the extension of the mobile-phone network to virtually the whole country, there has been a big increase in domestic appliance, mobile phone and vehicle ownership in the rural areas. All of these require additional cash resources to meet operating and maintenance costs. The availability of employment in the rural areas has not increased overall, gains made in the tourism sector have recently been lost as jobs have been cut at Yazaki. Remittances have begun to decline and agricultural prices have not keep pace with inflation. All these point to a likely reduction in the real incomes of those in the rural areas (and to a lesser extent elsewhere) and this is now being reflected in an increase in the numbers experiencing hardship.

Table 12				
Incidence of Poverty				
Proportion of HH and Population with Weekly Per Capita Expenditure less than the Food Poverty Line				
%	Households		Population	
	2002	2008	2002	2008
National average	8.5	3.3	10.6	4.9
Apia Urban Area	5.3	2.3	7.6	3.5
North-West Upolu	12.1	2.0	16.2	3.3
Rest of Upolu	5.6	5.6	6.1	8.1
Savai'i	9.8	3.6	10.3	5.1

Table 13				
Incidence of Poverty				
Proportion of HH and Population with Weekly Per Capita Expenditure less than Basic Needs Poverty Line				
%	Households		Population	
	2002	2008	2002	2008
National average	19.1	20.1	22.9	26.9
Apia Urban Area	20.1	17.2	25.9	24.4
North-West Upolu	23.8	19.4	29.5	26.8
Rest of Upolu	13.4	20.5	15.1	26.6
Savai'i	17.6	21.9	19.1	28.8

96. In terms of numbers of estimated population falling below the food and basic needs poverty lines the figures indicate that overall 8,982 people were living below the FPL and 49,145 were below the BNPL.

97. The figures for the incidence of basic needs poverty suggest there are therefore, many households whose expenditure cannot always and sustainably cover the basic-needs costs of a reasonable, minimum standard of living. There are many who would be classified as working poor, especially those engaged in small private enterprise businesses where hourly rates are low. They may be in employment, either full or part-time, but their income and thus expenditure is insufficient to meet all the needs of their family's. The recent loss of jobs and short-time working at Yazaki will have exacerbated these problems, as will the decline in remittance flows that is now being experienced.

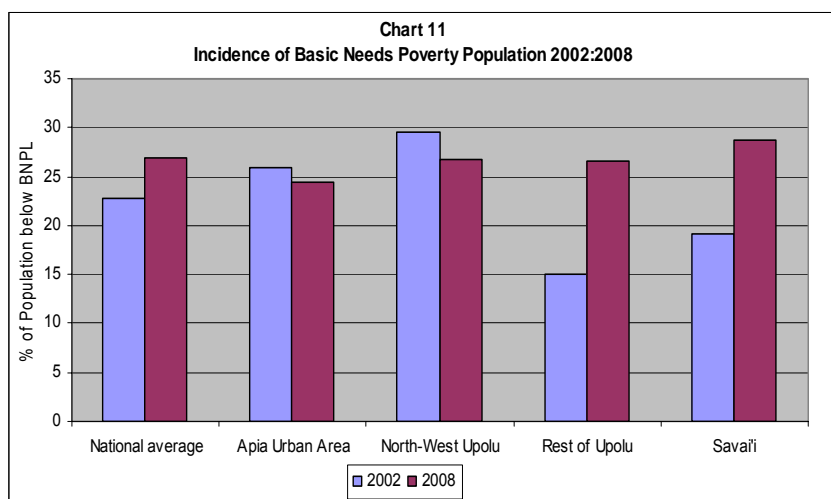


98. In considering the differences in the assessed incidence of hardship and poverty between the regions it is important to remember that these are “relative” estimates. They measure the proportion of households or population in each region that has a level of expenditure below the poverty line for that particular region.

#### 7.4 Vulnerability of Households to Falling into Poverty

99. The recent rapid increases in the price of imported fuel and foods, notably rice and cereal products which, as already noted, feature quite prominently in the diets of households in Samoa, will likely be causing many more households and individuals to be experiencing growing degrees of hardship and difficulty in meeting their basic-needs expenditure. These households are therefore becoming increasingly vulnerable to falling into poverty.

100. Based on the prices used in the calculation of the FPL it is estimated that the cost of the food basket would have been almost twenty-five percent higher in the fourth quarter than in the first quarter of 2008. It is estimated that the additional number of people vulnerable to falling below the BNPL with increases in the poverty line of either 10% or 20% is 7,976 and 16,880 respectively. These would represent an additional 4.4% and 9.3% of the population in poverty respectively.



101. This level of vulnerability to households falling below the BNPL is similar to that seen in other Pacific countries; in general, it is estimated that for each ten percent increase in the real cost of living the level of poverty incidence rises by about five percentage points. Where countries or regions within a particular country

have a higher level of food security as result of a strong subsistence agriculture sector, the vulnerability is less. But the loss of cash income from a decline in remittances or loss of employment can still exacerbate the level of vulnerability for this group.

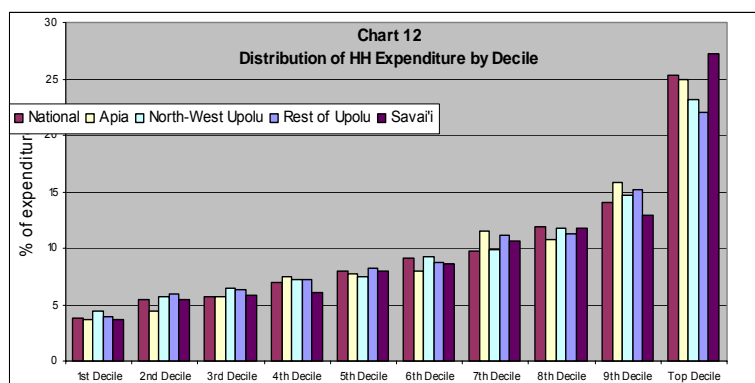
## 7.5 Depth and Severity of Poverty

102. The Head Count ratio discussed in the previous paragraphs does not give any indication of the seriousness of the poverty being experienced. For example are those households that are below the poverty line just below it, or are they well below? This is referred to as the depth and severity of poverty.

103. The depth and severity of poverty are measured by the Poverty Gap Index<sup>16</sup> (PGI) and the Squared Poverty Gap Index (SPGI)<sup>17</sup> respectively, Table 14. The former is a measure of the depth of poverty being experienced by each household below the basic needs poverty line. The latter measures the severity of poverty by giving more weight to the poorest households whose poverty gap is greatest. The PGI is Indicator 2 of Target 1, Goal 1 of the MDGs.

104. At the national level the PGI (depth of poverty) for Samoa has been estimated at 8.2, which is lower than, for example, Fiji (11.2) and FSM (9.3). Effectively the PGI indicates that the households that are below the BNPL have per capita expenditure that is, on average, approximately 8% below the level of the BNPL. According to the survey data the depth of poverty rose slightly from a PGI of 6.6 in 2002 to a PGI of 8.2 in 2008. The biggest increases in the PGI are seen RoU and Savai'i, which is consistent with the higher levels of poverty incidence noted for these two regions.

105. The implication of this is that it would take, on average, a real increase of between 8 – 10% in the income of the poorest



	Poverty Gap Index (PGI)		Squared Poverty Gap Index (SPGI)	
	2002	2008	2002	2008
National average	6.6	8.2	2.7	2.9
Apia Urban Area	6.5	8.8	2.2	3.4
North-West Upolu	8.8	8.0	3.9	2.6
Rest of Upolu	4.0	8.7	1.6	3.2
Savai'i	5.4	8.3	2.2	3.0

households, those below the BNPL, for them to move above the basic-needs poverty line. With the annual rate of price inflation running at around 10% in mid-2009 the reality is that real incomes are likely to be declining. Far from moving up and out of poverty many

<sup>16</sup> The Poverty Gap Index gives an indication of how poor the poor are and reflects the depth of poverty. The formula calculates the mean distance below the basic needs poverty line as a proportion of the poverty line where the mean is taken over the whole population, counting the non-poor as having zero poverty gap. The PGI is an important indicator as recognised by its inclusion as a specific indicator in MDG1.

$$\text{Poverty Gap Index: } \frac{1}{N} \left( \sum_{i=1}^m (\text{BNPL} - y_i) / \text{BNPL} \right)$$

where: N = total number of households, m = number of households below basic needs poverty line; and  $y_i$  equals expenditure of each household.

<sup>17</sup> Through the process of squaring the index the SPGI gives greater weight to those at the lowest consumption/income levels and thus better reflects the severity of the poverty gap. In both the PGI and SPGI, the higher the index the greater the depth and severity of poverty respectively.



households are in fact now moving down towards the poverty line as they face higher prices for essential food and non-food items.

106. The SPGI, which is a measure of the severity of poverty being experienced, is estimated at 2.9 nationally. This is very similar to the level estimated for 2002, and is lower than the recent

estimates for Fiji (5.1), Tonga and FSM (both 4.0). There is little difference in the SPGI between the regions, the main point of note is the increase in the RoU index between 2002 and 2008, again this is consistent with the other poverty indicators

for RoU. These indices suggest that Samoa experiences a somewhat lower level of poverty depth and severity than other Pacific countries.

Ranked by per capita HH expenditure deciles	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
Lowest Quintile	31.4	31.5	32.1	30.7	29.5
Lowest Three Deciles	43.1	44.8	44.1	42.4	42.4
Highest Quintile	9.5	9.2	9.7	10.7	9.6
Children by Region	72865	14116	22627	17698	18425

## 8. Income Distribution and Inequality

107. Levels of income distribution and inequality are measured by the Gini Coefficient of Inequality. Table 15 summarises the Gini Coefficients (where a higher coefficient indicates greater inequality and a lower one represents great equality).

108. Figures for the Gini Coefficient indicate that the level of inequality in Samoa has increased slightly since 2002. At the national level the Gini Coefficient was 0.47, up from 0.43 in 2002. At the regional level, Apia had the highest coefficient in 2008 at 0.48, up from 0.40 in 2002. However all regions showed an increase in the index of inequality since 2002.

109. These figures suggest that there has been a small increase in the level of inequality in Samoa over the last six years. The PGI and SPGI discussed in the previous section also suggest that there was a small increase in both the depth and severity of poverty over the period.

110. Chart 12 and Appendix Table A6 show the share of expenditure incurred by each decile. On average over the whole of Samoa, the poorest ten-percent of households incurred about 3.8% of all expenditure (up from 3.2% in 2002) while the top decile of households incurred slightly more than one-quarter of expenditure (26.4%, up from 25.8% in 2002). Although there are quite wide differences in actual expenditure per capita between the poorest and better-off households, the larger household size in the poorest households means that the overall share of expenditure incurred by these households is higher than might otherwise be expected.

	HH Gini Coefficients	
	2002	2008
National average	0.43	0.47
Apia Urban Area	0.40	0.48
North-West Upolu	0.40	0.46
Rest of Upolu	0.39	0.44
Savai'i	0.41	0.46

111. The ratio of expenditure incurred by the top and bottom quintiles (MDG Indicator 3 of Target 1, Goal 1) was 4.3 overall (5.2 in 2002), with a high of 5.0 in Apia and lows of 3.8 in NWU and 3.7 for RoU (4.4 and 5.0 respectively in 2002). In comparison the ratio in Savai'i was 4.4.

## 9. Who Are the Poor and What are their Characteristics?

### 9.1 Location of Poor Households

112. The following tables and charts begin to analyse the characteristics of the poor (those in the lowest three deciles of per capita expenditure) and non-poor households. Table 16 and Chart 13 illustrate the location of low-expenditure (L3D) households and population across the regions relative to each region's share of total population.

113. Chart 13 thus shows that NWU has 30.5% of all HH and 31.4% of all population in the lowest three deciles. Apia has the least share of L3D HH (18.7%) and population (18.5%) with both RoU and Savai'i each having about 25% of both L3D HH and population.

### 9.2 Gender

114. Table 2 above illustrated how the proportion of female headed HH compared across expenditure deciles and regions. Nationally, 5496 HH (21.9% of all HH) were recorded as being headed by females. In the poorest quintile there were 872 female HHH accounting for 17.4% of all HH in that quintile and 15.9% of all female HHH. In the lowest three deciles there were 1316 female HHH accounting for 17.5% of all HH in these deciles and 23.9% of all female HHH. The corresponding figures for the proportions of female HHH in the highest quintile were 21.8% and 19.9% respectively. Thus the gender of the head of household therefore appears to play a relatively small role in determining the likelihood of a household being in poverty in Samoa.

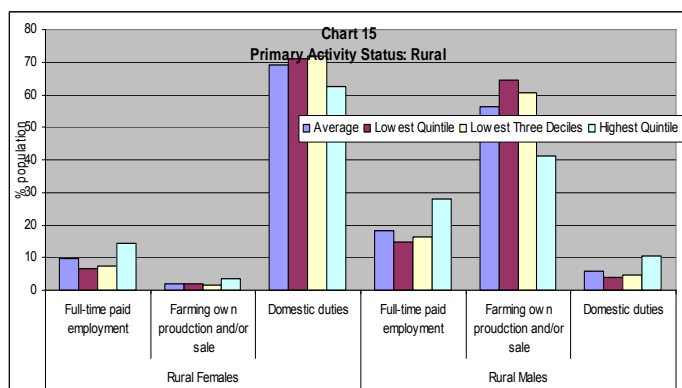
115. A somewhat different picture emerges from the location of all females across expenditure deciles, Tables 17 and A7, and Chart 14. These show that 37.4% of all females live in HH in the lowest three deciles, and only 12.9% of all females live in HH in the highest quintile. In NWU almost 40% of all females in this region live in HH in the bottom three deciles.

116. This suggests that females are more likely to be in poor HH and therefore to be potentially disadvantaged. Further analysis of female activity status in both rural and urban areas is provided in section 8.4 below.

### 9.3 Children in Poverty

%	HH	Proportion of Poor HH by region	Population	Proportion of Poor Population by region
Total Number below BNPL	5038		49145	
Apia Urban Area	944	18.7	9077	18.5
North-West Upolu	1534	30.5	15454	31.4
Rest of Upolu	1183	23.5	11806	24.0
Savai'i	1306	25.9	12465	25.4

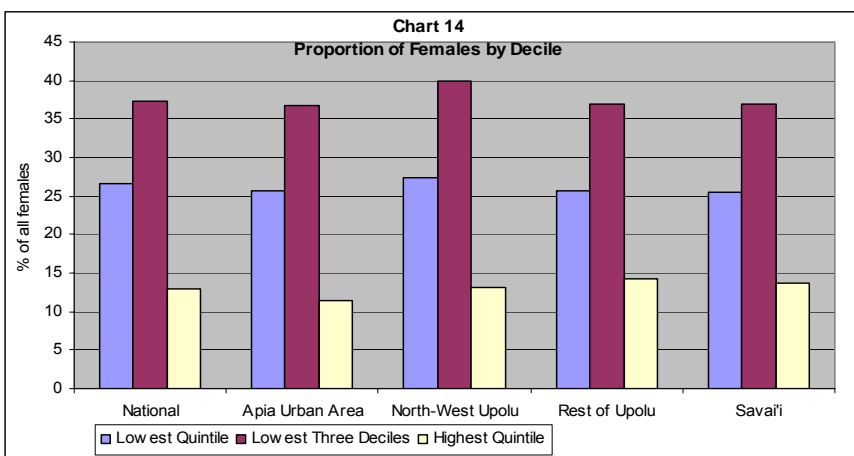
Ranked by per capita HH expenditure deciles	National	Apia Urban Area	North-West Upolu	Rest of Upolu	Savai'i
All Households	48.6	49.2	48.9	47.6	48.5
Lowest Quintile	26.6	25.7	27.4	25.7	25.5
Lowest Three Deciles	37.4	36.8	39.9	36.9	37.0
Highest Quintile	12.9	11.3	13.1	14.3	13.6



117. The survey results indicate that there were 72,865 children (39.9% of total population) under the age of 15. The analysis indicates that 19.4% of all children live in Apia, 31.1% in NWU and 24.3% and 25.3% in RoU and Savai'i respectively. The figures also indicate that children are proportionately more likely to be living in poor HH. Across the country approximately 30% of children live in HH in the lowest

quintile, and 43% live in HH in the lowest three deciles. At the other end of the scale only 10% of children live in HH in the highest quintile, Table 18 and Chart 2 above. See also Appendix table A8.

118. Overall 15,080 children (20.7% of all children) were living female headed households; however of these children 5,567 (36.9%) were living in female HHH in the lowest three deciles. Thus, children living in female headed households were more likely to be in a poor household.



### 9.4 Activity Status of Households

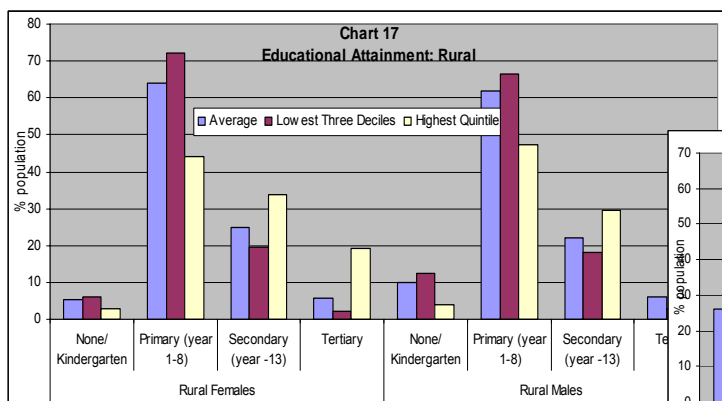
119. The activity status of males and females in rural and urban HH is illustrated in Charts 15 and 16. Details of male and female activity status by urban and rural locations is provided in Appendix tables A9 through A16. In rural HH the primary activities for

males are farming, either for own consumption and/or for sale in the market; for females "home duties" predominate.

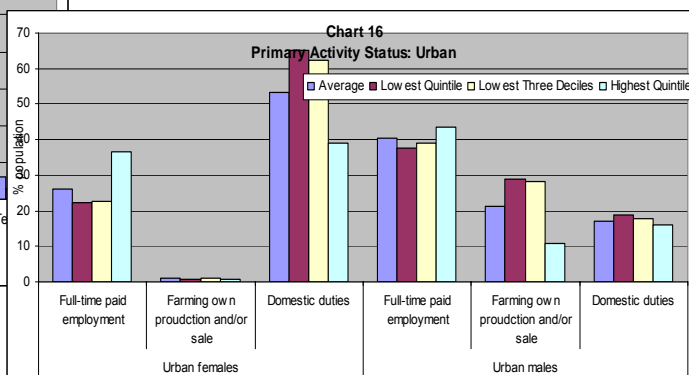
120. For rural males in the top quintile employment is more significant accounting for just under 30% of primary activity. Amongst rural females only about seven-percent of those in the lowest three deciles report being employed, for those in the top quintile approximately 15% report being in employment. Rural males are therefore around twice-as-likely to be in employment as rural females. The ratio of males-to-females in employment is approximately similar in the urban areas or Apia and NWU, Chart 16.

121. Approximately 20% and 46% of females in the bottom and top quintiles respectively reported having employment. This compares with around 38% and 43% of males in the same quintiles. In the lowest deciles the proportion of females engaged in home duties is similar in both the urban and rural areas at between sixty to seventy-percent. The survey did not ask information on unemployment but it would be reasonable to assume that a large proportion of those engaged in home duties, for females, and in farming for males would be available for employment should employment be available.

122. The low level of employment opportunities in the rural areas compared with the urban centres is clear. The survey was undertaken during the period when Yazaki was reducing both its workforce and the number of hours worked, and the loss of these jobs is no doubt reflected in the low rural employment figures.



## 9.5 Educational



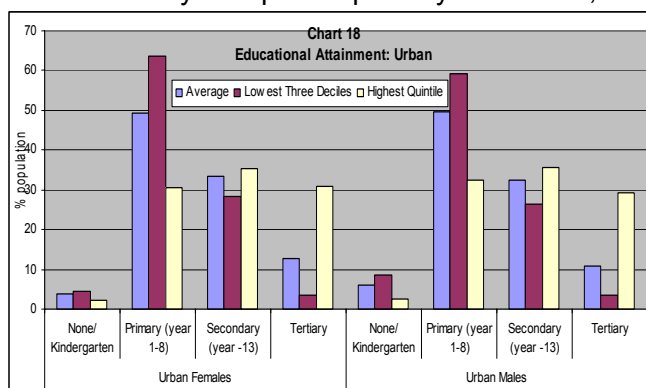
### Attainment

123. Education is generally acknowledged as being one of the most critical factors in influencing whether a household is likely to be in poverty, and whether it will be able to rise out of such a condition. Samoa is in the fortunate position of having very few people reporting not having completed even primary level; less than five-percent of females (both urban and rural) and ten percent of males (urban and rural). Of those living in the urban areas approximately sixty-percent overall reported having completed at least primary level; however for those in the bottom three deciles the proportion achieving only primary level was over seventy-percent for females and two-thirds for males. The implication of this being that those who have only achieved primary education have a slightly greater chance of being in the three bottom three deciles. Appendix Table A17 through A24.

124. Chart 18 showing the situation of the urban adult population reinforces the rural picture. On average while fifty-percent of the urban population had only completed primary education, the proportion only completing primary was over around sixty-percent for those in the lowest three deciles of both males and females.

125. A comparison of the two charts indicates that just over 40% of both males and females in the urban areas reported completing secondary education compared with only around one-quarter of those in the rural areas.

126. These figures further indicate that the higher the level of educational attainment the less likelihood of that person being in the bottom three deciles; it also tends to reinforce the view that living in the urban areas is more likely to lead to a higher level of education and therefore encourages parents to either move to the urban centres or send their children to live with relatives in the urban centres.



## 9.6 Energy Access and Use

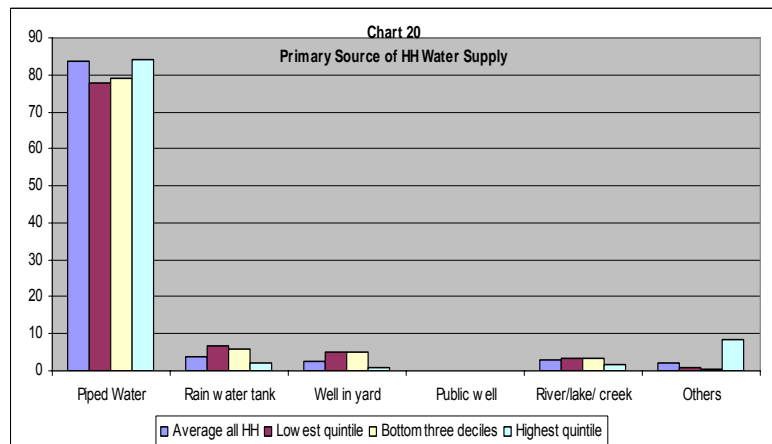
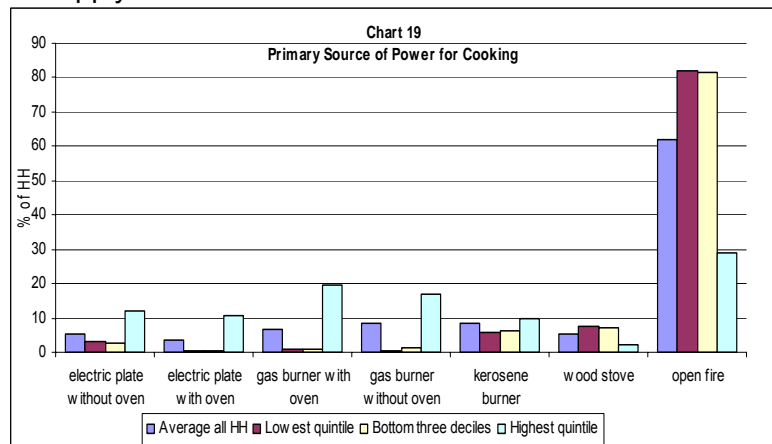
127. Power supplies are reticulated to almost every village in Samoa and the pay-as-you-go “cash-power” pre-payment system enables HH to manage their power consumption effectively. The almost universal availability of electricity is seen in the fact that 97% of HH overall, and

even 95% of those in the bottom two and three deciles use electricity as their primary source of energy for lighting. Only 5% of HH in the bottom three deciles use other sources of lighting, mostly oil or kerosene lamps, see Appendix Tables A25 & A26.

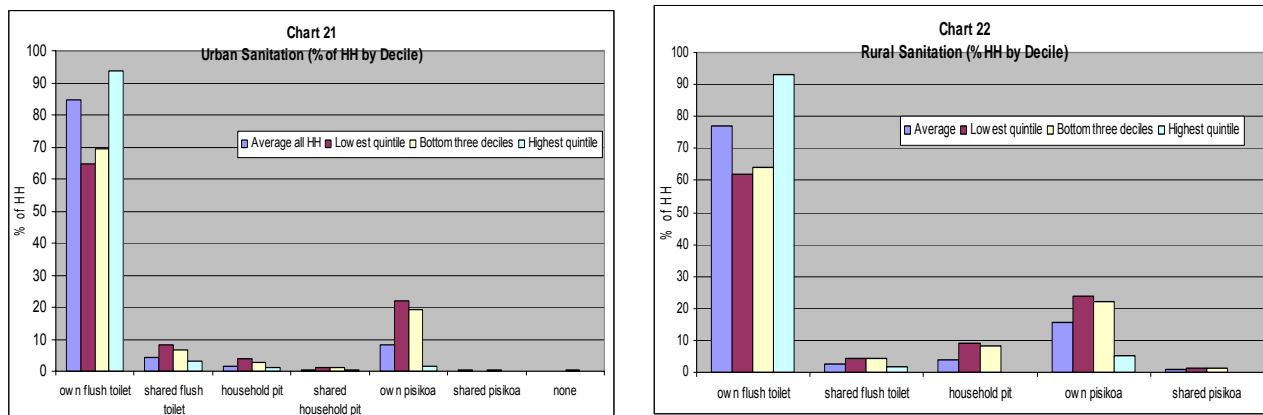
128. However despite the availability of electricity and its use for lighting, it is not used very much as the primary power source for cooking. Chart 19 clearly shows that an open fire is the most widely used cooking power, especially for the lowest income HH. Eighty-percent of HH in the bottom two and three deciles use open fires with the balance almost all using either wood-burning stoves or kerosene burners. For HH in the top quintile thirty-percent also use an open fire but the remainder are spread between their use gas-burners just under 40%, kerosene burners 10% and electric stoves about twenty-percent. Appendix Tables A27 & A28 provide further details of HH energy use for cooking and lighting by decile.

### 9.7 Access to Water and Sanitation

129. Samoa's high status in the Pacific human poverty index is reflected in the high level of access to safe water and improved sanitation. Chart 20 shows that about 80% of all HH, across all deciles, have access to a piped water supply. For the bottom two and three deciles those that do not have piped water most have access to a rain water tank or to their own well. Less than five-percent of HH even in the poorest deciles rely on rivers or creeks and are therefore deemed to not have a safe water supply. Details of water supply by decile are provided at Appendix Tables A29 & A30.



130. Access to improved sanitation is also good for most HH; Charts 21 and 22 illustrate the sanitation status of HH in the urban and rural areas. Overall approximately 80% of HH have



access to a flush toilet, even for HH in the bottom three deciles the proportion was just over sixty-percent in the rural areas and just under seventy-percent in the urban centres. For most others the sanitation system is still of an improved type although the approximate 20% of HH in the bottom three deciles that use the “*pisikoa*” local type could probably benefit from some improvements.

131. Although not especially marked by Pacific standards there are some differences in access to improved sanitation services between the urban and rural areas of Samoa. Appendix Tables A31 through A34 provide details of urban and rural sanitation by decile.

## 10. Conclusions

### 10.1 Poverty of Income/Expenditure or Opportunity?

132. Poverty is a multi-dimensional issue. The national poverty lines and levels of incidence of poverty between the regions are the “headline” indicators. They are the basic building blocks on which poverty alleviation strategies can be founded. Far more important from a policy perspective is to analyse the specific characteristics, and where possible, the causes of low-income/expenditure and poverty in the disadvantaged sections of society. Policymakers need to know who-are-the-poor, why-are-they-poor, and specifically, what-are-the-characteristics of the poor and poor households, so that targeted poverty alleviation measures can be initiated.

133. The analysis in this paper has aimed to provide a basis for this discussion to be carried forward to the policy level. The information available from the household survey can be used to effectively guide the formulation of specific hardship and poverty alleviation policies.

134. The BNPL measures the incidence of “income or expenditure” poverty but this is just one aspect of poverty or hardship. Families might have low incomes, but through good household budgeting and prioritising of expenditure, might still be reasonably well-fed and healthy. Nevertheless they are still likely to live in conditions where they experience varying degrees of hardship. For a variety of reasons they might lack adequate access to health, education and transport facilities. These weaknesses in access are likely to be greatest in the rural parts of the country, although of course in general Samoa has very good education, health, road and transport systems and networks. But a combination of low educational attainment by the household head, and other socio-cultural factors relating to age, gender and specific personal characteristics might also limit freedom of choice, or socio-economic opportunity.

135. This poverty of opportunity, e.g. lack of access to basic health and education services, employment opportunities, standards of good governance and equal opportunities across

gender and age, is now regarded as just as important in defining the extent of poverty and hardship in a society as is the lack of income/expenditure. Often the conditions and circumstances giving rise to the poverty of opportunity are the causes of income/expenditure poverty. Alleviating poverty of opportunity will help to increase incomes and wealth.

## **10.2 How Does Poverty Affect People**

136. Despite the six-years of relatively good economic growth that was achieved in the period between the household surveys of 2002 and 2008, the level of hardship and poverty being experienced by the least well-off in Samoa society has not improved. The incidence of poverty has fallen in the urban centres but appears to have increased in the rural parts of the country where access to economic opportunities are less. The increase in the level of inequality as measured by the Gini coefficient and the accompanying increase in the depth of poverty as measured by the poverty gap index, suggest that the economic growth did not really benefit the most disadvantaged. The results of this household survey, held in the middle of the global economic slowdown, also reflect the impact of global situation on the Samoa economy.

137. However in Samoa, as already noted, households with income below the basic needs poverty line level will not necessarily be going hungry, although their diets may be poor in nutrition. It means, more likely, that whilst they are probably not going hungry they are, nevertheless, struggling to meet their daily/weekly living expenses, particularly those that require cash payments (power, water, transport, school fees and education-related costs, clothing, housing, medical costs etc). These families will be constantly trying to balance their incomes with their expenditure and frequently something has to be given up, a trade-off will have to be made between one bill and another. And added to this may be the need to make cash or cash-based contributions to church, *fa'alavelave* and other community endeavours.

138. Fortunately, few people in Samoa are going hungry, but there are indications in the expenditure patterns of the poorest households that many may be getting inadequate nutrition. This may be especially the case for children in poorer household with less access to land where local produce may not be so readily available in household diets. Poor diet and inadequate nutrition are critical issues for child health now are for their future health as adults. The data on expenditure patterns for the poorest households provide valuable information for the health authorities to develop targeted health and nutrition awareness programmes.

139. The data on household production and consumption of local produce should be very valuable to agriculture sector policy makers to target extension and other services to improve local crop production for domestic markets.

140. Poverty and hardship in Samoa means having to make choices on a daily or weekly basis between the competing demands for household expenditure and the limited availability of cash income to meet that expenditure. Many households struggle to pay bills and, in the absence of adequate home gardens in Apia urban area, to purchase adequate food. They borrow regularly from informal lenders who often charge very high interest rates for small unsecured loans to meet family commitments and community obligations. They will also run-up trade-store debts or borrow from other family members. They are frequently, and occasionally constantly, in debt.

141. The costs of education are high, not necessarily for school fees themselves, but rather for uniforms, books and the regular fund raising that is part of school life. Moreover children frequently miss school due to ill-health or because school fees or associated costs have not been paid, or families simply cannot afford the costs of uniforms, books and other related costs. Adults, especially many young men in the rural areas, are frequently less well educated and thus unable to get anything but the lowest paid employment, if such employment is even available. The cycle of poverty can therefore be perpetuated. Education is therefore one of the most the most critical issues.

### 10.3 Policy Considerations

142. The priorities of the people, as outlined in Box 1 above, highlight those issues which were deemed important for reducing hardship and poverty at the household and community levels. They provide indicators for government in terms of identifying the policy challenges for creating more economic and employment opportunities, improving infrastructure and access improved quality of services. Other studies have highlighted the need for improving the policy and regulatory environment for foreign investment, access to micro-finance and to markets, either inwards as source of tourism or outwards for potential exports.

143. The analysis has identified that between 2002 and 2008 the extent of poverty and hardship in Samoa rose in the more rural parts of the country and fell in the more urbanised areas. The problems facing families already living below the basic needs poverty line and those with expenditure levels only just above the BNPL and thus vulnerable to falling into poverty, is being exacerbated by the impact of the global economic situation.

144. The government needs therefore to renew and strengthen its commitment to economic and public sector reform and to improving service delivery. There needs to be full recognition that hardship and poverty are now realities for many households in Samoa; and the number of households being affected is increasing throughout the country as growth slows and incomes begin to decline. More attention needs to be given to addressing the needs of the disadvantaged and those who are being left behind.

145. Amongst the key issues facing Samoa in addressing the growing signs of hardship and poverty are the need to:

- strengthen the institutional and regulatory basis for renewed domestic economic growth and stability;
- ensure fiscal discipline and sound financial management;
- give greater emphasis to promoting private sector investment, access to financial services for people and communities and the creation of new employment opportunities;
- broaden and deepen the economic base of the economy, especially in strengthening the contribution of the agriculture sector, and to further improve food security;
- improve technical and vocational training opportunities in order to meet the skill needs of the private sector and of those who will need lifestyle skills to succeed in both the rural economy and in overseas employment; and to
- continue to improve the delivery of education, primary health care and health/nutrition education.

146. At the micro level, it is necessary to address the specific needs of individual communities and villages. This means promoting rural enterprise activities, especially in the agriculture and eco-tourism sectors, to create income generating opportunities as well as meeting particular local social development and infrastructure priorities.

147. The current high prices of imported food and fuel give many opportunities for domestic agriculture to provide import substitutes for the rice and cereal products that feature in the diets of those in the urban centres.



148. The potential for a continuing weakening in the fiscal situation in the face of high fuel prices and rising personnel costs in particular is a serious challenge and needs careful monitoring to ensure that fiscal discipline is maintained. Renewed economic growth needs to be generated in the domestic economy through an appropriate investment enabling environment and maintaining high governance standards. Growth oriented, employment-creating strategies, need to be implemented to keep the macroeconomic side moving forward.

149. Samoa like many PICs is facing serious challenges in coping with the impact of the current period of global recession. Over the past decade the country has been one of the best performing economies in the Pacific region. It has enjoyed high growth rates with increasing real incomes for many, fiscal stability, and a high standard of governance. The economic growth has now come to an abrupt halt and real incomes are falling, the fiscal situation is no longer quite so stable but governance structures are being sustained.

150. When faced with a similar set of challenges in the mid 1990s Samoa embarked on a period of radical reforms that provided the launching pad for the period of sustained growth just ended. It is time again for bold measures to be put forward to launch the economy back onto a path of renewed economic growth and to reverse the increase in hardship and poverty now being experienced.

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Appendix 1

2008 HIES: Food Poverty Line Estimate

Quantities of Food: calculation sheet for low cost diet - 2200 kcal per day

Name of food	Quantity of food/ week/ person (ep)		Conver. Factor	Quantity of food/ week/ (ap)		Conversion factor		Amount of food as units purchased		Price/ lb			grams	lbs	Total food price/ week 2002	Local items 2002	Total food price/ week 2008	Local items 2008	2008 prices			
	2002	2008		% price change	1Q	2Q	3Q	4Q														
Tea	10	cup	2	20	g	455	g	0.04	lb tea	5.14	6.70	30.4	20	0.0440	0.2259		0.2945		5.56	6.58	6.68	7.98
Sugar	87	tsp	4	348	g	455	g	0.8	lb sugar	0.80	0.94	17.5	348.0	0.76484	0.6119		0.7189		0.88	0.89	0.93	1.06
Bread (white)	22	thick slice	36	792	g	500	g	1.6	loaves of bread	1.12	1.54	37.1	loaf	loaf	1.7741		2.4314		1.29	1.37	1.55	1.93
Margarine	134	g	1	131	g	455	g	0.3	lb margarine	4.80	8.28	72.5	134	0.29451	1.4136		2.4385		8.28	8.28	8.28	8.28
Rice, dry	1086	g	1	1086	g	455	g	2.4	lb rice	0.86	1.48	72.4	1086.0	2.38681	2.0527		3.5385		1.12	1.19	1.54	2.08
Eleni	450	g	1	450	g	425	g	1.1	can tinned fish	1.91	2.42	26.6	450.0	0.98901	2.0224		2.3909		2.31	2.36	2.4	2.6
Onion	132	g	1.2	158.4	g	455	g	0.3	lb onions	0.96	1.42	47.7	158.4	0.34813	0.3342		0.4935		1.45	1.39	1.44	1.39
Taro	600	g	1.2	720	g	455	g	1.6	lb taro	0.97	1.43	47.4	720.0	1.58242	1.5349		2.2629	2.2629	1.19	1.33	1.56	1.64
C/ Cream	515	g	1	515	g	155	g	3.3	popo	0.11	0.23	104.5	515.0	1.13187	0.1245		0.2547	0.2547	0.22	0.21	0.23	0.24
K/ Samoa	21	g	1	21	g	140	g	0.2	pkt samoan koko	3.41	4.93	44.5	pkt	pkt	0.5115	0.5115	0.7391	0.7391	4.43	4.95	5.36	4.97
Water	56	cup	0.25	14	ltr	1	ltr	14.0	ltr of water	0.00022	0.0005	127.3	ltr	ltr	0.0031		0.0070		0.0005	0.0005	0.0005	0.0005
Pumpkin	230	g	1.5	345	g	3000	g	0.12	med pumpkin	0.66	0.95	43.9	345.0	0.75824	0.5004	0.5004	0.7203	0.7203	0.95	0.88	0.94	1.03
Salt	10.5	tsp	5	53	g	455	g	0.1	lb salt	0.50	0.70	40.0	53.0	0.11648	0.0582		0.0815		0.63	0.67	0.71	0.79
Breadfruit	300	g	1.18	354	g	1360	g	0.3	average breadfruit	0.32	0.44	35.9	354.0	0.77802	0.2490	0.2490	0.3384	0.3384	0.36	0.45	0.48	0.45
Turkey Tail	150	g	1	150	g	455	g	0.3	lb turkey tails	2.09			150.0	0.32967	0.6890				not available in 2008 replaced by additional chicken			
Cook oil/Dripping	15.62	tsp	5	78.1	g	455	g	0.2	lb dripping	3.05	3.14	3.0	78.1	0.17165	0.5235		0.5390		3.14	3.14	3.14	3.14
Lau Moli	12	leaves	2	24	leaves	1	leaves	24.0	laumoli leaves	Nil	0.00	0.0			0.0000		0.0000		0	0	0	0
Cucumber	40	g	1	40	g	150	g	0.27	cucumber	0.70	1.36	94.6	40.0	0.08791	0.0615	0.0615	0.1198	0.1198	1.45	1.19	1.66	1.15
Beans	40	g	1.2	48	g	455	g	0.1	lb beans	1.85	3.41	84.3	48.0	0.10549	0.1952	0.1952	0.3597	0.3597	2.89	3.38	3.61	3.76
Chicken D/ stick	345	g	1.22	345	g	455	g	0.76	lb chicken d/ stick	1.90	2.37	24.5	420.9	0.92505	0.9934		2.1878		2.17	2.25	2.34	2.7
Ripe Banana	300	g	50	6	banana	1	banana	6.0	misiuki banana	1.20	0.80	-33.1			1.2000	1.2000	0.8000	0.8000	0.79	0.68	0.82	0.92
Pele Leaves	200	g	1.1	220	g	8	g	28	pele leaves	1.67	1.67	0.0	220.0	0.48352	0.8075	0.8075	0.8075	0.8075	1.67	1.67	1.67	1.67
Green Banana	1100	g	1.6	1760	g	130	g	14	G/ bananas	0.69	0.62	-9.8	1760.0	3.86813	2.6690	2.6690	2.4079	2.4079	0.48	0.54	0.6	0.87
Mutton Flaps	75	g	1.35	101	g	455	g	0.2	lb mutton flaps	2.30	3.93	70.8	101.0	0.22198	0.5105		0.8718		3.8	3.87	3.91	4.13
Soy Sauce	1	tsp	5	5	g	296	g	0.017	sml bottle s/ sauce	1.50	1.50	0.0	5.0	0.01099	0.0165		0.0165		2.74	3.69	2.89	2.9
Water Cress	80	g	1	80	g	455	g	0.2	lb watercress	1.76	3.21	82.1	80.0	0.17582	0.3095	0.3095	0.5635	0.5635	3.45	2.79	3.37	3.21
Vi	400	g	1.78	712	g	212	g	3.4	Vi	0.53	0.69	30.7	712.0	1.56484	0.8294	0.8294	1.0836	1.0836	0.54	0.66	0.87	0.7
Sago	16	g	1	16	g	455	g	0.04	lb sago	2.40	2.64	10.0	16.0	0.03516	0.0844	0.0844	0.0928	0.0928	2.64	2.64	2.64	2.64
Garlic	1	clove	3	3	g	40	g	0.1	bulb garlic	7.40	2.64	-64.3	3.0	0.00659	0.0488		0.0174		2.64	2.64	2.64	2.64
Egg	1	whole	1	1	whole	1	whole	1.0	Egg doz	5.81	6.59	13.4	5.81/12	each	0.4842		0.5490		6.64	6.67	6.65	6.39
Masi	140	g	20	20	masi	1	masi	20.0	Masi	0.20	0.20	0.0	7 masi	each	1.4000	1.4000	1.4000	1.4000	0.2	0.2	0.2	0.2
Flour	86.5	g	1	86.5	g	455	g	0.2	lb flour	0.76	1.28	68.1	86.5	0.19011	0.1445		0.2429		0.98	1.09	1.47	1.57
Noodles	246	g	200	1.23	pkt	1	pkt	1.23	pkt noodles	0.76	1.01	32.2	0.76	0.00167	0.9348		1.2362		1.02	0.93	0.97	1.1
Curry Powder	1	tsp	4	4	g	455	g	0.01	lb curry powder	2.69	3.36	24.8	4.0	0.00879	0.0236		0.0295		3.49	3.43	3.61	2.9
Pawpaw	387	g	2.22	859.14	g	660	g	1.3	Med Pawpaw	0.48	0.62	28.6	859.14	1.88822	0.9063	0.9063	1.1660	1.1660	0.73	0.57	0.6	0.57
Taro Leaves	45	q	1.33	59.85	q	20	q	3.0	Taro leaves	1.29	2.70	108.9	59.9	0.13154	0.1697	0.1697	0.3545	0.3545	2.73	2.75	2.73	2.57
<b>TOTAL</b>															<b>24.68</b>	11.55	<b>31.56</b>	13.47				

## APPENDIX TABLES

<b>Table A1</b>					
<b>Weekly Food Expenditure per capita</b>					
SAT per capita per week					
Ranked by per capita HH expenditure deciles	National	Apia	North-West Upolu	Rest of Upolu	Sava'i'i
1st Decile	19.17	18.40	20.41	18.19	18.68
2nd Decile	24.68	26.55	24.03	22.63	23.84
3rd Decile	30.03	33.80	29.77	29.70	28.63
4th Decile	35.15	38.37	37.52	33.58	34.92
5th Decile	38.62	39.92	39.98	36.25	39.33
6th Decile	43.04	55.32	41.24	40.25	37.60
7th Decile	51.24	56.85	50.56	46.90	49.49
8th Decile	58.57	58.32	55.54	55.52	55.98
9th Decile	63.08	70.44	59.40	58.27	69.99
Top Decile	114.42	164.84	102.94	78.30	129.48
Total	42.02	47.05	40.68	38.55	43.03

<b>Table A2</b>					
<b>Weekly Non-Food Expenditure per capita</b>					
SAT per capita per week					
Ranked by per capita HH expenditure deciles	National	Apia	North-West Upolu	Rest of Upolu	Sava'i'i
1st Decile	14.11	17.79	17.54	10.79	12.08
2nd Decile	23.13	28.09	26.77	20.30	21.19
3rd Decile	29.98	38.79	35.28	23.53	25.51
4th Decile	37.72	54.09	40.49	29.91	31.98
5th Decile	48.52	70.08	53.89	36.56	41.14
6th Decile	62.25	84.65	70.66	43.98	55.56
7th Decile	79.07	110.39	85.30	54.80	68.70
8th Decile	105.96	161.68	124.87	72.53	89.68
9th Decile	168.78	271.21	196.51	110.73	120.72
Top Decile	415.96	668.27	411.78	265.03	351.06
Total	75.32	102.96	81.12	54.33	65.28

<b>Table A3</b>										
<b>Comparison of Total HH Expenditure 2002:2008</b>										
SAT per week	National		Apia		North-West Upolu		Rest of Upolu		Sava'i'i	
	2002	2008	2002	2008	2002	2008	2002	2008	2002	2008
Average all Households	574.88	852.33	593.99	1017.13	463.86	889.28	639.02	712.66	638.06	786.79
Lowest Quintile	224.36	394.55	260.28	412.61	212.10	446.71	259.32	356.64	214.21	354.53
Lowest Three Deciles	260.38	424.61	285.23	472.37	228.13	489.29	304.90	388.23	255.42	389.17
Highest Quintile	1155.22	1674.83	1214.22	2054.04	914.74	1683.00	1269.72	1320.22	1314.20	1565.06
SAT per capita per week										
Average all Households	76.13	117.34	84.54	150.01	60.38	121.80	85.93	92.88	79.69	108.32
Lowest Quintile	25.34	40.55	28.80	45.42	21.82	44.38	30.78	35.95	24.62	37.89
Lowest Three Deciles	30.04	47.03	33.58	54.47	25.69	51.27	35.73	41.71	30.13	43.31
Highest Quintile	219.55	381.12	260.11	537.38	165.45	385.32	240.21	256.17	217.98	335.62
Ratio 5Q:1Q	8.7	9.4	9.0	11.83	7.6	8.68	7.8	7.12	8.9	8.86
% change in average per HH and per capita expenditure	National		Apia		North-West Upolu		Rest of Upolu		Sava'i'i	
	Per HH	Per Capita	Per HH	Per Capita	Per HH	Per Capita	Per HH	Per Capita	Per HH	Per Capita
Average all Households	48.26	54.14	71.24	77.44	91.71	101.73	11.52	8.09	23.31	35.92
Lowest Quintile	75.85	59.99	58.53	57.73	110.61	103.37	37.53	16.82	65.50	53.91
Lowest Three Deciles	63.07	56.55	65.61	62.21	114.48	99.55	27.33	16.76	52.36	43.74
Highest Quintile	44.98	73.59	69.17	106.59	83.99	132.89	3.98	6.64	19.09	53.97

<b>Table A4</b>					
<b>Weekly HH Purchased Food</b>					
SAT per capita per week					
Ranked by per capita HH expenditure deciles	National	Apia	North-West Upolu	Rest of Upolu	Savai'i
1st Decile	9.91	15.16	10.68	7.79	8.05
2nd Decile	13.52	21.25	15.11	9.72	11.08
3rd Decile	17.30	29.11	19.80	15.06	12.89
4th Decile	23.50	35.24	27.26	17.49	18.82
5th Decile	26.62	34.38	28.52	20.45	22.36
6th Decile	30.44	49.52	31.27	22.99	22.80
7th Decile	36.89	51.34	40.29	29.20	30.57
8th Decile	45.27	52.15	45.52	32.61	36.97
9th Decile	51.03	66.56	51.33	37.21	47.71
Top Decile	102.65	157.60	91.59	59.79	105.40
Total	30.10	42.24	30.74	22.40	26.68

<b>Table A5</b>					
<b>Weekly HH Production of Own Food Consumed</b>					
SAT per capita per week					
Ranked by per capita HH expenditure deciles	National	Apia	North-West Upolu	Rest of Upolu	Savai'i
1st Decile	9.26	3.24	9.73	10.40	10.63
2nd Decile	11.15	5.30	8.92	12.91	12.76
3rd Decile	12.73	4.69	9.97	14.64	15.74
4th Decile	11.65	3.13	10.25	16.09	16.09
5th Decile	12.00	5.54	11.47	15.80	16.97
6th Decile	12.60	5.80	9.97	17.26	14.80
7th Decile	14.36	5.52	10.28	17.69	18.92
8th Decile	13.30	6.17	10.01	22.91	19.01
9th Decile	12.05	3.88	8.07	21.06	22.28
Top Decile	11.77	7.25	11.35	18.51	24.08
Total	11.93	4.81	9.95	16.15	16.36

<b>Table A6</b>					
<b>Distribution of HH Expenditure %</b>					
Ranked by per capita HH expenditure deciles	National	Apia	North-West Upolu	Rest of Upolu	Savai'i
1st Decile	3.9	3.6	4.4	4.0	3.6
2nd Decile	5.4	4.5	5.6	6.0	5.4
3rd Decile	5.7	5.7	6.5	6.4	5.8
4th Decile	6.9	7.5	7.3	7.2	6.1
5th Decile	7.9	7.7	7.4	8.2	8.0
6th Decile	9.1	8.0	9.2	8.8	8.6
7th Decile	9.8	11.5	9.9	11.1	10.6
8th Decile	11.9	10.7	11.7	11.2	11.7
9th Decile	14.0	15.9	14.7	15.1	12.9
Top Decile	25.4	24.9	23.2	22.1	27.2
Total	100.0	100.0	100.0	100.0	100.0
Ratio of Q1:Q5	4.3	5.0	3.8	3.7	4.4

Table A7						
Proportion of Females by Deciles						
Ranked by per capita HH expenditure deciles	Urban Females			Rural Females		
	<15 years	>60 years	Working Age	<15 years	>60 years	Working Age
Decile 1	47.3	4.8	47.9	46.6	5.8	47.6
Decile 2	42.3	5.7	52.0	45.5	6.4	48.1
Decile 3	40.8	7.7	51.5	41.9	8.4	49.7
Decile 4	39.0	6.8	54.1	39.5	7.0	53.5
Decile 5	39.0	10.9	50.1	39.6	11.1	49.3
Decile 6	38.7	8.0	53.4	37.8	10.0	52.2
Decile 7	34.4	9.1	56.5	33.9	7.7	58.3
Decile 8	32.8	8.3	58.9	33.4	12.2	54.3
Decile 9	31.8	8.7	59.5	28.4	15.1	56.5
Decile 10	28.3	11.2	60.5	25.6	16.2	58.2
Average	37.9	8.0	54.1	39.7	8.8	51.5
Total number of Females	17615	3719	25195	16724	3715	21681
Bottom Quintile	44.8	5.3	49.9	46.1	6.1	47.9
Lowest three deciles	43.5	6.1	50.5	44.7	6.8	48.5
Top Quintile	30.1	9.9	60.0	27.0	15.6	57.4

Table A8										
Children by Decile and Region										
Ranked by per capita HH expenditure deciles	National		Apia		North-West Upolu		Rest of Upolu		Savai'i	
	% of children	Children per HH	% of children	Children per HH	% of children	Children per HH	% of children	Children per HH	% of children	Children per HH
Decile 1	16.5	4.8	17.7	4.6	17.3	5.0	15.9	5.0	15.1	4.7
Decile 2	14.9	4.3	13.8	3.5	14.8	4.2	14.7	4.5	14.4	4.4
Decile 3	11.7	3.4	13.4	3.5	12.1	3.4	11.7	3.6	12.9	4.0
Decile 4	11.7	3.4	11.6	3.0	12.3	3.5	10.3	3.1	10.4	3.2
Decile 5	10.6	3.1	9.8	2.5	10.3	2.9	11.1	3.4	10.7	3.3
Decile 6	9.9	2.9	8.1	2.1	9.6	2.8	8.8	2.7	10.5	3.2
Decile 7	8.0	2.3	9.5	2.4	8.4	2.4	9.4	2.9	8.7	2.7
Decile 8	7.3	2.1	6.9	1.8	5.6	1.6	7.3	2.2	7.8	2.5
Decile 9	5.4	1.6	5.3	1.4	5.5	1.6	6.8	2.1	5.9	1.8
Decile 10	4.1	1.2	3.9	1.0	4.1	1.2	3.9	1.2	3.7	1.1
Total/Average	100.0	2.9	100.0	2.6	100.0	2.9	100.0	3.1	100.0	3.1
Total number of Children	72865		14116		22627		17698		18425	
Bottom Quintile	15.7	4.6	15.7	4.1	16.0	4.6	15.3	4.7	14.7	4.6
Lowest three deciles	14.4	4.2	14.9	3.9	14.7	4.2	14.1	4.3	14.1	4.4
Top Quintile	4.8	1.4	4.6	1.2	4.8	1.4	5.4	1.6	4.8	1.5

Table A9									
Primary Economic Activity Status of Rural Females aged 15-59 years									
(% by Decile)									
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled)	
Decile 1	6.6	0.0	1.1	1.1	0.7	73.2	16.9	0.4	100.0
Decile 2	7.0	0.4	0.4	1.7	0.4	69.2	20.0	0.8	100.0
Decile 3	8.6	0.9	1.3	0.9	0.0	72.7	13.7	1.8	100.0
Decile 4	7.8	0.5	1.4	1.5	0.0	70.0	18.0	0.9	100.0
Decile 5	10.6	0.0	1.0	0.9	0.5	70.2	16.8	0.0	100.0
Decile 6	10.8	0.0	3.3	0.7	0.0	68.5	13.4	3.3	100.0
Decile 7	11.4	1.2	2.4	2.4	0.0	64.6	17.6	0.5	100.0
Decile 8	15.3	0.0	4.3	0.7	0.7	67.0	10.6	0.7	100.0
Decile 9	13.0	1.0	2.9	4.0	0.0	60.3	17.9	0.9	100.0
Decile 10	15.8	0.0	4.4	1.5	1.5	64.9	11.9	0.0	100.0
Average	9.7	0.4	1.9	1.4	0.3	69.1	16.2	0.9	100.0
Summary by Decile Group									
Average	9.7	0.4	1.9	1.4	0.3	69.1	16.2	0.9	
1Q	6.8	0.2	0.7	1.4	0.6	71.2	18.4	0.6	
L3D	7.4	0.4	0.9	1.2	0.4	71.7	16.9	1.0	
5Q	14.4	0.5	3.7	2.8	0.8	62.6	14.9	0.5	

Table A10								
Primary Economic Activity Status of Rural Females aged 15-59 years								
(% by Economic Activity)								
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled)
Decile 1	10.2	0.0	8.7	11.2	33.3	16.0	15.8	6.3
Decile 2	9.6	13.4	3.2	16.3	15.9	13.5	16.6	12.0
Decile 3	10.7	28.0	8.7	7.8	0.0	12.7	10.3	23.0
Decile 4	9.6	14.6	9.2	12.3	0.0	12.2	13.4	11.5
Decile 5	12.6	0.0	6.1	7.5	15.9	11.7	12.0	0.0
Decile 6	9.1	0.0	14.7	4.1	0.0	8.1	6.8	29.3
Decile 7	11.4	29.3	12.6	16.3	0.0	9.2	10.7	5.8
Decile 8	12.5	0.0	18.4	4.1	17.4	7.8	5.2	6.3
Decile 9	7.8	14.6	9.2	16.3	0.0	5.1	6.5	5.8
Decile 10	6.2	0.0	9.2	4.1	17.4	3.6	2.8	0.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of HH	2112	87	401	311	73	14976	3509	201
Summary by Decile Group								
1Q	19.9	13.4	11.8	27.5	49.3	29.5	32.4	18.3
L3D	30.6	41.4	20.5	35.4	49.3	42.3	42.7	41.4
5Q	14.1	14.6	18.4	20.4	17.4	8.7	9.3	5.8

Table A11									
Primary Economic Activity Status of Urban Females aged 15-59 years									
(% by Decile)									
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled)	
Decile 1	23.7	0.0	0.0	0.0	0.5	66.6	7.4	1.1	100.0
Decile 2	21.2	0.0	1.2	0.8	0.0	63.5	12.4	0.9	100.0
Decile 3	22.5	0.0	1.3	1.7	0.0	57.2	16.2	1.1	100.0
Decile 4	19.6	0.0	1.8	1.4	0.0	63.4	13.8	0.0	100.0
Decile 5	16.3	0.0	3.8	1.0	0.0	59.9	17.4	1.6	100.0
Decile 6	25.7	0.0	3.5	0.0	0.4	52.6	17.7	0.0	100.0
Decile 7	31.4	0.0	3.2	0.0	0.0	46.7	18.2	0.5	100.0
Decile 8	28.0	0.0	4.1	0.9	0.5	41.4	25.1	0.0	100.0
Decile 9	35.4	1.0	6.1	0.0	1.1	41.9	13.4	0.0	100.0
Decile 10	37.9	1.1	9.7	0.5	0.0	36.0	14.2	0.0	100.0
Average	26.0	0.2	3.4	0.6	0.3	53.1	15.6	0.5	100.0
Summary by Decile Group									
Average	26.0	0.2	3.4	0.6	0.3	53.1	15.6	0.5	100.0
1Q	22.5	0.0	0.6	0.4	0.3	65.1	9.9	1.0	100.0
L3D	22.5	0.0	0.8	0.8	0.2	62.4	12.0	1.0	100.0
5Q	36.7	1.0	7.9	0.3	0.5	39.0	13.8	0.0	100.0

Table A12									
Primary Economic Activity Status of Urban Females aged 15-59 years									
(% by Economic Activity)									
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled)	#N/A
Decile 1	8.1	0.0	0.0	0.0	18.5	11.2	4.2	19.5	34.8
Decile 2	9.8	0.0	4.2	15.1	0.0	14.3	9.5	20.8	0.0
Decile 3	7.5	0.0	3.2	23.6	0.0	9.4	9.0	19.5	0.0
Decile 4	8.0	0.0	5.6	23.6	0.0	12.6	9.4	0.0	0.0
Decile 5	6.0	0.0	10.4	15.1	0.0	10.8	10.6	30.5	0.0
Decile 6	11.5	0.0	12.0	0.0	18.5	11.5	13.2	0.0	0.0
Decile 7	11.1	0.0	8.6	0.0	0.0	8.1	10.7	9.7	0.0
Decile 8	11.1	0.0	12.2	15.1	21.0	8.0	16.5	0.0	0.0
Decile 9	13.7	51.7	17.9	0.0	42.1	7.9	8.6	0.0	65.2
Decile 10	13.2	48.3	25.7	7.5	0.0	6.1	8.2	0.0	30.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Summary by Decile Group									
1Q	17.9	0.0	4.2	15.1	18.5	25.5	13.7	40.3	
L3D	25.4	0.0	7.4	38.7	18.5	34.9	22.8	59.7	
5Q	26.9	100.0	43.6	7.5	42.1	14.1	16.8	0.0	



Table A13									
Primary Economic Activity Status of Rural Males aged 15-59 years									
(% by Decile)									
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled)	
Decile 1	17.1	1.8	0.0	53.3	8.9	5.0	12.7	1.0	100.0
Decile 2	12.7	0.9	1.3	55.1	11.5	3.1	15.4	0.0	100.0
Decile 3	19.5	2.8	6.8	42.8	10.0	5.8	11.6	0.7	100.0
Decile 4	16.2	4.9	3.5	45.8	9.2	5.3	13.2	2.1	100.0
Decile 5	16.7	1.9	3.6	55.4	4.5	7.0	10.1	0.9	100.0
Decile 6	14.3	0.6	5.2	53.2	6.5	4.2	15.0	1.1	100.0
Decile 7	23.4	0.6	4.2	48.0	5.7	4.7	13.4	0.0	100.0
Decile 8	18.9	0.0	4.4	44.2	6.4	7.7	17.1	1.3	100.0
Decile 9	23.3	0.0	8.4	40.4	3.4	11.1	13.4	0.0	100.0
Decile 10	32.4	4.2	8.0	30.4	8.3	9.8	6.8	0.0	100.0
Average	18.2	1.8	3.9	48.6	7.8	5.8	13.1	0.8	100.0
Summary by Decile Group									
Average	18.2	1.8	3.9	48.6	7.8	5.8	13.1	0.8	
1Q	14.9	1.4	0.7	54.2	10.2	4.0	14.1	0.5	
L3D	16.4	1.9	2.7	50.4	10.1	4.6	13.2	0.6	
5Q	27.9	2.1	8.2	35.4	5.8	10.5	10.1	0.0	

Table A14									
Primary Economic Activity Status of Rural Males aged 15-59 years									
(% by Economic Activity)									
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled)	Number of HH
Decile 1	14.2	15.8	0.0	16.6	17.3	12.9	14.7	20.0	3428
Decile 2	8.4	6.3	4.1	13.8	17.9	6.4	14.3	0.0	2759
Decile 3	14.6	21.8	23.5	12.1	17.5	13.6	12.1	12.9	3108
Decile 4	9.2	28.4	9.1	9.7	12.2	9.3	10.4	27.1	2346
Decile 5	10.7	12.3	10.6	13.4	6.7	14.0	9.1	12.9	2661
Decile 6	7.1	3.2	11.9	9.9	7.5	6.4	10.4	12.9	2058
Decile 7	11.8	2.9	9.8	9.1	6.7	7.4	9.4	0.0	2082
Decile 8	8.8	0.0	9.4	7.7	7.0	11.1	11.1	14.1	1928
Decile 9	8.1	0.0	13.4	5.3	2.7	12.0	6.5	0.0	1436
Decile 10	7.1	9.5	8.1	2.5	4.2	6.7	2.1	0.0	905
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	22710
Number of HH	4142	403	896	11027	1768	1326	2970	179	
Summary by Decile Group									
1Q	22.6	22.1	4.1	30.4	35.2	19.3	29.0	20.0	
L3D	37.3	43.8	27.7	42.4	52.8	33.0	41.1	32.9	
5Q	15.2	9.5	21.6	7.8	7.0	18.7	8.6	0.0	

Table A15										
Primary Economic Activity Status of Urban Males aged 15-59 years										
(% by Decile)										
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled)	Total	Number of HH
Decile 1	37.2	2.6	1.4	21.6	1.0	23.4	10.3	2.4	100.0	2556
Decile 2	38.2	1.3	0.0	32.7	2.5	14.2	8.8	2.5	100.0	3051
Decile 3	41.2	2.1	1.6	26.9	0.0	15.7	9.9	2.7	100.0	2445
Decile 4	39.0	0.5	4.7	23.1	3.0	15.8	13.4	0.5	100.0	2810
Decile 5	40.0	0.5	3.3	16.1	1.6	19.9	18.0	0.6	100.0	2283
Decile 6	40.6	1.6	6.0	15.3	1.0	21.3	13.4	0.7	100.0	3515
Decile 7	42.1	1.1	6.8	20.8	1.1	15.9	12.2	0.0	100.0	2258
Decile 8	40.0	0.5	9.4	17.6	2.4	11.2	18.5	0.5	100.0	2629
Decile 9	42.6	0.0	10.1	15.5	1.1	16.1	12.6	2.1	100.0	2362
Decile 10	44.7	0.6	15.2	3.2	1.7	15.8	18.4	0.5	100.0	2310
Average	40.4	1.1	5.6	19.6	1.6	17.0	13.4	1.3	100.0	26220
Number of HH	10600	288	1480	5134	410	4462	3517	328	26220	26220
Summary by Decile Group										
Average	40.4	1.1	5.6	19.6	1.6	17.0	13.4	1.3	100.0	
1Q	37.7	2.0	0.7	27.1	1.7	18.8	9.5	2.4	100.0	
L3D	38.9	2.0	1.0	27.1	1.1	17.8	9.6	2.5	100.0	
5Q	43.6	0.3	12.6	9.3	1.4	15.9	15.5	1.3	100.0	

Table A16									
Primary Economic Activity Status of Urban Males aged 15-59 years									
(% by Economic Activity)									
Ranked by per capita HH expenditure deciles	Full-time paid employment	Part-time paid employment	Self employed	Farm/plant/ fish - own consumption	Farm/plant/ fish - sale	Domestic duties	Full-time student	Unable to work (disabled) & Others	Number of HH
Decile 1	9.0	23.5	2.5	10.8	5.9	13.4	7.5	19.1	2556
Decile 2	11.0	13.3	0.0	19.4	18.2	9.7	7.6	22.8	3051
Decile 3	9.5	17.5	2.6	12.8	0.0	8.6	6.9	20.1	2445
Decile 4	10.3	4.8	8.9	12.7	20.8	9.9	10.7	4.2	2810
Decile 5	8.6	4.2	5.1	7.1	8.9	10.2	11.7	4.2	2283
Decile 6	13.5	19.3	14.2	10.5	8.9	16.8	13.4	7.3	3515
Decile 7	9.0	8.4	10.3	9.1	5.9	8.1	7.9	0.0	2258
Decile 8	9.9	4.2	16.7	9.0	15.7	6.6	13.8	3.7	2629
Decile 9	9.5	0.0	16.1	7.1	6.3	8.5	8.4	14.9	2362
Decile 10	9.7	4.8	23.7	1.4	9.3	8.2	12.1	3.7	2310
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	26220
Number of HH	10600	288	1480	5134	410	4462	3517	328	26220
Summary by Decile Group									
1Q	20.0	36.7	2.5	30.2	24.2	23.2	15.1	41.8	
L3D	29.5	54.2	5.1	43.0	24.2	31.8	21.9	61.9	
5Q	19.2	4.8	39.8	8.5	15.7	16.7	20.5	18.6	

Table A17					
Urban Males 15 to 59: Educational Attainment					
% by achievement level					
	None/ Kindergarten	Primary (year 1-8)	Secondary (year 1-13)	Tertiary	#N/A
Decile 1	12.2	12.6	6.9	4.3	4.9
Decile 2	21.2	13.0	10.6	2.3	20.3
Decile 3	10.7	11.0	7.6	3.2	39.9
Decile 4	8.4	12.7	10.8	2.8	9.8
Decile 5	12.4	9.2	9.4	2.8	0.0
Decile 6	13.6	12.5	14.4	14.2	14.7
Decile 7	3.0	9.8	8.8	6.4	4.9
Decile 8	10.5	7.5	12.0	15.9	5.6
Decile 9	3.9	6.9	9.6	20.5	0.0
Decile 10	3.9	4.8	9.8	27.5	0.0
	100.0	100.0	100.0	100.0	100.0
Number of Males	1606	12997	8535	2833	249
1Q	33.4	25.6	17.5	6.6	25.2
L3D	44.2	36.6	25.1	9.8	65.0
5Q	7.8	11.7	19.5	48.1	0.0

Table A18							
Urban Males 15 to 59: Educational Attainment							
% by decile							
	None/ Kindergarten	Primary (year 1-8)	Secondary (year 1-13)	Tertiary	#N/A	Total	Number of Males by Decile
Decile 1	7.7	64.0	23.1	4.8	0.5	100.0	2556
Decile 2	11.2	55.3	29.7	2.2	1.7	100.0	3051
Decile 3	7.0	58.7	26.5	3.7	4.1	100.0	2445
Decile 4	4.8	58.6	32.9	2.8	0.9	100.0	2810
Decile 5	8.8	52.6	35.1	3.5	0.0	100.0	2283
Decile 6	6.2	46.3	35.0	11.5	1.0	100.0	3515
Decile 7	2.2	56.1	33.2	8.0	0.5	100.0	2258
Decile 8	6.4	37.0	38.9	17.2	0.5	100.0	2629
Decile 9	2.6	37.9	34.8	24.6	0.0	100.0	2362
Decile 10	2.7	27.2	36.4	33.8	0.0	100.0	2310
Average	6.1	49.6	32.6	10.8	0.9	100.0	26220
Summary by Decile							
Average	6.1	49.6	32.6	10.8	0.9	100.0	
1Q	9.4	59.6	26.4	3.5	1.1	100.0	
L3D	8.6	59.3	26.4	3.5	2.1	100.0	
5Q	2.7	32.5	35.6	29.2	0.0	100.0	

<b>Table A19</b>					
<b>Rural Males 15 to 59: Educational Attainment</b>					
% by achievement level					
	None/ Kindergarten	Primary (year 1-8)	Secondary (year -13)	Tertiary	#N/A
Decile 1	23.0	16.6	10.5	3.6	0.0
Decile 2	9.9	14.0	10.0	5.1	0.0
Decile 3	19.6	13.5	12.6	9.5	100.0
Decile 4	13.1	10.2	10.4	6.7	0.0
Decile 5	5.4	12.5	13.1	9.5	0.0
Decile 6	10.2	8.3	11.1	7.0	0.0
Decile 7	7.8	8.5	9.6	16.7	0.0
Decile 8	6.6	8.4	8.4	13.0	0.0
Decile 9	3.3	5.3	9.3	11.1	0.0
Decile 10	1.1	2.8	4.8	17.6	0.0
Total	100.0	100.0	100.0	100.0	100.0
Number of Males	2251	14028	5023	1395	13
1Q	32.9	30.6	20.6	8.8	0.0
L3D	52.4	44.1	33.2	18.3	100.0
5Q	4.4	8.1	14.1	28.7	0.0

<b>Table A20</b>							
<b>Rural Males 15 to 59: Educational Attainment</b>							
% by decile							
	None/ Kindergarten	Primary (year 1-8)	Secondary (year -13)	Tertiary	#N/A		Number of Males by Decile
Decile 1	15.1	68.0	15.4	1.5	0.0	100.0	3428
Decile 2	8.1	71.0	18.3	2.6	0.0	100.0	2759
Decile 3	14.2	60.8	20.4	4.3	0.4	100.0	3108
Decile 4	12.6	61.1	22.3	4.0	0.0	100.0	2346
Decile 5	4.6	65.7	24.8	5.0	0.0	100.0	2661
Decile 6	11.1	56.9	27.2	4.8	0.0	100.0	2058
Decile 7	8.5	57.2	23.1	11.2	0.0	100.0	2082
Decile 8	7.7	60.9	22.0	9.4	0.0	100.0	1928
Decile 9	5.1	51.5	32.5	10.8	0.0	100.0	1436
Decile 10	2.8	43.2	26.8	27.2	0.0	100.0	905
Average	9.9	61.8	22.1	6.1	0.1	100.0	22710
Number of Males	2251	14028	5023	1395	13	22710	
Average	9.9	61.8	22.1	6.1	0.1	100.0	
1Q	11.6	69.5	16.9	2.0	0.0	100.0	
L3D	12.4	66.6	18.0	2.8	0.1	100.0	
5Q	4.0	47.3	29.7	19.0	0.0	100.0	

<b>Table A21</b>					
<b>Urban Females 15 to 59: Educational Attainment</b>					
% by achievement level					
	None/ Kindergarten	Primary (year 1-8)	Secondary (year -13)	Tertiary	#N/A
Decile 1	12.5	11.0	8.1	2.2	0.0
Decile 2	16.4	14.7	11.0	3.3	0.0
Decile 3	4.9	12.3	6.1	2.5	18.3
Decile 4	13.8	12.0	10.4	4.8	8.5
Decile 5	15.2	10.8	8.5	6.1	0.0
Decile 6	12.9	11.4	10.3	15.2	26.8
Decile 7	7.4	8.3	11.7	7.3	0.0
Decile 8	6.5	7.6	13.7	12.9	9.7
Decile 9	7.9	6.7	12.1	18.1	9.7
Decile 10	2.5	5.2	8.1	27.7	26.8
Total	100.0	100.0	100.0	100.0	100.0
Number of females	986	12413	8452	3203	142
1Q	28.9	25.7	19.1	5.5	0.0
L3D	33.9	38.0	25.2	8.0	18.3
5Q	10.4	11.9	20.2	45.8	36.6

Table A22							
Urban Females 15 to 59: Educational Attainment							
% by decile							
	None/ Kindergarten	Primary (year 1-8)	Secondary (year -13)	Tertiary	#N/A		Number of Females by Decile
Decile 1	5.5	60.8	30.6	3.1	0.0	100.0	2245
Decile 2	5.4	60.5	30.7	3.5	0.0	100.0	3020
Decile 3	2.2	69.3	23.7	3.6	1.2	100.0	2196
Decile 4	5.1	55.8	32.9	5.8	0.5	100.0	2667
Decile 5	6.2	55.7	30.0	8.1	0.0	100.0	2403
Decile 6	4.3	48.2	29.6	16.6	1.3	100.0	2939
Decile 7	3.1	44.4	42.4	10.0	0.0	100.0	2324
Decile 8	2.5	36.6	44.6	15.9	0.5	100.0	2592
Decile 9	3.1	33.0	40.4	22.9	0.5	100.0	2528
Decile 10	1.1	28.2	30.1	38.9	1.7	100.0	2283
Average	3.9	49.3	33.5	12.7	0.6	100.0	25195
Average	3.9	49.3	33.5	12.7	0.6	100.0	
1Q	5.4	60.6	30.7	3.3	0.0	100.0	
L3D	4.4	63.5	28.3	3.4	0.4	100.0	
5Q	2.1	30.6	35.3	30.9	1.1	100.0	

Table A23					
Rural Females 15 to 59: Educational Attainment					
% by achievement level					
	None/ Kindergarten	Primary (year 1-8)	Secondary (year -13)	Tertiary	#N/A
Decile 1	25.4	17.4	9.8	3.7	0.0
Decile 2	8.7	15.5	10.7	7.4	0.0
Decile 3	15.0	13.1	11.1	2.8	0.0
Decile 4	7.6	12.5	12.8	7.7	0.0
Decile 5	12.9	12.4	9.2	10.7	0.0
Decile 6	10.6	5.7	12.3	16.2	0.0
Decile 7	12.3	8.8	11.1	13.5	0.0
Decile 8	1.1	7.8	9.5	9.6	100.0
Decile 9	6.4	4.4	8.8	9.2	0.0
Decile 10	0.0	2.4	4.8	19.2	0.0
Total	100.0	100.0	100.0	100.0	100.0
Number of females	1129	13895	5377	1268	12
1Q	34.1	32.9	20.5	11.2	0.0
L3D	49.2	46.0	31.6	14.0	0.0
5Q	6.4	6.8	13.5	28.5	0.0

Table A24							
Rural Females 15 to 59: Educational Attainment							
% by decile							
	None/ Kindergarten	Primary (year 1-8)	Secondary (year -13)	Tertiary	#N/A	Total	Number of Females by Decile
Decile 1	8.8	73.7	16.1	1.4	0.0	100.0	3277
Decile 2	3.4	73.8	19.6	3.2	0.0	100.0	2918
Decile 3	6.5	69.3	22.8	1.4	0.0	100.0	2625
Decile 4	3.3	66.6	26.4	3.7	0.0	100.0	2613
Decile 5	5.8	69.1	19.7	5.4	0.0	100.0	2501
Decile 6	6.7	44.6	37.1	11.5	0.0	100.0	1776
Decile 7	6.6	57.5	27.9	8.0	0.0	100.0	2129
Decile 8	0.7	62.1	29.5	7.0	0.7	100.0	1735
Decile 9	5.7	48.1	37.1	9.2	0.0	100.0	1270
Decile 10	0.0	40.1	30.8	29.1	0.0	100.0	837
Average	5.2	64.1	24.8	5.8	0.1	100.0	21681
Average	5.2	64.1	24.8	5.8	0.1	100.0	
1Q	6.1	73.7	17.9	2.3	0.0	100.0	
L3D	6.2	72.3	19.5	2.0	0.0	100.0	
5Q	2.8	44.1	33.9	19.2	0.0	100.0	

Table A25							
Primary Source of Energy for Lighting and Appliances							
Households (% by source)							
Ranked by per capita HH expenditure deciles	electric mains	electric own generator	kerosene or spirit lamp	oil lamp	solar power	other	Number of HH
Decile 1	9.3	0.0	31.4	13.2	100.0	47.1	2501
Decile 2	10.3	0.0	2.0	13.8	0.0	0.0	2523
Decile 3	9.7	0.0	19.1	15.8	0.0	24.7	2506
Decile 4	10.0	0.0	12.9	0.0	0.0	0.0	2509
Decile 5	10.2	0.0	4.2	13.8	0.0	0.0	2515
Decile 6	9.9	49.9	12.7	0.0	0.0	0.0	2515
Decile 7	10.0	31.9	6.5	13.8	0.0	0.0	2515
Decile 8	10.2	0.0	2.4	0.0	0.0	28.2	2507
Decile 9	10.2	18.2	2.4	0.0	0.0	0.0	2516
Decile 10	10.1	0.0	6.3	29.6	0.0	0.0	2518
Average	100.0	100.0	100.0	100.0	100.0	100.0	
Number of HH	24319	76	577	88	14	49	25123

Table A26							
Primary Source of Energy for Lighting and Appliances							
Households (% by Decile)							
Ranked by per capita HH expenditure deciles	electric mains	electric own generator	kerosene or spirit lamp	oil lamp	solar power	other	Total
Decile 1	90.8	0.0	7.2	0.5	0.6	0.9	100
Decile 2	99.1	0.0	0.5	0.5	0.0	0.0	100
Decile 3	94.6	0.0	4.4	0.6	0.0	0.5	100
Decile 4	97.0	0.0	3.0	0.0	0.0	0.0	100
Decile 5	98.6	0.0	1.0	0.5	0.0	0.0	100
Decile 6	95.6	1.5	2.9	0.0	0.0	0.0	100
Decile 7	97.1	1.0	1.5	0.5	0.0	0.0	100
Decile 8	98.9	0.0	0.6	0.0	0.0	0.6	100
Decile 9	98.9	0.6	0.6	0.0	0.0	0.0	100
Decile 10	97.5	0.0	1.5	1.0	0.0	0.0	100
Total	96.8	0.3	2.3	0.4	0.1	0.2	100

Table A27									
Source of Energy for Cooking									
Households (% by source)									
Ranked by per capita HH expenditure deciles	electric plate without oven	electric plate with oven	gas burner with oven	gas burner without oven	kerosene burner	wood stove	open fire	other	Total
Decile 1	1.6	0.6	0.6	0.6	5.5	10.9	80.3	0.0	100.0
Decile 2	4.4	0.5	1.0	0.0	6.1	4.1	84.0	0.0	100.0
Decile 3	2.1	0.0	0.6	3.1	6.6	6.8	80.4	0.5	100.0
Decile 4	1.6	0.0	2.1	6.0	10.1	3.5	76.8	0.0	100.0
Decile 5	3.6	2.1	4.1	6.5	8.6	8.4	66.7	0.0	100.0
Decile 6	5.6	2.1	5.0	9.7	8.1	5.9	63.5	0.0	100.0
Decile 7	4.5	2.0	6.2	10.0	10.3	7.8	59.1	0.0	100.0
Decile 8	4.8	5.4	9.2	15.7	10.3	3.1	51.6	0.0	100.0
Decile 9	7.8	6.8	13.7	16.6	14.9	3.4	36.5	0.5	100.0
Decile 10	16.0	14.3	25.5	17.0	4.6	0.9	21.6	0.0	100.0
Average	5.2	3.4	6.8	8.5	8.5	5.5	62.0	0.1	100.0

<b>Table A28</b>									
<b>Source of Energy for Cooking</b>									
Households (% by source)									
Ranked by per capita HH expenditure deciles	electric plate without oven	electric plate with oven	gas burner with oven	gas burner without oven	kerosene burner	wood stove	open fire	other	Number of HH
Decile 1	3.1	1.6	0.8	0.6	6.4	19.8	12.9	0.0	2501
Decile 2	8.5	1.4	1.4	0.0	7.2	7.5	13.6	0.0	2523
Decile 3	4.0	0.0	0.8	3.7	7.7	12.4	12.9	48.8	2506
Decile 4	3.1	0.0	3.1	7.0	11.9	6.3	12.4	0.0	2509
Decile 5	7.0	6.3	6.0	7.6	10.1	15.3	10.8	0.0	2515
Decile 6	10.8	6.3	7.4	11.4	9.5	10.9	10.2	0.0	2515
Decile 7	8.7	6.1	9.1	11.7	12.2	14.3	9.5	0.0	2515
Decile 8	9.1	15.8	13.5	18.4	12.1	5.6	8.3	0.0	2507
Decile 9	14.9	20.1	20.2	19.5	17.5	6.2	5.9	51.2	2516
Decile 10	30.8	42.4	37.7	20.0	5.4	1.7	3.5	0.0	2518
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number of HH	1309	850	1705	2137	2135	1376	15587	24	25123

<b>Table A29</b>									
<b>Source of Water Supply</b>									
Households (% by decile)									
Ranked by per capita HH expenditure deciles	pipd to house/yard	pipd to neighborhood	pipd outside neighbourhood	well in yard	public well	bottled water	rainwater tank	tanker truck	Total
Decile 1	74.5	9.4	6.2	0.0	3.3	0.5	6	0.0	2501
Decile 2	81.1	4.0	3.7	0.0	3.3	1.0	7	0.0	2523
Decile 3	81.2	4.0	4.7	0.5	3.7	0.0	5	0.5	2506
Decile 4	84.1	3.4	2.4	0.0	3.7	0.0	6	0.0	2509
Decile 5	82.7	2.9	0.5	0.0	5.1	0.5	8	0.0	2515
Decile 6	87.0	3.3	1.9	0.6	2.9	0.0	4	0.5	2515
Decile 7	89.4	1.9	1.9	0.0	2.9	0.5	4	0.0	2515
Decile 8	87.9	2.8	1.9	0.0	1.9	1.5	4	0.0	2507
Decile 9	86.9	2.9	0.9	0.0	1.8	4.9	2	0.0	2516
Decile 10	80.9	1.6	0.5	0.0	1.9	11.6	3	0.0	2518
Average	83.6	3.6	2.5	0.1	3.0	2.1	5	0.1	25123

<b>Table A30</b>								
<b>Source of Water Supply</b>								
Households (% by source)								
Ranked by per capita HH expenditure deciles	pipd to house/yard	pipd to neighborhood	pipd outside neighbourhood	well in yard	public well	bottled water	rainwater tank	tanker truck
Decile 1	8.9	25.9	25.2	0.0	10.8	2.4	12	0.0
Decile 2	9.7	11.1	15.2	0.0	10.9	4.7	14	0.0
Decile 3	9.7	11.0	19.2	45.5	12.1	0.0	11	47.8
Decile 4	10.1	9.3	9.7	0.0	12.1	0.0	13	0.0
Decile 5	9.9	8.0	2.0	0.0	16.7	2.3	16	0.0
Decile 6	10.4	9.0	7.6	54.5	9.4	0.0	8	52.2
Decile 7	10.7	5.2	7.6	0.0	9.4	2.5	7	0.0
Decile 8	10.5	7.8	7.6	0.0	6.2	7.3	8	0.0
Decile 9	10.4	8.2	3.9	0.0	6.1	24.1	5	0.0
Decile 10	9.7	4.3	2.0	0.0	6.4	56.8	7	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100	100.0
Number of HH	20998	905	616	25	765	515	1275	24

Table A31							
Urban Access to Sanitation System: % of HH by Type							
Ranked by per capita HH expenditure deciles	own flush toilet	shared flush toilet	household pit	shared household pit	own pisikoa	shared pisikoa	none
Decile 1	4.8	11.2	21.8	19.5	23.5	0.0	0.0
Decile 2	7.3	19.2	19.1	19.5	16.9	0.0	0.0
Decile 3	7.6	6.5	6.4	19.5	13.5	27.5	100.0
Decile 4	8.8	10.9	6.4	0.0	10.1	0.0	0.0
Decile 5	8.5	11.2	7.3	0.0	11.2	24.2	0.0
Decile 6	11.8	4.4	12.7	19.5	6.7	48.3	0.0
Decile 7	10.8	8.6	7.3	0.0	10.1	0.0	0.0
Decile 8	11.5	9.4	0.0	0.0	3.4	0.0	0.0
Decile 9	13.4	7.1	0.0	0.0	4.7	0.0	0.0
Decile 10	15.2	11.5	19.1	22.2	0.0	0.0	0.0
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of HH	11363	589	191	63	1120	50	12
Summary by Decile Group							
1Q	12.2	30.4	40.9	38.9	40.4	0.0	0.0
L3D	19.8	36.9	47.3	58.4	53.9	27.5	100.0
5Q	28.6	18.6	19.1	22.2	4.7	0.0	0.0

Table A32								
Urban Access to Sanitation System: % of HH by Decile								
Ranked by per capita HH expenditure deciles	own flush toilet	shared flush toilet	household pit	shared household pit	own pisikoa	shared pisikoa	none	Number of HH
Decile 1	58.9	7.1	4.5	1.3	28.2	0.0	0.0	931
Decile 2	70.4	9.5	3.1	1.0	16.0	0.0	0.0	1186
Decile 3	78.3	3.5	1.1	1.1	13.7	1.3	1.1	1107
Decile 4	84.1	5.4	1.0	0.0	9.5	0.0	0.0	1194
Decile 5	81.7	5.6	1.2	0.0	10.5	1.0	0.0	1189
Decile 6	89.3	1.7	1.6	0.8	5.0	1.6	0.0	1505
Decile 7	87.4	3.6	1.0	0.0	8.0	0.0	0.0	1408
Decile 8	93.3	4.0	0.0	0.0	2.7	0.0	0.0	1405
Decile 9	94.2	2.6	0.0	0.0	3.2	0.0	0.0	1614
Decile 10	93.6	3.7	2.0	0.8	0.0	0.0	0.0	1848
Average	84.9	4.4	1.4	0.5	8.4	0.4	0.1	13388
Summary by Decile Group								
Average	84.9	4.4	1.4	0.5	8.4	0.4	0.1	13388
1Q	64.7	8.3	3.8	1.2	22.1	0.0	0.0	2117
L3D	69.2	6.7	2.9	1.1	19.3	1.3	1.1	3224
5Q	93.9	3.1	1.0	0.4	1.6	0.0	0.0	3463

Table A33					
Rural Access to Sanitation System: % of HH by Type					
Ranked by per capita HH expenditure deciles	own flush toilet	shared flush toilet	household pit	own pisikoa	shared pisikoa
Decile 1	9.3	25.0	47.2	21.8	42.0
Decile 2	10.3	16.8	13.1	16.2	0.0
Decile 3	10.7	20.7	18.3	14.3	28.4
Decile 4	9.8	20.7	13.3	16.6	0.0
Decile 5	12.4	3.9	0.0	10.6	0.0
Decile 6	9.3	4.3	0.0	7.8	14.8
Decile 7	11.3	0.0	8.0	2.7	0.0
Decile 8	10.9	0.0	0.0	5.4	14.8
Decile 9	9.1	4.3	0.0	3.4	0.0
Decile 10	7.0	4.3	0.0	1.3	0.0
Average	100.0	100.0	100.0	100.0	100.0
Number of HH	9064	296	460	1830	86
1Q	19.6	41.8	60.3	38.0	42.0
L3D	30.3	62.5	78.7	52.2	70.3
5Q	16.1	8.6	0.0	4.7	0.0

Table A34						
Rural Access to Sanitation System: % of HH by Decile						
Ranked by per capita HH expenditure deciles	own flush toilet	shared flush toilet	household pit	own pisikoa	shared pisikoa	Number of HH
Decile 1	53.7	4.7	13.9	25.4	2.3	1569
Decile 2	69.7	3.7	4.5	22.1	0.0	1337
Decile 3	69.1	4.4	6.0	18.7	1.7	1398
Decile 4	67.7	4.7	4.7	23.0	0.0	1315
Decile 5	84.5	0.9	0.0	14.6	0.0	1326
Decile 6	83.3	1.3	0.0	14.2	1.3	1010
Decile 7	92.3	0.0	3.3	4.4	0.0	1107
Decile 8	89.8	0.0	0.0	9.0	1.2	1101
Decile 9	91.7	1.4	0.0	6.9	0.0	902
Decile 10	94.6	1.9	0.0	3.5	0.0	669
Average	77.2	2.5	3.9	15.6	0.7	11736
Summary by Decile Group						
Average	77.2	2.5	3.9	15.6	0.7	11736
1Q	61.7	4.2	9.2	23.8	1.1	2907
L3D	64.2	4.3	8.1	22.1	1.3	4305
5Q	93.2	1.7	0.0	5.2	0.0	1571