1. Introduction

1.1 Background

In 2002 the Government of Niue (GON) through its Niue Statistics Office(NSO), Statistics Niue, in partnership with United Nations Development Programme (UNDP) and United Nations Educational, Scientific and Cultural Organisation (UNESCO) conducted the Household Income and Expenditure Survey(HIES) for Niue – The Niue Poverty Strategies Initiative 1998.

This exercise was conducted with the aim to realise the Copenhagen Declaration and the Programme of Action, which resulted from the World Summit for Social Development (WSSD), held in Copenhagen in March 1995, where the Government of Niue (GON), through its membership in the United Nations endorsed.

The declaration states:

> "*Formulating or strengthening, preferably by the year 1996, and implementing national poverty eradication plans to address the structural causes of poverty, encompassing action on the local, national, sub-regional and international levels. These plans should establish within national context, strategies and affordable time-bound goals and targets for the substantial reduction of overall poverty and the eradication of absolute poverty. In the context of national plans, particular attention should be given to health and education, assigning a higher priority to basic social services, generating household income, and promoting access to productive assets and economic opportunities.*"

In recognition of the gender dimensions of poverty and the special needs of women, who comprise the majority of the world's poor, Commitment 5(d) of the Copenhagen Declaration calls upon Governments to take "*measures to integrate a gender perspective in the design and implementation of social and economic policies [and] establish structures, policies, objectives, and measurable goals to ensure gender balance and equity in decision-making processes at all levels, broaden women's political, economic, social and cultural opportunities and independence, and support to empowerment of women, especially those in poverty stricken communities*"

Following the WSSD, Niue declared that it will undertake to engage in suitable follow up activities to the Declaration and Programme of Action with support from UNDP's Poverty Strategies Initiative (PSI).

1.2   Objectives

The Niue Poverty Strategies Initiatives 1998 through HIES has eight main objectives:

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

◊   To provide data on the valuation of household work (women, youth, unemployed, public servants);

◊   To provide data to analyse the activities of youth;

◊   To provide data to analyse the source, patterns and amount of household income;

◊   To provide data to analyse the patterns of household expenditure;

◊   To provide data to analyse and value subsistence production;

◊   To provide some data for components of the national accounts; and

◊   To provide a basis for the new weights and items included in the Consumer Price Index (CPI)

The opening objectives of HIES clearly stated the need to provide the appropriate information to better define and assess the concepts of poverty, hardship and vulnerability in Niue and to design appropriate strategies to address and reduce hardship and poverty; and to incorporate these strategies into Niue's Integrated Strategic Plans, consistent with the government's priorities. Therefore, this assessment will address this objective and also included a comprehensive quantitative analysis of available hardship/poverty indicators of the United Nations to provide the government with the basis for monitoring progress towards the achievement of the Millennium Development Goals (MDGs).

1.3   The Household Income and Expenditure Survey (HIES)

HIES in Niue was conducted as a sample survey as oppose to a census due to cost, time and staff restrictions The sample size of 20% (101) of the total households (508 - 2001 Census of Population and Households) was agreed to. The sample was selected using the Two Staged Sampling Technique – Sampling with Probability Proportional to Size and the Systematic Sampling Techniques. All households was ranked by village and by income and then run a

systematic skip through the list to achieve the desired sample size. This approach resulted in a representative sample covering all villages and income levels.

Although there are limitations associated with sample surveys, the NSO in every effort has tried to keep these to the minimum.

1.4   HIES Weights

For a sample survey to provide information for the whole population of interest the individual survey records are weighted to population estimates. The principle is that each household and individual in the sample represents other households and individuals in the population which were not selected in the sample.

The weights used for the survey were:

Male = 4.69   Female = 3.95   Household = 4.99

The calculations of the weights were based on the totals from the 2001 Census of Population and Households.

2.   Poverty and Measuring Poverty

2.1   What is poverty?

Poverty is hunger. Poverty is lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not being able to go to school and not knowing how to read. Poverty is not having a job, is fear for the future, living one day at a time. Poverty is losing a child to illness brought about by unclean water. Poverty is powerlessness, lack of representation and freedom. Poverty has many faces, changing from place to place and across time, and has been described in many ways. Most often, poverty is a situation people want to escape. So poverty is a call to action -- for the poor and the wealthy alike -- a call to change the world so that many more may have enough to eat, adequate shelter, access to education and health, protection from violence, and a voice in what happens in their communities. *(World Bank-Understanding Poverty)*

There is no generally or officially accepted definition of Poverty as it means different things to different people, across time and place, or as Baulch conceptualized it as "freedom from the necessity to perform activities that are regarded as subservient and (their) ability to choose self-fulfilling and rewarding life styles." *(Baulch 1996, a discussion of the definitions of poverty.p.3-Nilüfer 1998 p.6, UNDP WP5)*

Poverty can be viewed in either absolute or relative terms; it may be temporary e.g. as a result of the destruction of crops etc after a cyclone, or it can be long-term and chronic e.g. where it might be experienced by a family having no-one in employment or where family members suffer from sickness or disability.

> **Absolute poverty** is where an individual or family is unable to meet its basic needs for food, clothing, and shelter, health care or education;

> **Relative poverty** is experienced by those whose incomes are sufficient to meet basic needs but which are still well below the "average" or norm.

Some discussions of poverty centre around those in absolute poverty and destitution. This is just one of poverty's manifestations, but there are many other ways in which people can be poor or suffering hardship. People can still be reasonably well-fed and healthy, but still live in relative poverty where they suffer varying degrees of hardship. They might lack access to basic services, especially health, education and transport, freedom of choice, or socio-economic opportunity.

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. Often the conditions and circumstances giving rise to the poverty of opportunity are the causes of income poverty.

The general perceptions are that poverty does not mean hunger and destitution in the Pacific context[1]. Poverty is seen more in terms of hardship, lack of access to essential services or poor education. It can mean not having a job or any source of steady income from which to meet the costs of school uniforms and extra curricular activities in the school or other important family commitments.

For the purposes of this assessment of poverty and hardship in Niue the following broad conceptual definition of poverty has been used. *"**An Inadequate Level of Sustainable Human Development is manifested by a lack of access to basic services and opportunities to participate fully in the socio-economic life of the community"[2]** (ADB 2001)*

2.2   Measuring poverty

The 2002 Household Income and Expenditure Survey (HIES) provided reliable data for analysis of overall household income and expenditure patterns for Niue. However the sample is considered small for a detailed analysis of the incidence of poverty. The HIES survey involved a total of only 101 households or 20 percent of all households in Niue.

For the purposes of this analysis the data on household expenditure has been used to estimate the incidence of hardship or poverty being experienced by households in Niue. The household expenditure data has been used in preference to the reported income data as it is generally believed that in HIES surveys the expenditure data is more accurate than the income data.

In this analysis the incidence and characteristics of hardship and poverty was measured in four ways. Absolute poverty is measured in terms of purchasing power parity, cost of a minimally sufficient diet, and cost of basic needs. Relative hardship is measured by analyzing the characteristics of the least advantaged households based on a standardized per-capita household expenditure.

The Millennium Development Goals (MDGs) use the internationally accepted value of US$1 per capita per day in 1993 Purchasing Power Parity (PPP) terms to measure the level of absolute poverty. This

> ### Millennium Development Goals (MDGs)
>
> ### Goal 1: Eradicate extreme poverty and hunger
> *Target 1:*
> *Halve the proportion of people whose income is less than one dollar a day (from 1990–2015).*
>
> - *Indicators:*
>   *(1) Proportion of the population below $1 per day (PPP)*
>   *(2) Poverty gap ratio (incidence x depth)*
>   *(3) Share of poorest quintile in national consumption*

measure can be used to make direct international comparisons of the incidence of absolute poverty across international boundaries. A broader measure of US$2 per capita per day is

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[1] ADB (2001) Poverty: Is it an issue in the Pacific?
[2] This definition and much of this paper is based on the ADB discussion papers on "Hardship and Poverty Status" for Pacific countries.

sometimes also used to estimate the incidence of basic needs poverty across international boundaries.

National poverty lines measure the incidence of absolute poverty within a country. National poverty lines are calculated for Food Poverty (FPL) and Basic Needs Poverty (BNPL). The FPL gives an indication of the poorest of the poor in society and the BNPL measures the incidence of basic needs hardship. In this context therefore it is important to note that hardship and poverty in Niue is associated with any potential difficulties in meeting basic needs (BNPL) rather than absolute poverty (FPL).

In relative poverty analysis the characteristics of the lowest twenty percent of households in terms of household income and expenditure are described. The measure is arbitrary in that these households might not necessarily consider themselves to be poor, and some households with income or expenditure above this amount might consider themselves to be poor. The total household expenditure was standardized to provide a per-capital estimate adjusted for number and age of household members.

3.   Poverty Lines

The Purchasing Power Parity Poverty Line (PPP) was calculated using a basket of goods commonly consumed in Niue using 2002 prices derived from the consumer price index (refer appendix). For 2002 it is estimated that the PPP value of US$1 per day was equivalent to NZ$3.79 per day or NZ$26.50 per capita per week. At the higher figure of US$2.00 per day the equivalent figure was NZ$53.00 per capita per week.

Millennium Development Goals (MDGs)

Goal 1: Eradicate extreme poverty and hunger
Target 2:
Halve the proportion of people who suffer from hunger (from 1990-2015).

- *Indicators:*
(4) Prevalence of underweight children under five years of age;
(5) Proportion of people below the minimum level of dietary energy consumption.

On the basis of the HIES expenditure data the national Food Poverty Line (FPL) for 2002 has been estimated at $33.70 per capita per week. This is based on the "cost" of a low-cost minimally nutritious diet, with a daily energy value of approximately 2100 kcal per adult per day[3]. This diet comprises store goods plus the value of own-production consumed or gifts received (refer appendix). In addition, a sufficient diet based on the recommended daily intake (RDI) for a 30-year-old male adult (3000 Kcal) was costed at $42.50 per week.

Non-food basic needs expenditure was estimated from the expenditure on household operations, fuel and energy, transport, and clothing by households with the lowest 20% of expenditure. This non-food basic needs expenditure represents 58% of weekly food expenditure and 37% of weekly total expenditure. Including the costs of food (basic diet), the basic needs poverty line (BNPL) was calculated at $55.00 per week. Including the costs of the sufficient diet and other non-food expenditure, the estimated cost of the basic (sufficient) needs was $86.00 per capita per week.

Table 1 SUMMARY OF THE NIUE POVERTY LINE CALCULATIONS

NZ$ 2002 prices Per Capita Per week	Poverty	Hardship
Purchasing Power Parity Poverty Line (PPPPL)	US$1/day $26.50	US$2/day $53.00
Food Poverty Line (FPL)	2100 Cal/day $33.70	3000 Cal/day $42.50
Basic Needs Poverty Line (BNPL)	Minimal BN $55.00	Sufficient BN $86.00
Relative Poverty Line (RPL)	50% of Median $103.30	Lowest Quintile $133.50

[3] The diet was provided by the Nutritionist, Niue Agriculture Department and based on 3 meals per day.

The upper limit of total household expenditure for the lowest quintile of households (QPL) was estimated at $133.50 per capita. The per capita figure was standardized by using the OECD method of adjustment by dividing total household expenditure by the number of adult equivalents. The adjustment allows for lower consumption of additional adults and children in the household as well as for economies of scale. Half of the equivalised median expenditure was estimated at $103.30 per capita per week.

4.   Incidence of Poverty

Not surprisingly there are no households in the 2002 HIES survey whose expenditure fell below the absolute poverty line of US$1/day in 2002 PPP terms. Even at the US$2/day level, all but one household[4] had expenditure greater than the equivalent amount of NZ$52.20 per week.

All households had total per capita expenditure above the food poverty line to meet both the cost of the minimal (2100 cal/day) and sufficient diets (3000 cal/day). Interestingly several households (11%) had per capita food expenditure less than the minimal FPL level.

At the basic needs level it is estimated that no households (except one) experienced difficulties in meeting their daily costs-of-living for both food and other essential expenditure. However an estimated 8 percent of households spent less than was considered sufficient to meet both essential and discretionary expenditures. The lesser need for non-food expenditure for basic services (such as education and health) and the greater access to own-produced food (37% of total food expenditure) played an important part in limiting financial hardship for Niue households.

While there is no evidence from the HIES survey that absolute poverty exists in Niue, the relative measures of hardship (RPL) suggest that there are differences in the characteristics of households whose total per-capita expenditure falls in the lowest quintile (20%) of all households. These households are considered to be in relative hardship, although only 14% of households fall below 50% of median per-capita expenditure (relative poverty).

Table 2 Summary of the Niue Poverty Estimates

	Poverty		Hardship	
Poverty Measure:	% Households	% Population	% Households	% Population
Purchasing Power Parity Poverty Line (PPPPL)	0%	0%	*	*
Food Poverty Line (FPL)	0%	0%	*	*
Basic Needs Poverty Line (BNPL)	*	*	8%	13%
Relative Poverty Line (RPL)	14%	15%	20%	24%

Note: * this estimate cannot be provided as it affects only one household in the sample.

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[4] One household in the sample representing five households in the population.

5.   Measuring Inequality

In 2002, the 10% of households with the lowest levels of expenditure incurred 2.4% of total household expenditure (refer Table 3). In contrast the top ten-percent of households incurred 26% of the total expenditure. Distributions by quintiles show that the bottom quintile (20% of households) incurred less than 7% of expenditure, whereas the top quintile of households incurred 40% of expenditure.

Table 3 Distribution of Household and Per-Capita Expenditure

	Total Household Expenditure ('000)	% of Household Expenditure	Per-Capita Expenditure
Bottom Decile (10%)	393	2.4	4,280
Bottom Quintile (20%)	1,057	6.6	5,740
Lowest 50%	4,355	27.1	7,550
Top Quintile (20%)	6,413	39.9	16,670
Top Decile(10%)	4,186	26.0	20,261

These figures suggest that there is a degree of inequality between the highest and lowest spending households. This conclusion is supported by the data of the 2002 HIES which gives a Gini coefficient[5] of 0.34 as measured by total household expenditure (cash plus value of own production). The associated Lorenz curve of expenditure distribution is shown in below.

Figure 1

Lorenz Curve

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[5] Gini coefficient is a measure of inequality where 0 = perfect equality and 1 = absolute inequality

6. Characteristics of Lower Spending Households

This section focuses on the characteristics of the households that fall in the lowest quintile of total annual household expenditure. While total expenditure of households in the lowest quintile is not an indicator of poverty or hardship, it does provide for the analysis of different levels of household expenditure.

The amount of household expenditure has been standardized to adjust for different household sizes and composition using the OECD recommended formula[6]. It should be noted that due to a small number of households in the sample (N=101) this analysis is subject to a high level of standard error, and therefore noted differences may not be significant.

Table 4   Distribution of Annual Standardised Total
Household Expenditure and Income

	Household Expenditure	Household Income
1 Quintile	$6,950	$6,500
2 Quintile	$9,400	$8,000
Median	$10,750	$10,100
3 Quintile	$12,100	$11,900
4 Quintile	$16,500	$17,350

Table 4 shows the level of annual household expenditure and income per adult equivalent for each quintile. Twenty percent of households had an estimated per capita standardized expenditure of less than $6,950 and a per capita standardized income of less than $6,500. The following analysis uses the estimated total annual expenditure of households rather than income as the metric for determining the lowest quintile.

The following section analyses the characteristics of households and persons living in those households in the lowest expenditure quintile. For comparison, the characteristics of households in the upper quintiles and total households are also presented and differences noted.

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[6] The formula adjusts household expenditure for the number of adults and children in the household by the formula $1+0.7(Na-1)+0.5Nc$ where a=adults and c=children.

6.1 Gender

Gender is an important variable in the analysis of household expenditure, as in many studies there are differences in the level of expenditure of households headed by women compared to male householders. The table below (Table 5) shows that three-quarters of all households in Niue were headed by males. However, a greater proportion of households in the lowest quintile (45%) were headed by females as opposed to households with higher expenditure (19%). Almost 38 percent of female householders headed households in the lowest quintile.

Table 5   Number of Households by Level of Expenditure and Gender of Householder

Gender of Householder	Higher Quintiles	%	Lowest Quintile	%	Total	%
Males	329	81	55	55	384	76
Females	75	19	45	45	120	24
Total	404	100	100	100	504	100

An estimated 415 people (24 percent of the population) live in the lowest spending households. The graph below (figure 2) shows that the proportion of females living in lower spending households (57%) is greater when compared to females who are in higher spending households (48%). Three-quarters of these females are living in households where the woman is the head of the household.


Figure 2   Number of Males and Females by Level of Household Expenditure
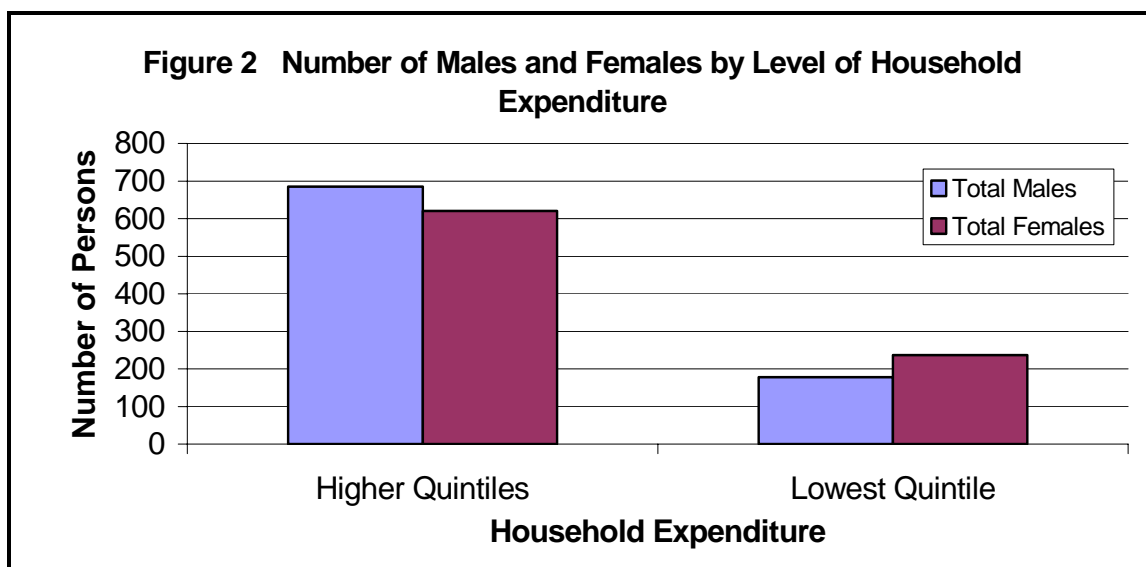
6.2 Age

The age of the householder provides an indicator of the stage of life-cycle of families in Niue. Poverty studies in other countries have shown that very young families and elderly are more likely to experience relative hardship than families headed by middle age householders[7]. Table 6 shows that the proportion of Niuean households in the lowest quintile does not widely differ from the age distribution of households in the higher quintiles.

**Table 6   Number of Households by Level of Expenditure and Age of Householder**

Age Groups	Higher Quintiles	%	Lowest Quintile	%	Total	%
Under 40	95	23	20	20	115	23
40 - 59	180	44	50	50	230	46
60+	130	32	30	30	160	32
Grand Total	**404**	**100**	**100**	**100**	**504**	**100**

An estimated 260 adults (22 percent of adult population) and 150 children (29 percent of all 0-14 year olds) live in households in the lowest quintile of household expenditure. A higher proportion of children live in lower spending households (37%) compared to children in higher spending households (28%). Most of these children (82%) were living in households where the householder was aged less than 60 years.

Figure 3   Number of Adults and Children by Level of Household Expenditure

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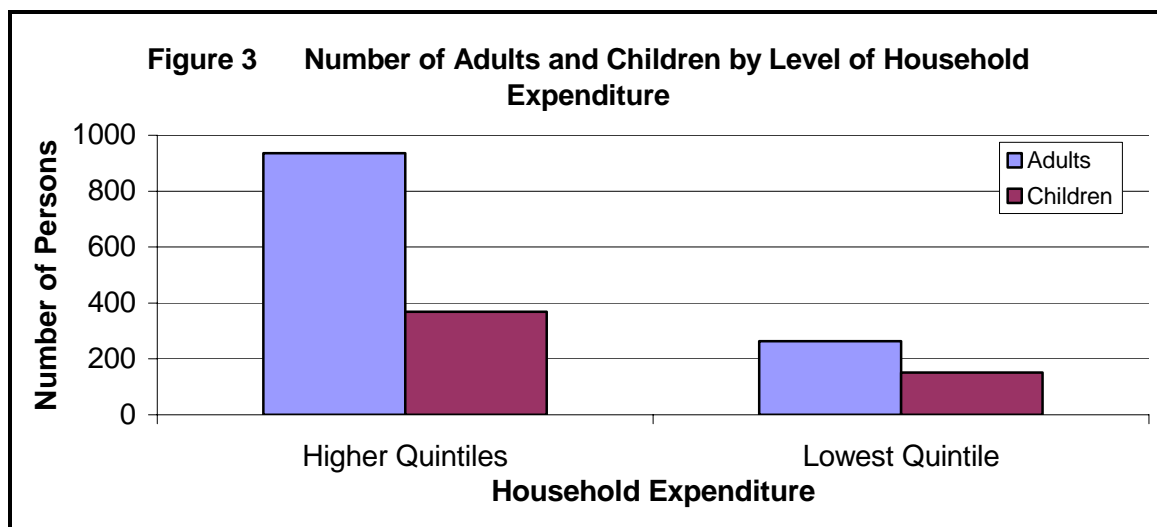
[7] Centre for Social Research & Evaluation, New Zealand Living Standards 2000.
 Ministry of Social Development, Wellington, 2002

6.3 Location
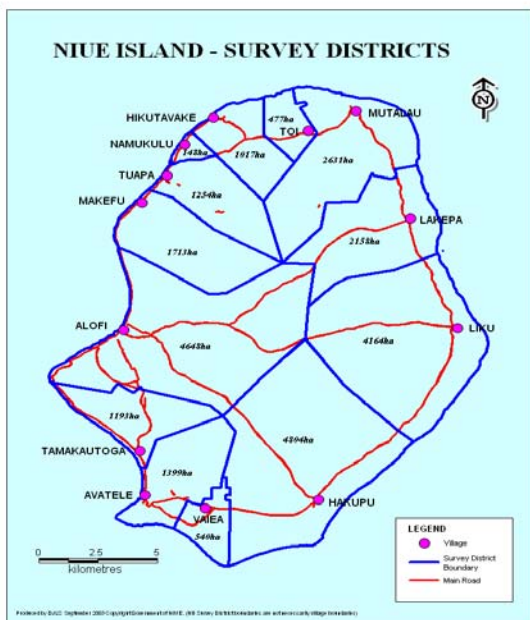
In Niue there is no clear distinction between urban and rural areas as there are in other Pacific countries. For the purposes of this analysis households located in Alofi are considered urban and households located in other areas are considered rural[8].

As shown in Table 7 more than one third of households (35%) are located in Alofi. However there is a greater proportion of lower spending households in the urban area (45%). Around 26 percent of urban households fall into the lowest expenditure quintile.

Table 7   Number of Households by Level of Household Expenditure in the Rural and Urban Locations

Household Location	Higher Quintiles	%	Lowest Quintile	%	Total	%
Rural	274	68	55	55	329	65
Urban	130	32	45	45	175	35
Grand Total	**404**	**100**	**100**	**100**	**504**	**100**

An estimated 600 persons live in Alofi (35% of total population) compared to 1100 living in other areas. The proportion of persons living in lower spending households in the urban area (49%) is higher compared to those in higher spending households (30%).

Figure 4   Location of Persons by Level of Household Expenditure

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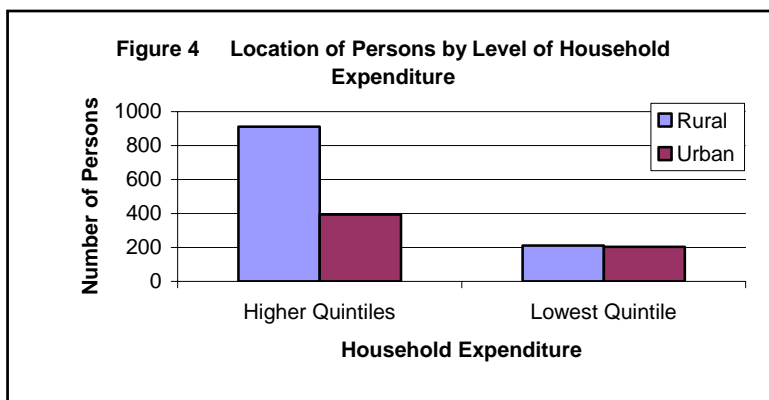
[8] These results should be used with caution as the HIES survey design did not take into account differences between "urban" and "rural" areas.

6.4 Children

In other poverty studies, the number of children in households has been associated with relative hardship[9]. In Niue, more than half of all households (54%) have children under the age of 15. As shown in table 8, lower spending households had proportionately more children (80%) than higher spending households, whereas half of the higher spending households (49%) have no dependent children.

Table 8   Number of Households by Level of Expenditure and Number of Children

Households with Children <15years	Higher Quintiles	%	Lowest Quintile	%	Total	%
No child	200	49	20	20	220	44
Single child	80	20	30	30	110	22
Two children	60	15	20	20	80	16
Three or more children	65	16	30	30	95	19
Total	**404**	**100**	**100**	**100**	**504**	**100**

The numbers of children living in households with different numbers of dependent children is shown in figure 5. The greatest number of children live in three child households, a third (36%) of whom live in lower spending households.

Figure 5   Number of Children in Households by Level of Household Expenditure

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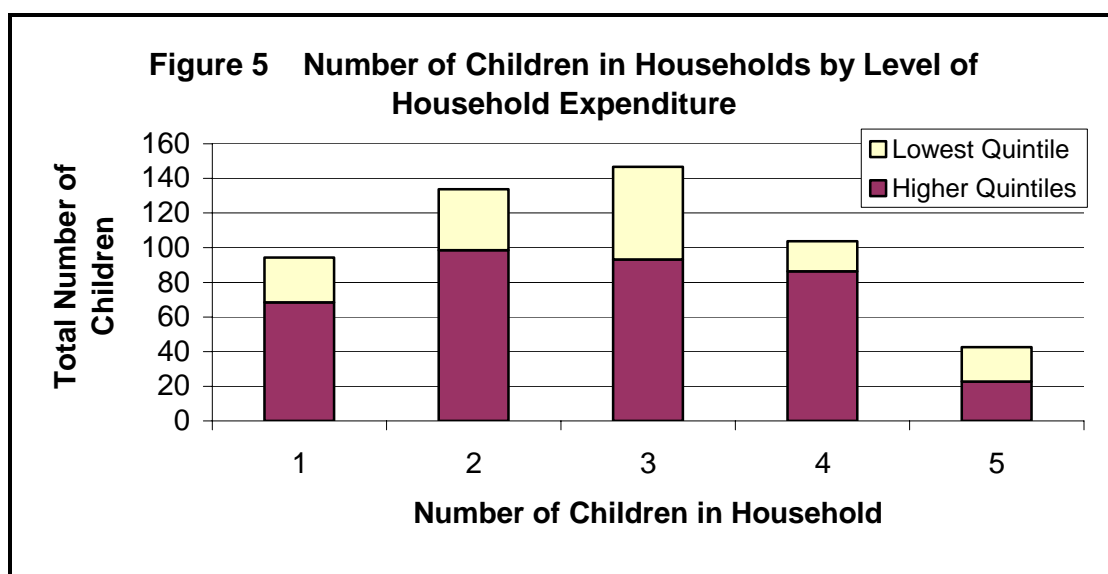
[9] Centre for Social Research & Evaluation, New Zealand Living Standards 2000.
 Ministry of Social Development, Wellington, 2002

6.5 Employment

The level of household income and expenditure is closely related to the number of employed persons in the household. Table 9 presents the number of households by whether there is at least one employed person (i.e. wages/salary and self-employed workers) in the household. Not surprisingly there is a greater proportion of lower spending households with no workers (30%) compared to higher spending households (17%).

Table 9 Number of Households by Level of Household Income and Employment Status

Employment	Higher Quintiles	%	Lowest Quintile	%	Total	%
No Worker	70	17	30	30	100	20
At least 1 Worker	334	83	70	70	404	80
Total	404	100	100	100	504	100

Around 62 percent of persons aged 15 years and over were reported as employed in Niue during the survey. This represents a total of 740 employed persons in 404 households. As shown in figure 6, there are relatively few persons living in lower spending households with workers compared to higher spending households.

Figure 6   Number of Persons in Households by Number of Workers

6.6 Income

The amount of income received or earned by a household is closely related to the level of total expenditure. On average higher spending households have twice the income and spend twice as much as lower spending households. Table 10 shows the distribution of households receiving income from the most common sources.

Table 10   Number of Households by Source of Household Income

Income Type	Higher Quintiles	%	Lowest Quintile	%	Total	%
Subsistence	74	18	19	19	93	18
Welfare Benefits	69	17	16	16	85	17
Wages	67	17	14	14	81	16
Other income	56	14	14	14	70	14
Goods Gifts	60	15	12	12	72	14
Loan	39	10	9	9	48	10
Cash Gifts	48	12	7	7	55	11

The proportion of households with income received from various sources does not vary much between higher quintile and lowest quintile households, except for cash gifts that is received by 12% of higher quintile households compared to 7% for lowest quintile households. Overall the proportion of income received from the various sources does not differ substantially between lower and higher spending households, except for income received from other sources.

Figure 7   Distribution of Income of Households in Lowest Quintile

Other
9%

Loans
7%

Welfare
10%

Subsistence
12%

Wages
62%
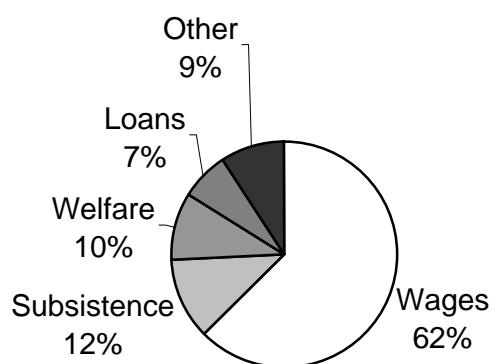
6.7 Expenditure

Overall lower spending households spent only half as much as higher spending households. Lower spending households spend on average a greater proportion of their total expenditure on food and less on housing. While all households spend cash on food and household operations, proportionally fewer households in the lowest quintile spend cash on housing, travel, cash gifts, tobacco and alcohol and church donations.

Table 11 **Number of Households by Type of Household Expenditure**

Expenditure Type	Higher Quintiles	%	Lowest Quintiles	%	Total	%
Transport	389	96	90	90	479	95
Subsistence Production	369	91	95	95	464	92
Clothing	364	90	85	85	449	89
Church Donations	334	83	75	75	409	81
Remittances	324	80	60	60	384	76
Goods Gifts	299	74	60	60	359	71
Housing	299	74	50	50	349	69
Travel	240	59	35	35	274	54
Cash Gifts	240	59	35	35	274	54
Tobacco and Alcohol	240	59	30	30	269	53
Mortgage Repayment	120	30	15	15	135	27
Education	95	23	30	30	125	25
Vehicle Loans	65	16	10	10	75	15
Medical	65	16	5	5	70	14

Figure 8   Distribution of Expenditure of Households in Lowest Quintile

Other 23%
Food 29%
Travel 9%
Household 11%
Subsistence 13%
Transport 15%