# HIES 2006 Poverty Analysis for MCA (Vanuatu)

## 1. Introduction

#### Background to this analysis

The overall objective of the MCC compact in Vanuatu is to reduce poverty and increase incomes in rural areas by stimulating economic activity in the tourism and agricultural sectors through the improvement of transport infrastructure, which is key to economic growth and poverty reduction. Benefits of the tourism and agricultural sectors include increased roadside enterprise development, traffic counts, household income, household agriculture production and economic activity. Other more complex benefits to measure include improved access to social services such as health care, education, vocational and capacity training activities.

The Monitoring and Evaluation Plan of the Vanuatu Transport Infrastructure Development Program details the mechanisms for quarterly and annual reporting on results to track progress and contribute information towards potential needed Program Adjustments for the MCC compact agreement in Vanuatu.

MCC Funding and additional funding from New Zealand Aid (“NZAID”) was used to rehabilitate or construct priority infrastructure, including:

1. Efate - Ring Road. Upgrade 92.5 km of the Ring Road on Efate, the most populous of Vanuatu’s islands, to a two-lane bitumen seal standard, with improved drainage systems; and
2. Santo - East Coast Road. Upgrade the 57.2 km road from Luganville to Port Olry on the island of Santo to a two-lane, bitumen seal standard, including associated drainage structures.

The economic impact of the compact was estimated by forecasting the probable economic value-added benefits of each project relative to the costs, as encapsulated in the Economic Rate of Return (“ERR”). Expected benefits for each project were identified and quantified by estimating the induced value added impact of (i) reduced transport costs; and (ii) improved reliability of access on economic activity in the tourism and agriculture sectors. For example baselines for key benefits in household income, including basic household agriculture production and economic activity were established.

The Monitoring and Evaluation Plan of the Vanuatu Transport Infrastructure Development Program states the three indicators to be used to measure the program goal; of which two are directly relevant to this analysis:

1. the change in [annual] cash income, used to measure the extent of income earned through participation in the formal economy, whilst taking note of changes within the traditional economy practices within beneficiary populations.
   * 1. Baseline (2006): Efate: $US 1,291; Santo: $US 2,122
     2. Target (2010): Efate: $US 1,617; Santo: $US 2,711
2. change in poverty, as indicated by an improved standard of living above the most basic needs poverty line.
   * 1. Baseline (2006): Efate: 37.7%; Santo: 14.6%
     2. Target (2010): Efate: 31.2%; Santo : 7.3%

Cash income and poverty indicators and targets were developed following the Household Income and Expenditure Survey (HIES) of 2006, as baseline data, and the accompanying poverty analysis that was conducted after the survey. Using the HIES 2006, Vanuatu developed more reliable measures of cash income, and also established a national poverty line, defined as the “Basic Needs Poverty Line”. Consequently, baseline poverty and income measures that had not been previously available were established, which will provide a much-improved measure of high-level Program results (presented as the ‘baseline’ information above). The 2006 HIES will serve as the primary baseline dataset and the 2010 HIES survey results will provide close-out data for comparison of the two groups (presented as the ‘target’ information above).

After the first HIES results of 2006 became available a data quality audit was conducted. As part of the recommendations for this, both MCA-V and MCC strongly felt that there needed to be more in-depth analysis done into developing Vanuatu’s poverty line to replicate the estimation methodology for poverty in Efate and Santo, as the current poverty analysis “only provided rates for Port Vila, Luganville and Rural (covering whole of Vanuatu), therefore, for the purposes of the project, it was proving quite difficult to measure poverty for the two areas of interest. The final draft is scheduled to be submitted to MCA-V by the consultant by September 2010 and when this report is approved, MCA-V hopes that the information will be useful, not just for our own purposes, but for any evaluation and future program development activities in Vanuatu.”[[1]](#footnote-1)

The purpose of this paper is to summarise the methodology used to derive the estimates of the incidence of poverty from the HIES 2006, and present an analysis of the incidence of poverty and per capita consumption in the program sites of rural Efate and the East Coast of Santo. Poverty estimates included are refined to be specific to the program site areas so the incidence of poverty reported differs to that contained in the M&E Plan.

#### Measuring poverty

*Poverty is a multidimensional concept*. The concept of poverty is applied at the individual (or household, regional (eg province) and national levels. From any geographic perspective, poverty is a multidimensional concept. At the national and province level poverty is linked to a number of factors such as the capacity of the economy, and donor partners, to provide the government administrations with sufficient resources to develop infrastructures, organise public services and implement development programmes. In addition social factors (education and skill levels, health status, vulnerable groups etc) are also key determinants of the capacity of the economy to provide adequate resources to government.

Measuring poverty, as with all measurement of social issues, necessarily requires simplification. Many of the dimensions of poverty outlines above are difficult, or impossible, to quantify. Even for those features that seem possible to measure, summarising the various dimensions in a single index is highly challenging. In order to provide a measure of poverty it is necessary to make choices, leading to a simplification of the concept of poverty.

However measurement of poverty is necessary in order to provide essential information for all programmes that aim to reduce poverty. For example the overall objective of the MCC compact in Vanuatu is to reduce poverty and increase incomes in rural areas by stimulating economic activity in the tourism and agricultural sectors through the improvement of transport infrastructure, which is key to economic growth and poverty reduction. Benefits of the tourism and agricultural sectors include increased roadside enterprise development, traffic counts, household income, household agriculture production and economic activity. Other more complex benefits to measure include improved access to social services such as health care, education, vocational and capacity training activities.

Therefore concepts must be simplified. Two aspects of poverty are more easily quantified than others and are used as the basis for poverty assessment: income and consumption (as measured by household expenditure). In Vanuatu consumption values have been selected as the basis for attempts to quantify poverty. The main reason for selecting consumption rather than income as a basis for a poverty index is that discrepancies are often observed between declared income and expenditure, with the declared income being significantly lower than the declared consumption. Another reason is that this is the standard used in the Pacific region for the analysis of poverty by the Secretariat of the Pacific Community (SPC,), United Nations Development Program (UNDP) and the Asian Development Bank (ADB).

The consumption that separates the poor from the rest of the population is called the poverty line. The first step in calculating a consumption-based index is to assess a level of consumption below which an individual will be defined as poor: the so-called poverty line. Considerable research has shown that if consumption is divided into two categories, food consumption and non-food consumption, the poorer people are the higher the proportion of their overall consumption that is accounted for by food consumption. In determining consumption levels that can be used to separate the poor from the non-poor, food consumption is the most significant measure. **Thus a Food Poverty Line (FPL), a minimum level of food consumption, is first calculated. A non-food minimum allowance is then calculated and added to the food poverty line using the Engels ratio of food to non-food consumption in the lowest 30% of household consumption to produce the total poverty line which is called the Basic Needs Poverty Line (BNPL).**

Nutrition is itself a complex subject. Diet must fulfil a wide range of nutritional needs, such as protein, energy and many micronutrients. Again, measurement requires simplification. The choice made in Pacific regional standards is to simplify by focusing on energy intake, measured in terms of calories. The benchmark adopted is an average 2,100 calories minimum energy requirement per person per day. There are many possible ways to provide 2,100 calories per day. In the Pacific typical consumption patterns are identified for broad categories of population in a country using household food consumption (expenditure) per capita. The population group chosen to derive the model composition of food consumption is the lowest three percentiles for total consumption distribution. A reference food basket is constructed by taking the average values of the reported quantities consumed for each food item by this population group. The overall daily calorie intake is then either scaled up or down to achieve a reference food basked with a calorie content of 2,100 and the average price per unit is used to calculate the FPL.

To incorporate non-food expenditure into the construction of the BNPL a minimum allowance for non-food goods was derived, based on the typical non-food spending in lowest three percentiles for total consumption distribution. An alternative is to use the typical non-food spending of those who can just afford the reference food basket (± 10% households in food poverty) and are therefore just on the food poverty line; but the incidence of food poverty was too low and the non-food expenditure to variable in the two sites to use this method and the same reference group was used as to derive the FPL; that is, the non-food expenditure of the lowest 30% of households. Again this is in keeping with standard practice in the Pacific region.

Once a poverty line has been set, a number of summary statistics describing the incidence, depth and severity of poverty may be calculated when per capita household consumption is compared with the corresponding poverty line value. These include the headcount index (which measures the incidence of poverty), the poverty gap (which measures the depth of poverty) and the squared poverty gap (which measures the severity of poverty). When classified as poor are those whose level of consumption is below the poverty line.

Annex 2 contains the detailed calculations used to derive the Food Poverty Line for the two program sites.

## 2. Estimation of poverty lines and poverty incidence

The Food Poverty Line (FPL) was been developed using the food expenditure of the lowest three percentile expenditure households (total expenditure p.c.a.e percentiles) of three different areas:

1. East Coast Santo – the Enumeration Areas (EAs) with access to the East Coast road;
2. Rural Santo – Espiritu Santo excluding the Luganville urban area (and including the East Coast);
3. Rural Efate – the island of Efate including outer islands except Ifira and excluding the Port Vila urban area.

The FPLs were derived using the major food items purchased by the lowest three percentile expenditure households with unit prices assigned from the Vanuatu Rural FPL (food prices for the East Coast of Santo were derived using the average of Luganville and rural prices). Non-food expenditure was derived using the ratio of food to non-food expenditure in the lowest expenditure households. The FPL for East Coast Santo was Vt 3,132; Rural Santo Vt 2,773 and Rural Efate Vt 3,695 (Table 1). This means that the average adult in the East Coast area of Santo in 2006 needed to consume Vt 3,132 worth of food (both purchased and subsistence production) per month to meet the minimum dietary energy intake of 2,100 k/cal per day.

Table : Monthly adult equivalent per capita poverty lines (Vt), 2006

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **VUV per capita adult equivalent per month** | **Food Poverty Line** | **Non-food basic needs factor (% of food)** | **Estimated non-food expenditure** | **Basic Needs Poverty Line** |
| **A** | **B** | **C=A\*B** | **D=A+C** |
| **Vanuatu average** | 3,064 | 0.5 | 1,651 | 4,716 |
| **Rural** | 2,589 | 0.3 | 777 | 3,366 |
| **Luganville** | 3,594 | 0.7 | 2,516 | 6,110 |
| **Port Vila** | 5,034 | 1.2 | 6,041 | 11,075 |
| **Rural Santo** | 2,773 | 0.3 | 757 | 3,530 |
| **East Coast Santo** | 3,132 | 0.3 | 940 | 4,072 |
| **Rural Efate** | 3,695 | 0.4 | 1,589 | 5,284 |

It is interesting to note that there is little variation in the non-food basic needs factor (column B in Table 1) which ranged from 0.3 for Santo and 0.4 for Efate. This means that on average in the lowest three expenditure percentiles in households in Efate 70% of total spending was on food (including subsistence) and 30% on non-food items so the ratio is 30:70 or 0.3. Note that a separate ratio was not developed for the East Coast Santo and the Santo value was used.

Adding the basic needs expenditure to the FPL gives the monthly Basic Needs Poverty Line (BNPL): Vt 4,072 in East Coast Santo; Vt 3,530 in Rural Santo and Vt 5,284 in Rural Efate. Using these poverty lines gives the incidence of poverty in Table 2.

Table : Proportion of households and population with monthly p.c.a.e expenditure less than the food and basic needs poverty lines

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **VUV per capita adult equivalent per month** | **Households** | | **Population** | |
| **Food** | **Basic Needs** | **Food** | **Basic Needs** |
| **Vanuatu average** | 6.0 | 12.9 | 7.4 | 15.9 |
| **Rural** | 5.1 | 8.5 | 6.6 | 10.8 |
| **Luganville** | 2.2 | 9.2 | 2.2 | 10.9 |
| **Port Vila** | 4.7 | 27.2 | 5.4 | 32.8 |
| **Rural Santo** | 0.4 | 2.2 | 0.7 | 4.2 |
| **East Coast Santo** | 0.0 | 1.0 | 0.0 | 1.3 |
| **Rural Efate** | 12.4 | 17.1 | 16.6 | 22.6 |

*Source: VNSO HIES 2006*

These results indicate that households in Santo, including the East Coast, have a diet which provides for average energy needs, whether from cash or ‘own production and consumption’ and because their other essential spending is relatively small the overall incidence of poverty as measured by the BNPL. On the other hand, in Rural Efate the diet derived from the HIES had to be adjusted to meet daily average adult energy requirements, indicating some nutrition issues, which is reflected in the incidence of food poverty where 12% of households or 17% of the population of Rural Efate did not have sufficient p.c.a.e expenditure to meet the minimum food energy requirements. This increased to 17% of households and 23% of the population in Rural Efate which did not have sufficient average expenditure to meet requirements for food and other basic needs.

These results show that poverty, as measured by poverty lines, is most significant in the road catchment area of Rural Efate. These results indicate that households in Santo have adequate food, either purchased or grown etc, and that their other ‘basic needs’ are extremely modest resulting in a relatively low incidence of overall poverty as measured by the BNPL. This is a problem using survey data to estimate ‘basic needs’ costs as it reflects what households purchase and not a more prescriptive or ideal list of what household’s need. This would indicate that perhaps establishing other benchmarks for estimating poverty, including costs for basic items such as energy for cooking and lighting, access to piped water etc would give a more realistic measure of the incidence of poverty rather than using the HIES survey data. In situations like this it is important to examine household expenditure patterns and relative poverty in terms of percentiles and quintiles rather than using poverty lines. An alternative is to examine the incidence of poverty with different poverty lines, as follows.

Table : Proportion of households and pop with monthly adult equivalent per capita expenditure less than the adjusted food and basic needs poverty lines

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **VUV per capita adult equivalent per month** | **Households** | | **Population** | |
| **Food** | **Basic needs** | **Food** | **Basic needs** |
| **Rural Santo** |  |  |  |  |
| **Poverty Line +20%** | 1.7 | 3.4 | 3.4 | 6.2 |
| **Poverty Line +50%** | 3.4 | 8.8 | 6.2 | 14.2 |
| **Poverty Line +100%** | 10.7 | 21.3 | 16.5 | 28.7 |
| **Non Poor** | 89.3 | 78.7 | 83.5 | 71.3 |
| **East Coast Santo** |  |  |  |  |
| **Poverty Line +20%** | 0.0 | 3.2 | 0.0 | 4.1 |
| **Poverty Line +50%** | 3.2 | 9.0 | 4.1 | 11.9 |
| **Poverty Line +100%** | 10.7 | 22.4 | 13.6 | 27.3 |
| **Non Poor** | 89.3 | 77.6 | 86.4 | 72.7 |
| **Rural Efate** |  |  |  |  |
| **Poverty Line +20%** | 15.3 | 23.1 | 20.3 | 29.8 |
| **Poverty Line +50%** | 18.7 | 34.0 | 24.1 | 42.0 |
| **Poverty Line +100%** | 29.1 | 46.8 | 36.8 | 55.6 |
| **Non Poor** | 70.9 | 53.2 | 63.2 | 44.4 |

*Source: VNSO HIES 2006*

Table 3 shows that poverty in Rural Santo does not increase significantly with an increase in the FPL and BNPL of 20% with the incidence of poverty is above 10% of the population when the BNPL is increased by 50%. In contrast in Rural Efate basic needs poverty is above 30% for both population and households with a 20% increase in the BNPL.

Finally its possible to analyse the incidence of poverty according to absolute measures like the $US1.00 (PPP) measure. Table 4 shows that poverty in the two areas in Santo has a lower incidence than in Efate.

Table : Proportion of households with monthly adult equivalent per capita expenditure less than the 'PPP' poverty lines

|  |  |  |  |
| --- | --- | --- | --- |
| **Poverty lines (US$ PPP)** | **% households with p.c.a.e expenditure below poverty line** | | |
| **Rural Santo** | **East Coast Santo** | **Rural Efate** |
| **$1.08 per day** | 0.2 | 0.0 | 5.2 |
| **$1.25 per day** | 0.2 | 0.0 | 8.1 |
| **$2.00 per day** | 3.0 | 1.0 | 13.5 |
| **$3.00 per day** | 16.5 | 10.7 | 22.3 |
| **$4.00 per day** | 36.4 | 28.2 | 36.7 |
| PPP exchange rate (2006): 68.6 VUV per $1.00 PPP | | | |

*Source: VNSO HIES 2006, PPP exchange rates from* [*www.un.org*](http://www.un.org)*.*

The Poverty Gap Index (PGI) and the Squared Poverty Gap Index (SPGI) are used to show the depth and severity of poverty. The Poverty Gap Index (PGI) measures the depth of poverty; that is how far, on average, by which households/individuals fall below the basic needs poverty line (BNPL). This measure is the mean proportionate poverty gap in the population (where the non-poor have zero poverty gap). This is sometimes thought of as a means to measure the cost of eliminating poverty (relative to the poverty line), because it shows how much would have to be transferred to the poor to bring their incomes or expenditures up to the poverty line (as a proportion of the poverty line). The minimum cost of eliminating poverty using targeted transfers is simply the sum of all the poverty gaps in a population; every gap is filled up to the poverty line. However this interpretation is only reasonable if the transfers could be made perfectly efficiently, for instance with lump sum transfers, which is probably very difficult to achieve in practice as targeting usually involves leakages and administration costs so that it is not unusual for the cost of eliminating poverty to be a multiple of the poverty gap.

To measure the severity of poverty, that is the degree of inequality amongst the poor themselves, the SPGI is used. This is defined as the average of the “weighted sum” of the individual PG where the weights are the proportionate poverty gaps themselves (i.e. the square); in other words the PGs are “squared”. The act of squaring the PG gives greater weight to the PG of the poorest households since their PG will be larger: it shows the inequality in the distribution of consumption among poor people.

Table : Poverty Gap Index (PGI) and Poverty Gap Index Squared (PGIS)

|  |  |  |
| --- | --- | --- |
|  | **Poverty Gap Index** | **Poverty Gap Index Squared** |
| **Vanuatu average** | 5.6 | 3.0 |
| **Rural** | 3.8 | 2.0 |
| **Luganville** | 2.9 | 1.2 |
| **Port Vila** | 10.4 | 5.1 |
| **Rural Santo** | 0.001 | 0.000 |
| **East Coast Santo** | BNPL IP too low to derive | |
| **Rural Efate** | 0.020 | 0.012 |

*Source: VNSO HIES 2006*

The incidence of poverty was too low in East Coast Santo to derive the PGI and PGIS; and both values were very low in the other two areas indicating a relatively ‘flat’ incidence of poverty as measured by households with consumption beneath the BNPL.

## 3. Household Expenditure Patterns

In terms of expenditure per capita and per household, the highest overall average was recorded in Rural Efate with an average per capita of Vt 11,600 per month or Vt 55,800 per household per month (Table 6). This was mainly because of the much higher incomes in the upper quintile compared with Santo. Santo had higher per capita and per household income than Rural Efate for the lowest 30% of households as ranked by total expenditure per capita adult equivalent.

Table : Total monthly expenditure per capita and per household for MCA areas, 2006 HIES

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Expenditure Percentile | Rural Santo | | East Coast Santo | | Rural Efate | |
| Average expenditure per capita | Average expenditure per h'hold | Average expenditure per capita | Average expenditure per h'hold | Average expenditure per capita | Average expenditure per h'hold |
| percentile 1 | 3,400 | 23,700 | 3,900 | 20,800 | 1,600 | 10,100 |
| percentile 2 | 4,800 | 25,400 | 5,600 | 25,700 | 3,400 | 21,000 |
| percentile 3 | 5,900 | 32,500 | 6,900 | 26,700 | 5,500 | 31,000 |
| percentile 4 | 6,400 | 28,400 | 7,200 | 31,100 | 6,600 | 32,200 |
| percentile 5 | 7,400 | 33,200 | 8,900 | 36,900 | 7,700 | 41,000 |
| percentile 6 | 8,600 | 35,100 | 10,700 | 33,400 | 9,900 | 41,100 |
| percentile 7 | 9,800 | 37,700 | 11,300 | 40,200 | 12,800 | 56,400 |
| percentile 8 | 11,400 | 41,600 | 15,200 | 47,000 | 15,600 | 69,200 |
| percentile 9 | 15,500 | 50,700 | 18,400 | 51,400 | 22,000 | 94,000 |
| percentile 10 | 26,400 | 86,700 | 30,500 | 96,100 | 55,000 | 153,600 |
| Average (VT) | 8,900 | 39,900 | 11,000 | 41,700 | 11,600 | 55,800 |
| Average (US) | $82.41 | $369.44 | $101.85 | $386.11 | $107.41 | $516.67 |
| Average (US PPP) | $56.53 | $253.44 | $69.87 | $264.87 | $73.68 | $354.43 |

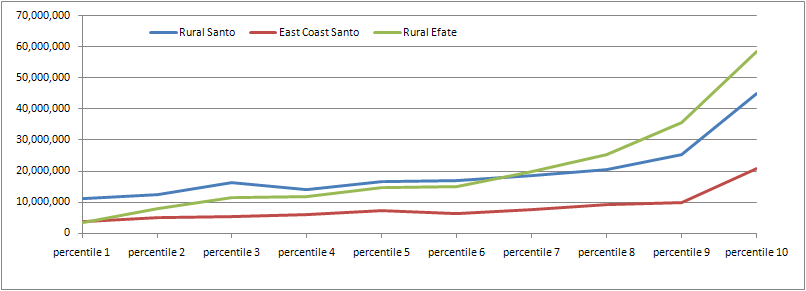
US dollar exchange rate is from the M&E Plan Version 2: 108 VUV/USD. PPP exchange rate (2006): 68.6 VUV per $1.00 PPP

*Source: VNSO HIES 2006.*

The median occurs in the 5th percentile and for Rural Santo this was approximately Vt 7,400 per person per month or Vt 33,200 per household per month; for the East Coast part of rural Santo it was slightly higher at Vt 8,900 per person or Vt 36,900 per household and in Rural Efate it was Vt 7,700 per capita and Vt 41,100 per household. Monthly averages for the three regions have been included in US dollars and US dollars using PPP exchange rates.

The 2006 HIES estimate for total income (as measured by total expenditure) in the Rural Efate area was approximately Vt 203 million a month, Vt 197 million a month in Rural Santo, of which 46% or Vt 81 million was within the Santo East Coast area (see Table 7 over).

Figure : Total monthly household expenditure, 2006 HIES



*Source: VNSO HIES 2006*

Table : Total monthly expenditure, estimated population and households for MCA areas, 2006 HIES

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Expenditure Percentile | Rural Santo | | | East Coast Santo | | | Rural Efate | | |
| Total Expenditure | Total Population | Total Households | Total Expenditure | Total Population | Total Households | Total Expenditure | Total Population | Total Households |
| percentile 1 | 11,051,400 | 3,280 | 470 | 3,684,000 | 940 | 180 | 3,389,600 | 2,190 | 340 |
| percentile 2 | 12,374,100 | 2,580 | 490 | 5,090,900 | 900 | 200 | 7,798,400 | 2,290 | 370 |
| percentile 3 | 16,195,500 | 2,750 | 500 | 5,265,800 | 770 | 200 | 11,344,500 | 2,050 | 370 |
| percentile 4 | 14,066,200 | 2,180 | 500 | 6,172,400 | 850 | 200 | 11,659,800 | 1,750 | 360 |
| percentile 5 | 16,506,700 | 2,220 | 500 | 7,261,700 | 820 | 200 | 14,768,200 | 1,910 | 360 |
| percentile 6 | 17,038,300 | 1,980 | 490 | 6,486,000 | 610 | 190 | 15,090,500 | 1,520 | 370 |
| percentile 7 | 18,700,500 | 1,900 | 500 | 7,557,800 | 670 | 190 | 20,011,200 | 1,570 | 350 |
| percentile 8 | 20,587,700 | 1,800 | 490 | 9,182,400 | 600 | 200 | 25,190,800 | 1,620 | 360 |
| percentile 9 | 25,423,700 | 1,640 | 500 | 9,994,000 | 540 | 190 | 35,551,300 | 1,620 | 380 |
| percentile 10 | 45,082,000 | 1,700 | 520 | 20,739,400 | 680 | 220 | 58,566,100 | 1,060 | 380 |
| Total | 197,026,100 | 22,040 | 4,940 | 81,434,500 | 7,390 | 1,950 | 203,370,500 | 17,580 | 3,640 |

*Source: VNSO HIES 2006*

Figure : Total monthly household expenditure per capita, 2006 HIES

 *Source: VNSO HIES 2006*

### Total food expenditure

In Rural Santo households spent a total of Vt 135 million a month on food, including purchased food and that produced and consumed in the home. Of this the East Coast Santo region contributed Vt 53 million. In Rural Efate total monthly food expenditure was Vt 118 million a month.

Table : Total monthly food expenditure for MCA areas, 2006 HIES

|  |  |  |  |
| --- | --- | --- | --- |
| Expenditure Percentile | Rural Santo | East Coast Santo | Rural Efate |
| percentile 1 | 8,771,700 | 3,272,000 | 2,278,900 |
| percentile 2 | 9,882,000 | 4,398,300 | 5,524,100 |
| percentile 3 | 12,468,400 | 4,267,500 | 7,954,400 |
| percentile 4 | 11,146,900 | 4,641,700 | 8,952,400 |
| percentile 5 | 12,358,300 | 5,124,100 | 10,169,000 |
| percentile 6 | 13,375,200 | 5,149,500 | 9,961,600 |
| percentile 7 | 14,304,100 | 5,032,800 | 13,956,500 |
| percentile 8 | 14,200,200 | 5,852,900 | 13,569,900 |
| percentile 9 | 16,623,000 | 6,723,400 | 19,380,800 |
| percentile 10 | 21,444,900 | 8,514,900 | 25,930,700 |
| Total | 134,574,900 | 52,977,100 | 117,678,200 |

*Source: VNSO HIES 2006.*

Monthly food expenditure on average represented 68% of total expenditure in Rural Santo, 64% in the East Coast of Santo and 57% of total monthly expenditure in Rural Efate. Food expenditure as a proportion of total expenditure was highest in the East Coast of Santo for the first four percentiles compared with the whole of rural Santo (Figure 3).

Figure : Food expenditure as a proportion of total expenditure for MCA areas, 2006 HIES



*Source: VNSO HIES 2006.*

### Purchased and home produced and consumed food expenditure

In rural Santo own account production and consumption of food is more important to households than purchased food and is in the order of 2.3 more than that of purchased food. In the East Coast part of Santo this ratio decreases to 1.4 while in Rural Efate own account production and consumption of food is 0.9 of the value of purchased food (Table 9). In Rural Efate it is interesting to note that in the lowest 30% of income households purchased food is higher than own account production and it is only in the 4th to 7th percentiles that own account production is higher than purchased food.

Table : Total monthly purchased and own account (OA) food expenditure for MCA areas, 2006 HIES

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Exp. %ile | Rural Santo | | East Coast Santo | | Rural Efate | |
| Total Purchased Food Expenditure | Total OA Food Expenditure | Total Purchased Food Expenditure | Total OA Food Expenditure | Total Purchased Food Expenditure | Total OA Food Expenditure |
| p 1 | 1,392,200 | 7,235,300 | 1,212,700 | 2,032,300 | 1,332,900 | 866,200 |
| p 2 | 2,733,300 | 7,013,800 | 1,543,600 | 2,847,700 | 3,465,300 | 2,023,100 |
| p 3 | 2,903,400 | 9,281,600 | 1,463,100 | 2,802,100 | 4,103,500 | 3,738,700 |
| p 4 | 2,855,000 | 8,161,100 | 1,771,400 | 2,870,300 | 3,209,100 | 5,668,900 |
| p 5 | 3,142,000 | 9,096,900 | 2,032,900 | 3,085,500 | 4,915,100 | 4,979,300 |
| p 6 | 3,693,600 | 9,185,900 | 1,809,600 | 3,275,900 | 4,592,600 | 5,019,500 |
| p 7 | 3,737,400 | 9,955,700 | 1,967,800 | 2,896,500 | 5,861,500 | 7,755,900 |
| p 8 | 4,014,600 | 9,436,900 | 2,040,700 | 3,643,600 | 7,138,800 | 5,756,500 |
| p 9 | 5,563,300 | 10,464,400 | 3,186,500 | 3,373,700 | 10,635,100 | 8,050,400 |
| p 10 | 9,693,600 | 10,556,100 | 4,716,400 | 3,358,800 | 12,560,900 | 10,564,200 |
| Total | 39,728,300 | 90,387,600 | 21,744,900 | 30,186,200 | 57,814,900 | 54,422,600 |

*Source: VNSO HIES 2006.*

In Rural Santo own account production and consumption of food accounts for an average of 69% of total food expenditure compared with Rural Efate where own account production and consumption of food accounts for an average of 48% of total food expenditure (Figure 4). There is a higher proportion of food purchased in the East Coast of Santo compared with all rural Santo because of the proximity to the urban area of Luganville in the south part of the East Coast.

Figure : Own account and purchased food expenditure as a proportion of total food expenditure for MCA areas, 2006 HIES



*Source: VNSO HIES 2006.*

### All expenditure other than food

All other expenditure includes gifts given and received and expenditure on housing, household operation and supplies, alcohol, kava and tobacco, clothing and footwear, transport, communications, health, education and other goods and services. In Rural Efate where the proportion of non-food expenditure was highest in the lowest 30% of households it was still no more than about one-third of total expenditure whereas in the East Coast of Santo the proportion for the lowest 30% of households ranged from 11% to 18%. This means that it is not practical to do a detailed analysis of the different types of non-food expenditure because of sampling and non-sampling error.

Table : Total monthly expenditure and proportion of non-food (NF) expenditure for MCA areas, 2006 HIES

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Exp. %ile | Rural Santo | | East Coast Santo | | Rural Efate | |
| Total expenditure | NF % total exp | Total expenditure | NF % total exp | Total expenditure | NF % total exp |
| p 1 | 11,051,400 | 20 | 3,684,000 | 13 | 3,389,600 | 33 |
| p 2 | 12,374,100 | 21 | 5,090,900 | 14 | 7,798,400 | 30 |
| p 3 | 16,195,500 | 22 | 5,265,800 | 18 | 11,344,500 | 32 |
| p 4 | 14,066,200 | 20 | 6,172,400 | 26 | 11,659,800 | 25 |
| p 5 | 16,506,700 | 25 | 7,261,700 | 30 | 14,768,200 | 35 |
| p 6 | 17,038,300 | 22 | 6,486,000 | 24 | 15,090,500 | 33 |
| p 7 | 18,700,500 | 24 | 7,557,800 | 34 | 20,011,200 | 31 |
| p 8 | 20,587,700 | 31 | 9,182,400 | 37 | 25,190,800 | 48 |
| p 9 | 25,423,700 | 36 | 9,994,000 | 34 | 35,551,300 | 45 |
| p 10 | 45,082,000 | 53 | 20,739,400 | 53 | 58,566,100 | 56 |
| Total | 197,026,100 | 32 | 81,434,500 | 36 | 203,370,500 | 43 |

*Source: VNSO HIES 2006.*

## 4. General household characteristics

A series of tables have been prepared to monitor change over the baseline of the 2006 HIES.

## Household size

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Expenditure Percentile | Rural Santo | | East Coast Santo | | Rural Efate | |
| Persons | P.C.A.E | Persons | P.C.A.E | Persons | P.C.A.E |
| percentile 1 | 5.4 | 6.7 | 4.1 | 5.3 | 5.3 | 6.5 |
| percentile 2 | 4.1 | 5.2 | 3.7 | 4.6 | 4.9 | 6.2 |
| percentile 3 | 4.3 | 5.3 | 3.3 | 3.9 | 4.8 | 5.6 |
| percentile 4 | 3.6 | 4.6 | 3.5 | 4.3 | 4.0 | 4.8 |
| percentile 5 | 3.5 | 4.3 | 3.5 | 4.2 | 4.2 | 5.3 |
| percentile 6 | 3.1 | 3.8 | 2.7 | 3.1 | 3.3 | 4.1 |
| percentile 7 | 3.1 | 3.9 | 2.8 | 3.6 | 3.6 | 4.4 |
| percentile 8 | 3.0 | 3.5 | 2.7 | 3.1 | 3.6 | 4.4 |
| percentile 9 | 2.6 | 3.1 | 2.4 | 2.8 | 3.5 | 4.3 |
| percentile 10 | 3.0 | 3.5 | 2.6 | 3.2 | 2.4 | 2.8 |
| Total | 3.6 | 4.5 | 3.1 | 3.8 | 3.9 | 4.8 |
| *Bottom Quintile* | *4.8* | *5.9* | *3.9* | *4.9* | *5.1* | *6.3* |
| *Lowest 30% households* | *4.6* | *5.7* | *3.7* | *4.6* | *5.0* | *6.1* |
| *Highest quintile* | *2.8* | *3.3* | *2.5* | *3.0* | *2.9* | *3.5* |

*Source: VNSO HIES 2006.*

## Households and new households since 1999

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| p.c.a.e expenditure quintile | Rural Santo | | East Coast Santo | | Rural Efate | |
| Here since '99 | Moved here since '99 | Here since '99 | Moved here since '99 | Here since '99 | Moved here since '99 |
| q 1 | 900 | 50 | 350 | 20 | 550 | 160 |
| q 2 | 920 | 70 | 380 | 10 | 620 | 110 |
| q 3 | 880 | 110 | 360 | 30 | 590 | 130 |
| q 4 | 870 | 120 | 330 | 50 | 580 | 140 |
| q 5 | 890 | 140 | 360 | 50 | 550 | 210 |
| Total | 4,460 | 490 | 1,790 | 170 | 2,890 | 750 |

*Source: VNSO HIES 2006.*

## Housing materials

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Housing materials | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| *Roof material* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Iron | 24.0 | 25.5 | 28.9 | 30.9 | 49.9 | 55.1 | 39.6 | 39.6 | 56.7 | 50.1 | 88.3 | 82.5 | 90.4 | 88.5 | 92.5 |
| Natakura thatch | 76.0 | 74.5 | 71.1 | 69.1 | 48.2 | 44.9 | 60.4 | 60.4 | 43.3 | 45.0 | 11.7 | 9.8 | 7.7 | 9.5 | 5.7 |
| Coconut thatch |  |  |  |  |  |  |  |  |  |  |  | 3.9 |  |  |  |
| Wild cane thatch |  |  |  |  |  |  |  |  |  |  |  | 3.7 | 2.0 | 2.0 | 1.9 |
| Other thatch |  |  |  |  | 1.9 |  |  |  |  | 4.8 |  |  |  |  |  |
| *Wall Material* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bamboo | 72.8 | 80.8 | 69.1 | 63.8 | 46.0 | 50.7 | 55.1 | 52.8 | 32.1 | 44.8 | 6.1 | 9.0 | 3.9 | 7.8 | 3.8 |
| Iron | 3.3 | 4.2 | 4.2 | 5.4 | 7.0 | 8.2 | 5.2 | 5.2 | 11.0 | 7.3 | 70.4 | 62.8 | 61.6 | 61.3 | 48.7 |
| Cement | 10.8 | 9.6 | 13.9 | 16.1 | 29.5 | 21.8 | 23.9 | 18.5 | 37.6 | 25.1 | 14.5 | 9.3 | 31.0 | 27.2 | 35.1 |
| Cardboard | 2.1 | 1.1 | 3.2 | 3.2 | 3.1 | 5.3 | 5.5 | 7.8 | 2.8 | 5.2 |  | 2.0 |  |  | 1.7 |
| Cement sheet | 2.3 | 1.1 | 2.1 | 1.1 | 1.0 | 2.9 | 5.2 | 2.8 |  | 2.4 | 1.8 | 7.2 | 1.8 |  | 5.1 |
| Wood | 5.5 | 3.2 | 5.3 | 9.4 | 3.0 | 8.3 | 2.5 | 12.9 | 8.2 | 4.8 | 5.4 | 2.0 |  | 2.0 | 1.9 |
| Other | 3.3 |  | 2.1 | 1.1 | 10.4 | 2.8 | 2.5 |  | 8.4 | 10.3 | 1.8 | 7.9 | 1.8 | 1.7 | 3.8 |
| *Floor Material* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cement | 53.1 | 62.8 | 59.0 | 59.4 | 80.5 | 71.6 | 63.1 | 70.5 | 80.8 | 87.7 | 57.7 | 53.2 | 65.4 | 71.4 | 75.9 |
| Other | 32.3 | 24.4 | 27.9 | 21.2 | 10.2 | 19.8 | 18.2 | 13.1 | 2.6 | 7.3 |  | 5.9 | 3.9 | 10.0 | 1.9 |
| Coral/sand | 3.4 | 6.5 | 5.5 | 9.7 | 4.2 | 2.9 | 5.5 | 2.8 | 8.2 |  | 27.0 | 21.8 | 17.1 | 12.9 | 12.8 |
| Pandanus/Coconut mat | 1.1 | 3.1 | 1.1 | 1.1 | 4.1 | 2.8 | 5.2 |  | 2.8 | 5.1 | 9.5 | 17.2 | 11.6 | 5.8 | 7.5 |
| Wood | 10.1 | 3.2 | 6.5 | 8.6 | 1.1 | 2.9 | 8.0 | 13.7 | 5.6 |  | 5.9 | 2.0 | 2.0 |  | 1.9 |

*Source: VNSO HIES 2006.*

## Type of housing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| House type | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Mixed house | 39.2 | 44.9 | 41.0 | 39.1 | 33.8 | 28.0 | 29.1 | 38.8 | 21.6 | 34.7 | 46.1 | 59.7 | 27.1 | 36.8 | 23.7 |
| Permanent house | 15.2 | 12.8 | 18.1 | 19.2 | 35.7 | 32.9 | 26.2 | 26.5 | 43.1 | 32.8 | 35.1 | 32.6 | 61.9 | 51.9 | 70.9 |
| Traditional house | 42.4 | 42.2 | 38.9 | 41.7 | 27.6 | 36.5 | 44.7 | 29.7 | 32.7 | 27.6 | 13.3 | 5.9 | 9.2 | 11.3 | 3.8 |
| Makeshift house | 1.0 |  | 2.0 |  | 2.9 | 2.7 |  | 5.1 | 2.6 | 4.8 | 1.8 | 1.8 |  |  |  |
| Other (flat etc) | 2.2 |  |  |  |  |  |  |  |  |  | 3.6 |  | 1.8 |  | 1.7 |

*Source: VNSO HIES 2006.*

## Main energy for household lighting

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main kind of lighting | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Kerosene lamp | 94.4 | 89.3 | 90.2 | 84.9 | 79.5 | 80.2 | 75.9 | 81.1 | 69.8 | 66.8 | 57.8 | 74.8 | 57.0 | 56.0 | 41.8 |
| Electricity | 5.6 | 9.6 | 5.4 | 14.0 | 17.6 | 19.8 | 18.7 | 16.4 | 27.6 | 28.4 | 30.7 | 15.8 | 35.4 | 34.4 | 47.1 |
| Candle |  |  | 1.1 |  |  |  |  |  |  |  | 3.6 | 1.8 | 1.8 | 1.8 | 1.9 |
| Coleman lamp |  |  | 1.0 |  |  |  |  | 2.5 |  |  | 2.0 |  |  | 2.0 | 1.9 |
| Wood/Coconut Shells |  | 1.1 | 1.1 | 1.1 |  |  | 2.7 |  |  |  | 2.0 | 3.9 |  | 2.0 | 3.8 |
| Other |  |  | 1.1 |  | 2.9 |  | 2.7 |  | 2.6 | 4.8 | 3.8 | 3.7 | 5.9 | 3.8 | 3.6 |

*Source: VNSO HIES 2006.*

## Main energy for household cooking

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main fuel for cooking | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Wood/Coconut Shell | 100.0 | 97.9 | 98.9 | 97.8 | 92.9 | 100.0 | 94.6 | 100.0 | 97.4 | 84.8 | 92.1 | 94.5 | 76.7 | 69.9 | 75.6 |
| Gas |  |  | 1.1 |  | 6.1 |  | 2.7 |  | 2.6 | 12.7 | 2.0 | 5.5 | 19.5 | 20.6 | 19.1 |
| Electricity |  | 1.1 |  |  |  |  | 2.7 |  |  |  | 1.8 |  | 1.8 | 3.6 | 5.3 |
| Charcoal |  | 1.1 |  | 1.1 |  |  |  |  |  |  | 2.0 |  |  | 6.0 |  |
| Kerosene |  |  |  | 1.1 | 1.0 |  |  |  |  | 2.4 | 2.0 |  |  |  |  |
| Other |  |  |  |  |  |  |  |  |  |  |  |  | 2.0 |  |  |

*Source: VNSO HIES 2006.*

## Household main source of drinking water

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main source of drinking water | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Piped Water (private) | 3.3 | 1.1 | 3.2 | 5.3 | 6.2 |  |  | 2.5 | 7.8 | 7.9 | 31.0 | 14.2 | 35.6 | 30.7 | 34.7 |
| Piped water (outside) | 8.9 | 4.3 | 4.3 | 9.4 | 4.9 | 5.5 | 5.2 | 10.4 | 13.4 | 7.3 | 14.7 | 5.3 | 9.0 | 9.1 | 10.7 |
| Stand pipe (private) | 4.4 | 2.1 | 1.1 | 3.2 | 4.1 | 2.7 | 2.7 |  | 2.7 | 2.4 |  | 7.9 | 5.9 | 4.0 | 7.5 |
| Standpipe (shared) | 35.7 | 33.3 | 26.0 | 22.4 | 24.8 | 30.6 | 21.3 | 26.0 | 16.2 | 12.4 | 4.0 | 3.7 | 2.0 | 6.0 | 1.9 |
| Household tank | 5.4 | 13.5 | 13.5 | 9.4 | 18.0 | 24.8 | 25.8 | 36.6 | 21.8 | 32.2 | 15.3 | 17.9 | 22.8 | 18.8 | 21.4 |
| Community tank | 16.6 | 13.8 | 11.9 | 20.4 | 6.2 | 8.3 | 5.0 | 8.3 | 11.0 | 2.6 | 4.0 | 3.9 | 3.7 | 4.0 | 3.5 |
| Well | 4.4 | 6.2 | 7.5 | 7.3 | 13.1 | 16.6 | 23.7 | 10.6 | 13.2 | 17.6 | 11.5 | 13.1 | 3.9 | 7.8 | 1.9 |
| River | 12.2 | 17.1 | 21.7 | 18.1 | 15.4 | 2.9 | 10.9 | 2.8 | 8.2 | 9.9 | 11.9 | 19.6 | 11.8 | 17.7 | 16.8 |
| Spring | 3.4 | 4.3 | 3.3 | 1.1 | 3.1 |  | 2.7 |  |  |  | 4.0 |  |  | 2.0 | 1.7 |
| Other | 5.6 | 4.3 | 7.6 | 3.2 | 4.1 | 8.6 | 2.7 | 2.8 | 5.6 | 7.7 | 3.5 | 14.3 | 5.4 |  |  |

*Source: VNSO HIES 2006.*

## Household main type of toilet

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main type of toilet | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Flush toilet – private |  |  | 2.2 | 2.2 | 8.3 |  |  | 2.8 | 8.0 | 10.5 | 12.7 | 10.5 | 23.3 | 16.2 | 26.1 |
| Flush toilet – shared |  | 1.1 | 2.2 | 4.4 | 3.2 |  | 2.7 | 5.5 | 8.4 | 2.6 |  |  | 5.5 | 3.6 | 5.5 |
| Water seal toilet – private | 1.0 | 1.0 | 5.1 | 5.1 | 9.7 | 2.7 | 7.5 | 10.2 | 13.0 | 17.0 | 11.4 | 22.5 | 18.5 | 18.7 | 14.5 |
| Water seal - shared | 1.1 | 1.1 | 3.1 |  | 3.0 |  | 2.5 | 2.5 | 2.6 | 2.4 | 3.5 | 1.8 |  | 3.8 |  |
| VIP – private | 42.3 | 44.7 | 31.4 | 38.3 | 36.0 | 38.7 | 42.1 | 29.0 | 29.8 | 30.3 | 28.6 | 16.4 | 13.1 | 19.1 | 18.0 |
| VIP – shared | 5.5 | 5.3 | 12.9 | 6.4 | 7.0 | 2.7 | 2.7 | 5.1 |  | 7.3 | 7.4 |  | 1.8 | 1.8 | 3.8 |
| Pit latrine – private | 21.2 | 26.6 | 23.7 | 21.2 | 21.4 | 25.2 | 21.2 | 34.2 | 27.3 | 22.2 | 32.2 | 31.8 | 34.1 | 34.9 | 28.5 |
| Pit Latrine – shared | 24.5 | 17.0 | 18.4 | 19.2 | 11.4 | 28.1 | 21.2 | 10.8 | 11.0 | 7.7 | 2.0 | 13.5 | 3.7 | 2.0 | 3.8 |
| None | 4.4 | 3.2 | 1.1 | 3.2 |  | 2.7 |  |  |  |  | 2.0 | 3.6 |  |  |  |

*Source: VNSO HIES 2006.*

## Household’s nearest health facility

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nearest health facility | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Hospital | 6.7 | 14.9 | 24.8 | 19.0 | 24.6 | 25.9 | 47.8 | 42.8 | 38.7 | 40.6 | 32.3 | 31.9 | 39.4 | 53.2 | 51.1 |
| Health Centre | 51.0 | 38.3 | 44.1 | 49.8 | 36.8 | 38.5 | 18.5 | 36.2 | 31.9 | 24.7 | 2.0 | 24.7 | 9.8 | 10.0 | 14.9 |
| Dispensary | 26.7 | 31.8 | 18.3 | 12.9 | 23.1 | 15.9 | 22.8 | 7.6 | 15.5 | 29.7 | 53.2 | 24.1 | 40.3 | 27.5 | 24.0 |
| Aid post | 15.6 | 13.9 | 12.9 | 18.3 | 14.6 | 17.1 | 10.9 | 13.4 | 11.3 | 5.1 | 10.7 | 17.4 | 10.4 | 9.4 | 6.5 |
| Mobile Clinic |  | 1.0 |  |  | 1.0 | 2.7 |  |  | 2.6 |  | 1.8 |  |  |  |  |
| Other |  |  |  |  |  |  |  |  |  |  |  | 2.0 |  |  | 3.6 |

*Source: VNSO HIES 2006.*

## Household’s means of travel to health facility

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main means of travel to nearest health facility | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Walk | 91.1 | 77.8 | 74.2 | 76.7 | 68.6 | 62.9 | 41.7 | 52.0 | 45.4 | 52.0 | 48.6 | 58.9 | 42.6 | 32.1 | 31.6 |
| Motor vehicle | 5.5 | 19.0 | 19.2 | 16.8 | 19.1 | 25.6 | 47.4 | 31.5 | 35.3 | 27.4 | 49.4 | 35.6 | 53.9 | 62.1 | 57.7 |
| Horse |  |  |  | 1.1 | 3.9 |  |  |  | 5.2 | 4.8 |  |  | 1.8 |  |  |
| Boat/canoe |  |  |  |  |  |  |  |  |  |  |  |  |  | 2.0 |  |
| Other | 3.4 | 3.3 | 6.6 | 5.4 | 8.4 | 11.5 | 10.9 | 16.6 | 14.1 | 15.8 | 2.0 | 5.5 | 1.8 | 3.8 | 10.7 |

*Source: VNSO HIES 2006.*

## Household’s means of travel

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main means of travel | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Motor vehicle - private |  | 1.1 | 1.1 | 2.1 | 10.1 |  |  | 2.7 | 8.0 | 14.7 | 1.8 |  | 11.0 | 10.7 | 17.8 |
| Motor vehicle - shared | 73.4 | 76.5 | 63.3 | 64.8 | 74.4 | 100.0 | 100.0 | 97.3 | 92.0 | 85.3 | 81.6 | 75.6 | 74.7 | 78.2 | 73.8 |
| Boat - private |  |  |  |  | 1.1 |  |  |  |  |  |  |  |  | 2.0 |  |
| Boat - shared | 8.9 | 11.7 | 10.8 | 11.8 | 7.3 |  |  |  |  |  | 8.7 | 8.4 | 10.4 | 3.4 | 4.8 |
| Bicycle |  |  |  | 1.1 |  |  |  |  |  |  |  |  |  |  |  |
| Other | 17.8 | 10.7 | 24.8 | 20.3 | 7.3 |  |  |  |  |  | 7.9 | 16.0 | 3.9 | 5.7 | 3.5 |

*Source: VNSO HIES 2006.*

## Distance to nearest road from the household

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Distance to nearest road | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| < 1 km | 59.0 | 62.0 | 56.9 | 59.6 | 64.2 | 69.7 | 71.5 | 73.7 | 67.6 | 74.9 | 80.2 | 71.0 | 67.6 | 50.6 | 67.1 |
| 1-5 km | 25.5 | 18.9 | 16.1 | 16.9 | 25.4 | 30.3 | 26.0 | 23.5 | 27.0 | 25.1 | 11.9 | 15.3 | 18.6 | 20.4 | 20.1 |
| 6-15 km | 6.7 | 12.8 | 10.8 | 3.2 | 4.1 |  |  |  |  |  | 7.9 | 13.7 | 13.8 | 19.5 | 5.5 |
| 16-30 km |  | 1.1 | 1.1 | 2.1 | 2.1 |  |  | 2.8 | 2.8 |  |  |  |  | 5.5 | 1.7 |
| >30 km | 8.9 | 5.3 | 15.1 | 18.2 | 4.1 |  | 2.5 |  | 2.6 |  |  |  |  | 4.0 | 5.7 |

*Source: VNSO HIES 2006.*

## Educational qualifications of household head

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Highest educational qualification | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| None | 450 | 360 | 380 | 260 | 200 | 170 | 180 | 160 | 110 | 80 | 90 | 260 | 240 | 170 | 220 |
| Primary | 390 | 500 | 440 | 500 | 430 | 120 | 170 | 150 | 150 | 150 | 250 | 180 | 240 | 140 | 160 |
| Secondary | 70 | 110 | 80 | 120 | 230 | 60 | 20 | 30 | 70 | 70 | 130 | 70 | 90 | 220 | 110 |
| Post-Secondary | 30 | 20 | 80 | 110 | 160 | 10 | 30 | 40 | 50 | 100 | 30 | 70 | 40 | 30 | 40 |
| Not stated | 10 | 10 |  | 10 | 10 | 10 |  | 10 |  | 10 | 210 | 160 | 120 | 160 | 230 |
| Total | 950 | 990 | 980 | 990 | 1,020 | 370 | 400 | 390 | 380 | 410 | 710 | 730 | 730 | 720 | 760 |

*Source: VNSO HIES 2006.*

## Educational qualifications of household head

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Highest educational qualification | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| None | 46.7 | 36.2 | 38.7 | 26.5 | 19.3 | 44.8 | 44.7 | 42.1 | 27.4 | 19.7 | 13.1 | 35.6 | 32.7 | 23.6 | 29.3 |
| Primary | 41.1 | 50.0 | 44.4 | 50.0 | 41.8 | 32.9 | 42.3 | 37.1 | 40.0 | 37.5 | 34.9 | 24.3 | 32.7 | 19.3 | 20.9 |
| Secondary | 7.8 | 10.7 | 8.5 | 11.7 | 22.4 | 16.8 | 5.2 | 7.6 | 19.0 | 17.1 | 18.0 | 9.1 | 12.3 | 30.8 | 14.1 |
| Post-Secondary | 3.3 | 2.1 | 8.5 | 10.7 | 15.6 | 2.9 | 7.8 | 10.4 | 13.6 | 23.3 | 3.8 | 9.1 | 5.5 | 3.5 | 5.0 |
| Not stated | 1.0 | 1.1 |  | 1.1 | 1.0 | 2.7 |  | 2.8 |  | 2.4 | 30.2 | 21.9 | 16.9 | 22.8 | 30.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: VNSO HIES 2006.*

## Main activity of household head

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Economically active | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| 98.9 | 97.9 | 96.9 | 94.7 | 97.0 | 97.1 | 97.5 | 92.4 | 97.2 | 95.2 | 85.0 | 78.3 | 90.9 | 92.5 | 91.2 |
| Working | 97.8 | 97.9 | 96.9 | 94.7 | 97.0 | 94.5 | 97.5 | 92.4 | 97.2 | 95.2 | 65.6 | 70.7 | 81.7 | 81.1 | 84.0 |
| Unemployed | 1.0 |  |  |  |  | 2.7 |  |  |  |  | 19.4 | 7.6 | 9.2 | 11.3 | 7.1 |
| Non Labour force | 1.1 | 2.1 | 3.1 | 5.3 | 3.0 | 2.9 | 2.5 | 7.6 | 2.8 | 4.8 | 15.0 | 21.7 | 9.1 | 7.5 | 8.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: VNSO HIES 2006. Work includes work for one hour or more in the previous 7 days for pay or profit and own household consumption (own account production or subsistence).*

## Main activity of household head

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main activity | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 | q 1 | q 2 | q 3 | q 4 | q 5 |
| Working full/part-time for wages/salary | 6.6 | 5.4 | 10.9 | 17.1 | 21.9 | 14.1 | 13.4 | 19.1 | 35.8 | 23.6 | 40.4 | 26.0 | 47.4 | 40.8 | 46.2 |
| Own business |  |  |  |  | 7.0 |  |  |  |  | 12.3 | 4.0 | 2.0 |  | 7.3 | 3.6 |
| Sell products | 2.2 | 1.1 | 2.1 | 3.1 | 1.0 | 5.5 | 5.5 | 10.4 | 2.6 |  | 4.0 | 7.6 | 3.9 | 2.0 | 7.3 |
| Own household consumption | 89.0 | 91.4 | 83.9 | 74.4 | 67.1 | 74.8 | 78.6 | 62.9 | 58.8 | 59.2 | 17.1 | 35.0 | 30.3 | 31.1 | 27.0 |
| Unemployed | 1.0 |  |  |  |  | 2.7 |  |  |  |  | 19.4 | 7.6 | 9.2 | 11.3 | 7.1 |
| Domestic duties |  | 1.0 | 1.0 |  | 1.0 |  | 2.5 | 2.5 |  | 2.4 | 11.2 | 8.6 | 5.4 | 3.8 | 5.3 |
| Full time education |  |  |  | 2.2 | 1.1 |  |  |  |  |  |  |  |  |  |  |
| Other (Non-Labour Force) | 1.1 | 1.1 | 2.1 | 3.2 | 1.0 | 2.9 |  | 5.1 | 2.8 | 2.4 | 3.8 | 13.1 | 3.7 | 3.8 | 3.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: VNSO HIES 2006. Work includes work for one hour or more in the previous 7 days for pay or profit and own household consumption (own account production or subsistence).*

## Number of working age population per household (aged 15-59 years)

|  |  |  |  |
| --- | --- | --- | --- |
| p.c.a.e expenditure quintile | Total adults (aged 15-59 years) | | |
| Rural Santo | East Coast Santo | Rural Efate |
| q 1 | 3,294 | 985 | 2,479 |
| q 2 | 2,849 | 1,048 | 2,367 |
| q 3 | 2,328 | 956 | 1,834 |
| q 4 | 2,255 | 767 | 1,861 |
| q 5 | 2,155 | 791 | 1,631 |

*Source: VNSO HIES 2006.*

## Average number of working age population per household (aged 15-59 years)

|  |  |  |  |
| --- | --- | --- | --- |
| p.c.a.e expenditure quintile | Average adults per hh (aged 15-59 years) | | |
| Rural Santo | East Coast Santo | Rural Efate |
| q 1 | 3.4 | 2.6 | 3.5 |
| q 2 | 2.9 | 2.6 | 3.2 |
| q 3 | 2.4 | 2.4 | 2.5 |
| q 4 | 2.3 | 2.0 | 2.6 |
| q 5 | 2.1 | 1.9 | 2.1 |

*Source: VNSO HIES 2006.*

## Number of children per household (aged under 15 years)

|  |  |  |
| --- | --- | --- |
| Total children (aged under 15 years) | | |
| Rural Santo | East Coast Santo | Rural Efate |
| 2,316 | 787 | 1,723 |
| 1,923 | 554 | 1,211 |
| 1,637 | 403 | 1,399 |
| 1,389 | 445 | 1,147 |
| 1,032 | 381 | 957 |

*Source: VNSO HIES 2006.*

## Average number of children per household (aged under 15 years)

|  |  |  |  |
| --- | --- | --- | --- |
| p.c.a.e expenditure quintile | Average children per hh (aged under 15 years) | | |
| Rural Santo | East Coast Santo | Rural Efate |
| q 1 | 2.4 | 2.1 | 2.4 |
| q 2 | 1.9 | 1.4 | 1.7 |
| q 3 | 1.7 | 1.0 | 1.9 |
| q 4 | 1.4 | 1.2 | 1.6 |
| q 5 | 1.0 | 0.9 | 1.3 |

*Source: VNSO HIES 2006.*

## Number of older persons per household (aged 60 years and over)

|  |  |  |  |
| --- | --- | --- | --- |
| p.c.a.e expenditure quintile | Total older persons (aged 60 years and over) | | |
| Rural Santo | East Coast Santo | Rural Efate |
| q 1 | 247 | 76 | 271 |
| q 2 | 159 | 20 | 226 |
| q 3 | 234 | 63 | 203 |
| q 4 | 64 | 61 | 174 |
| q 5 | 155 | 51 | 94 |

*Source: VNSO HIES 2006.*

## Average number of older persons per household (aged 60 years and over)

|  |  |  |  |
| --- | --- | --- | --- |
| p.c.a.e expenditure quintile | Average older persons per hh (aged 60 years and over) | | |
| Rural Santo | East Coast Santo | Rural Efate |
| q 1 | 0.3 | 0.2 | 0.4 |
| q 2 | 0.2 | 0.1 | 0.3 |
| q 3 | 0.2 | 0.2 | 0.3 |
| q 4 | 0.1 | 0.2 | 0.2 |
| q 5 | 0.2 | 0.1 | 0.1 |

*Source: VNSO HIES 2006.*

## Main activity of adults aged 15-59

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Labour force status | Rural Santo | | | | |
| q 1 | q 2 | q 3 | q 4 | q 5 |
| Economically active | 2,925 | 2,599 | 2,047 | 2,067 | 1,986 |
| Working | 2,904 | 2,599 | 2,025 | 2,056 | 1,913 |
| Unemployed | 21 |  | 22 | 11 | 73 |
| Non Labour force | 370 | 249 | 281 | 189 | 169 |
| Total | 3,294 | 2,849 | 2,328 | 2,255 | 2,155 |

*Source: VNSO HIES 2006. Work includes work for one hour or more in the previous 7 days for pay or profit and own household consumption (own account production or subsistence).*

## Children aged 6-11 years school attendance

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Exp + Rent Quintile | Rural Santo | | East Coast Santo | | Rural Efate | |
| Attending | Not attending | Attending | Not attending | Attending | Not attending |
| q1 | 750 | 330 | 200 | 120 | 380 | 260 |
| q2 | 690 | 130 | 150 | 30 | 350 | 130 |
| q3 | 590 | 70 | 150 | 30 | 420 | 150 |
| q4 | 580 | 80 | 180 | 30 | 430 | 70 |
| q5 | 260 | 80 | 100 | 20 | 370 | 100 |
| Total | 2,870 | 690 | 780 | 230 | 1,950 | 710 |

*Source: VNSO HIES 2006. All blank responses treated as not attending.*

## Children aged 6-11 years attending school, distance to school

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Distance to school | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q1 | q2 | q3 | q4 | q5 | q1 | q2 | q3 | q4 | q5 | q1 | q2 | q3 | q4 | q5 |
| < 1km | 67.6 | 84.6 | 78.4 | 64.7 | 75.8 | 36.4 | 73.1 | 72.0 | 57.4 | 39.3 | 50.3 | 46.7 | 76.4 | 40.0 | 67.2 |
| 1-2km | 18.3 | 6.2 | 18.0 | 22.3 | 15.9 | 52.8 | 26.9 | 21.0 | 24.1 | 39.8 | 13.6 | 29.7 | 13.7 | 19.4 | 25.1 |
| 2-5km | 9.9 | 6.2 | 1.8 | 3.7 |  | 10.8 |  |  | 6.1 |  | 10.2 | 11.2 | 3.4 | 9.9 |  |
| 5-10km | 4.2 | 3.1 |  | 5.5 | 4.2 |  |  |  |  | 10.4 | 3.4 |  |  | 15.4 |  |
| >10 km |  |  | 1.8 | 3.8 | 4.2 |  |  | 7.0 | 12.3 | 10.4 | 11.0 |  | 6.5 | 6.2 | 3.9 |
| Not Stated |  |  |  |  |  |  |  |  |  |  | 11.4 | 12.5 |  | 9.2 | 3.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: VNSO HIES 2006.*

## Children aged 6-11 years attending school, travel mode to school

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Travel mode to school | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q1 | q2 | q3 | q4 | q5 | q1 | q2 | q3 | q4 | q5 | q1 | q2 | q3 | q4 | q5 |
| Walk | 98.6 | 100.0 | 98.2 | 90.6 | 87.8 | 100.0 | 100.0 | 93.0 | 75.4 | 69.5 | 67.3 | 76.4 | 93.5 | 66.0 | 88.4 |
| Private motor vehicle |  |  |  | 3.8 | 8.3 |  |  |  | 12.3 | 20.9 |  |  | 3.4 |  |  |
| Public transport |  |  | 1.8 | 3.7 | 3.8 |  |  | 7.0 | 6.1 | 9.6 | 21.6 | 11.2 | 3.1 | 21.6 | 3.9 |
| Other |  |  |  |  |  |  |  |  |  |  | 3.4 |  |  | 3.3 | 3.9 |
| Not stated | 1.4 |  |  | 1.9 |  |  |  |  | 6.1 |  | 7.6 | 12.5 |  | 9.2 | 3.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: VNSO HIES 2006.*

## Children aged 6-11 years attending school and missing school, reason

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for missing school | Rural Santo | | | | | East Coast Santo | | | | | Rural Efate | | | | |
| q1 | q2 | q3 | q4 | q5 | q1 | q2 | q3 | q4 | q5 | q1 | q2 | q3 | q4 | q5 |
| Sick | 480 | 480 | 370 | 400 | 140 | 80 | 40 | 40 | 80 | 70 | 130 | 70 | 160 | 150 | 160 |
| Bad weather | 100 | 40 | 60 | 10 | 70 | 60 | 40 | 30 | 40 | 20 |  | 80 | 30 | 30 | 30 |
| School fees problem | 30 | 40 | 40 | 10 |  | 20 | 10 | 10 |  |  | 50 | 20 |  | 30 | 10 |
| Absence of teacher | 20 |  | 20 | 40 | 10 |  |  |  |  |  | 10 |  | 70 | 20 | 10 |
| Other |  | 30 | 10 |  |  |  |  | 10 |  |  | 30 | 50 |  |  |  |
| Have to work |  |  |  | 20 |  |  |  |  | 10 |  |  | 20 |  |  |  |
| Family problems | 10 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Disaster |  |  |  |  |  |  |  |  |  |  | 10 |  |  |  |  |
| Not stated | 10 | 20 | 10 | 10 | 10 | 20 | 10 |  |  |  | 40 | 40 | 70 | 100 | 30 |
| Total | 650 | 630 | 520 | 500 | 230 | 190 | 100 | 90 | 140 | 90 | 280 | 290 | 320 | 330 | 250 |

*Source: VNSO HIES 2006.*

## Average number of working persons per household

|  |  |  |  |
| --- | --- | --- | --- |
| Exp + Rent percentile | Rural Santo | East Coast Santo | Rural Efate |
| 1 | 3.5 | 2.0 | 1.1 |
| 2 | 2.6 | 2.5 | 1.5 |
| 3 | 2.9 | 2.4 | 1.7 |
| 4 | 2.3 | 2.3 | 1.7 |
| 5 | 2.2 | 2.1 | 1.4 |
| 6 | 1.9 | 1.8 | 1.6 |
| 7 | 2.2 | 1.7 | 1.7 |
| 8 | 1.9 | 1.8 | 1.5 |
| 9 | 1.9 | 1.6 | 1.5 |
| 10 | 1.9 | 1.8 | 1.4 |
| Total | 2.3 | 2.0 | 1.5 |

*Source: VNSO HIES 2006. Work includes work for one hour or more in the previous 7 days for pay or profit and own household consumption (own account production or subsistence).*

# Annex 1: Minimum and maximum expenditure ranges (pcae), class mid points and number of households sampled for MCA areas, 2006 HIES

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| p.c.a.e expenditure percentiles and ranges | Rural Santo | | | | East Coast Santo | | | | Rural Efate | | | |
| Minimum | Maximum | Mid Point | H'holds (n) | Minimum | Maximum | Mid Point | H'holds (n) | Minimum | Maximum | Mid Point | H'holds (n) |
| percentile 1 | 1,900 | 5,300 | 4,500 | 44 | 3,857 | 5,957 | 5,200 | 17 | 408 | 2,723 | 2,000 | 25 |
| percentile 2 | 5,400 | 6,700 | 6,100 | 46 | 6,108 | 7,428 | 7,200 | 19 | 2,789 | 5,814 | 4,100 | 28 |
| percentile 3 | 6,700 | 7,700 | 7,500 | 47 | 7,481 | 8,274 | 8,000 | 19 | 5,815 | 7,507 | 6,500 | 27 |
| percentile 4 | 7,700 | 8,600 | 8,300 | 47 | 8,347 | 9,358 | 9,000 | 19 | 7,515 | 8,684 | 7,900 | 27 |
| percentile 5 | 8,600 | 10,000 | 9,700 | 47 | 9,610 | 11,175 | 10,500 | 19 | 8,749 | 11,234 | 9,700 | 27 |
| percentile 6 | 10,000 | 11,300 | 11,100 | 46 | 11,215 | 13,175 | 12,400 | 19 | 11,316 | 14,002 | 12,000 | 27 |
| percentile 7 | 11,400 | 13,000 | 12,400 | 47 | 13,218 | 15,449 | 13,800 | 18 | 14,032 | 16,978 | 15,400 | 26 |
| percentile 8 | 13,000 | 15,500 | 15,000 | 47 | 15,967 | 19,252 | 17,200 | 19 | 17,114 | 21,392 | 19,000 | 27 |
| percentile 9 | 15,500 | 21,100 | 20,200 | 48 | 19,717 | 24,044 | 20,800 | 19 | 21,871 | 33,847 | 26,400 | 28 |
| percentile 10 | 21,500 | 111,000 | 28,900 | 50 | 24,502 | 111,026 | 32,200 | 21 | 34,134 | 270,437 | 47,900 | 28 |

# Annex 2: Methodology for poverty analysis

**Low-cost diet**

Box 1: 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

The first step in measuring poverty is the calculation of the Food Poverty Line (FPL). Two methods are typically used to derive food poverty lines: using “model diets” and using actual food expenditure and consumption patterns of the lowest three decile p.c.a.e households from the daily expenditure diaries.

For the MCA progam, the food poverty line was derived from the actual food expenditure and consumption patterns of the lowest three expenditure percentile p.c.a.e households from the daily expenditure diaries. Further research could compare the results from this method with that of the “model menu” to see if there are differences. Research undertaken in other Pacific countries, the nearest being the Solomon Islands, has shown that there is very little difference in using the “model menu” approach and the actual food expenditure and items from the household expenditure diaries.

The following section describes the process of how the diet costs taken from the actual survey data have been used to estimate the FPL for this analysis; exactly the same used to derive national estimates.

The food expenditure from the diaries of households in the lowest three expenditure deciles in each of the three sites was analysed, Tables a, b, and c. It was observed that 96% of food expenditure was accounted for by 52 items with expenditure over Vt 50,000 in Rural Santo; 90% of food expenditure was accounted for 36 items with expenditure over Vt 50,000 in the East Coast of Santo and 89% of food expenditure occurred for 34 items with expenditure over Vt 50,000 in rural Efate. These items together with their share in monthly food intake are shown in Columns A and B of the tables. To get the daily per capita a.e Kcal value and per capita a.e daily cost of these diary expenditure items as the basis for the calculation of the FPL, the following steps were taken:

* + the reported diary food expenditure values were grossed up to the total recorded food expenditure from the survey for the bottom three expenditure deciles, by the appropriate factor to give a notional total food expenditure based on the listed items, Column C;
  + each item was priced using the urban CPI for all purchased items adjusted for home produced items, and the observed diary prices/values for items of own production, Column D;
  + the implied unit volume consumed of each item in the diary was calculated, column E;
  + the Kcal (energy) value from the South Pacific Food Composition Tables was applied to each of the items, column F, to give a total Kcal value for recorded consumption, Column G;
  + the daily per capita adult equivalent Kcal consumption values represented by each item was then calculated, Column H;
  + the daily cost of each item according to its share in the overall daily food intake was estimated, Column I; and finally
  + the daily cost of each item according to its Kcal value per day per a.e. was estimated, Column J.

The pricing of the food items was problematic because the HIES did not collect information about units of items purchased or consumed so it was difficult to determine average prices. Where possible averages were derived using total expenditure divided by quantity but for many items prices were derived from values observed in the data. Further research should re-visit the prices used for the food items selected and make adjustments if required.

Summing the daily Kcal values of the expenditure patterns of each region (K) shows that Port Vila households reported notionally acquiring an average of 1,431 kcal per capita a.e per day compared with 2,193 Kcal for Luganville and 2,470 Kcal for rural areas. In order to get to the minimum Kcal daily food energy intake for Port Vila this value was inflated to the equivalent of 2,100 Kcal by the ratio of the recorded Kcal value to the minimum (L). In the other two regions the value was deflated using the same method.

The notional estimated daily cost of the food items (M) is then grossed up also by the factor (L). This gives the adjusted daily cost of acquiring the minimum 2,100 Kcal per day from the listed items (N).

Finally the daily cost is converted to a monthly value (O). Thus the cost of acquiring a minimum adult equivalent diet in rural areas in Santo is estimated at VT92 per day and VT2,773 per month; for East Coast Santo the costs are VT104 per day and VT3,132 per month, and for Rural Efate VT123 per day and VT3,695 per month. These are the Food Poverty Lines used in the analysis, Table 2. The differences between the regions in the level of the FPL represent the variations in the actual food expenditure patterns and the differences in the prices applied to calculate the cost of the diets.

##### Table a: Rural Santo estimated food expenditure and daily kilo calorie intake

##### Table b: East Coast Santo estimated food expenditure and daily kilo calorie intake

##### Table c: Rural Efate estimated food expenditure and daily kilo calorie intake



1. *Page 10. Monitoring and Evaluation Plan. Vanuatu Transport Infrastructure Development Program; Revised M&E Plan; Version II: 21 September 2010, Version 2* [↑](#footnote-ref-1)