Vanuatu - National Sustainable Development Plan Baseline Survey 2019, Household Income and Expenditure Survey 2019

Vanuatu National Statistics Office

Report generated on: March 1, 2021

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Overview

Identification

ID NUMBER
SPC_VUT_2019_HIES_v01_M_v01_A_PUF

Version

VERSION DESCRIPTION
Version 01: Final clean, labelled and anonymized version of the Master file.

PRODUCTION DATE
2020-09-30

Overview

ABSTRACT
The National Sustainable Development Plan (NSDP) Baseline Survey 2019 is an expanded Household Income and Expenditure Survey (HIES) and is inclusive of health educational, cultural, and productive dimensions previously uncollected or in need of updating. The results of this survey will inform directly more than 30 key indicators listed in the NSDP M&E (Monitoring and Evaluation) Framework, as well as more than 40 of the listed indicators for the United Nations Sustainable Development Goals (SDGs). The NSDP Baseline Survey presents an opportunity as well for Vanuatu to establish a comprehensive Melanesian Wellbeing baseline as well as an updated baseline for the calculation of the Consumer Price Index (CPI) and revising National Accounts.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Household and Individual.

Scope

NOTES
-HOUSEHOLD: Household characterestics, Water access, Sanitation, Source of lighting, Source of cooking fuel, Transportation, Household assets, Household communication, Household finance, Home maintenance and construction, Services and taxes, Fishing, seafood collection and hunting, Agriculture, Handicraft.

-INDIVIDUAL: Demographic characteristics, Well-being, Culture and tradition, Sports, Education, Health, Disability, Communication, Narcotics, Economic activities, Remittances, Civic responsibility and satisfaction.

TOPICS

Topic	Vocabulary	URI
pacific-skills, education, training		
pacific-skills, industry, training		
pacific-skills, occupation		
pacific-skills, employment		
pacific-skills, gender		

pacific-skills, youth		
pacific-skills, dissability		

KEYWORDS

Household, Individual, Income, Expenditure, Labour market, Health, Education, Civic responsibility, Water access, Sanitation, Energy, Transportation, Communication, Agriculture, Livestock, Fishing, Hunting, Disability, Satisfaction

Coverage

GEOGRAPHIC COVERAGE

National coverage. Below are the details of this national coverage:

1. National (Vanuatu);

2. Provinces (Torba, Sanma, Penama, Malampa, Shefa, Tafea);

4. Area Councils (Torres Area council right to Futuna & Aneityum Area Council);

5. Villages / Towns;

6. Urban/Rural.

UNIVERSE

All de jure residents.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Vanuatu National Statistics Office	Ministry of Finance and Economic Management

OTHER PRODUCER(S)

Name	Affiliation	Role
Statistics for Development Division	Pacific Community	Technical Assistance in Planning, Questionnaire design, Training, Monitoring, Analysis.

FUNDING

Name	Abbreviation	Role
Vanuatu Government		Funding
India-UN Development Partnership Fund	I-UNDPF	Funding

OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
Department of Strategic Policy, Planning and Aid Coordination		Questionnaire design consultation
World Bank		Questionnaire design consultation
International Monetary Fund (IMF)		Questionnaire design consultation
Food and Agriculture Organization (FAO)		Questionnaire design consultation and Analysis
International Labour Organization (ILO)		Questionnaire design consultation and Analysis

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Vanuatu National Statistics Office	VNSO	Ministry of Finance and Economic Management	Documentation of the study
Statistics for Development Division	SDD	Pacific Community	Review of the documentation

DATE OF METADATA PRODUCTION
2020-09-07

DDI DOCUMENT VERSION
-Version 01 (May 2019): This is the first attempt at documenting the National Sustainable Development Plan Baseline Survey 2019 (NSDP) of Vanuatu. Done by Vanuatu National Statistics Office (VNSO).

-Version 02 (May 2020): This is the review of the existing documentation of the National Sustainable Development Plan Baseline Survey 2019 (NSDP) of Vanuatu. Done by Statistics for Development Division from the Pacific Community (SPC) at Noumea, New Caledonia.

-Version 03 (September 2020): This is the review of the existing documentation of the National Sustainable Development Plan Baseline Survey 2019 (NSDP) of Vanuatu which consists of adding/documenting the datasets. Done by Statistics for Development Division from the Pacific Community (SPC) at Noumea, New Caledonia.

-Version 04 (October 2020): This is the review of the existing documentation of the National Sustainable Development Plan Baseline Survey 2019 (NSDP) of Vanuatu which consists of documenting the anonymized datasets (and not the de-identified ones). Done by Statistics for Development Division from the Pacific Community (SPC) at Noumea, New Caledonia.

DDI DOCUMENT ID
DDI_SPC_VUT_2019_HIES_v01_M_v01_A_PUF

Sampling

Sampling Procedure

The sample size for this survey was determined using the previous 2010 Household Income and Expenditure Survey (HIES) outputs, and especially the per capita monthly total expenditure. From the 2010 HIES the mean, standard deviation and standard error were computed (per capita expenditure) and from the 2016 Census the distribution of the population across the 6 provinces of Vanuatu was used as a base. According to the accuracy of this variable of interest within each province the sample size per province were adjusted in order to get an expected sampling error around 5% within each province. The sampling frame used is the last 2016 Vanuatu census for the computation of the probability of selection of the Enumeration Areas (EAs) and the random selection method started with the random selection of EAs using the probability proportional to size. Then within each selected EAs 10 households were randomly selected using the sampling uniformed method.
Within each selected EA the household listing were updated by the team before random selection and interview.

i) The only variable considered is per capita total household expenditure (variable of interest), as in addition to being one of the main indicators derived from the Household Income and Expenditure Survey (HIES), it is likely highly correlated with many other variables of interest (e.g. poverty). From the 2010 HIES dataset, using this variable of interest, a list of relevant indicators were calculated, those indicators provide information on:
- (a)the status of the household expenditure distribution within each province,
- (b) The efficiency provided by the 2010 HIES sample design
- (c) The accuracy of the estimates calculated from the 2010 HIES dataset (especially the per capita household expenditure, our variable or interest)

ii) The original dataset has been trimmed using the variable of interest, the lowest and the highest percentiles (the 1% households with the lowest and highest per capita total household expenditure) were removed from the analysis (outliers). The dataset ends up with 4,289 households (given 4,377 households were completed).

iii) The 2010 Vanuatu HIES sample was based on a stratified multi stages selection
- Stratification: geographical provinces (by urban / rural locations)
- First stage of selection: Enumerations Areas (EAs) with probability of selection proportional to size
- Second stage: households, with uniform probability of selection within the EAs

iv) The mean and standard deviation indicate the status of the variable of interest within each strata. The intracluster correlation (p), and the design effect (DEFF) highlight the efficiency of the sampling strategy, and the standard error/relative standard error (SE/RSE) of the variable of interest show its accuracy.

v) The purpose of this analysis is to get some insights from the 2010 HIES sample design in order to improve the 2019 survey. There is no point to improve the sample size in strata where the sample is not efficient (the gain in accuracy will be minor compared to the related cost).

vi) The challenge in the 2019 Vanuatu baseline survey:
- Meet precision targets in each strata (provincial level) including Penama where Ambae island has been evacuated at the time of the sample design.
- Acceptable sample size (due to budget constraints)
- Following international recommendations (12 months of field operation)
- Enhance the monitoring and supervision of the field staff and simplify management of the logistics in the field

==> Optimize the variance/cost ratio of the survey design
vii) Table 1 from the Document Sample Design (provided as External Resources) presents the Vanuatu 2010 HIES survey specifications, efficiency and accuracy in each strata (for the variable of interest). It shows that some improvements can be done in Torba, and Shefa rural (where the RSE is higher than 5%), and it shows a high intraclass correlation in Malampa, Shefa rural and Tafea (that lead to a high design effect in those strata). In Torba, the high design effect comes from the high number of households interviewed in each selected EA (on average 33 households per selected EA in this strata were interviewed).
- Torba: the sample size is good, there is just a need to reduce the number of households to interview within each strata (and in order to keep a similar sample size the number of EAs to select in the province will be increased)
- Malampa: given the high intracluster correlation in this province, a higher number of EAs to select is required (with the same number of households per EA to interview).

- Shefa rural: keep the same number of households to interview within each EA, and increase the number of EA to select (this will lead to a higher sample size)
- Tafea: similar to Malampa province, the high intraclass correlation indicates that the number of EAs to select has to be increased (therefore the sample size as well).
The sample size has to be increased in Malampa, Shefa rural and Tafea, for the rest, the 2019 design will have to be similar as 2010 (in order to provide at least the same level of accuracy).
viii) The 2019 Vanuatu base line survey follows the international recommendations in terms of data collection schedule (12-month coverage) and considers a better management and supervision of the field staff. In this context, the field staff will work by team, given that:
- A team is made of 1 supervisor (team leader) and 2 or 3 interviewers
- Each interviewer will be responsible for 5 interview per round
- A round of survey is a 1 week period
- 1 EA is covered during 1 round, after the round completion, the team moves to the next EA for the next round.
- A team complete 32 rounds during the 12 month field operation period (roughly every 2 rounds/2 weeks) of work is followed by 1 round/1 week of rest).
ix) Table 3 from the Document Sample Design (provided as External Resources) presents a survey schedule starting February 2019 and ending February 2020. During this period of 32 working weeks (corresponding to 32 different selected EAs) the teams will be on the field (a 3 weeks period of rest during Christmas period).

x) The number of interviewer by team and number of team by province will determine the total sample size within each province. A team made of 3 interviewers can achieve 480 households over the period, while a team of 2 interviewers can achieve only 320 cases.

xi) The intraclass correlation is used to calculate the precision loss due to clustering. Like the standard deviation, the intracluster correlation is considered to be a true population parameter, and therefore transferable between designs. We have to accept the hypothesis that this correlation factor has not changed during the period 2010-2019, and therefore can be used to predict DEFF and RSE for the next survey given an adjusted design (based on the conclusions provided by the 2010 design). Table 2 from the Document Sample Design (provided as External Resources) predicts the design effect and sampling error of the variable of interest given the new sample design that is based on:
- the sample size within each strata
- the number of teams within each strata
- the number of interviewers per team
In order to allow more flexibility in the sample size, it is preferable to set up some teams of 3 interviewers, that can achieve 480 households, which represent a good sample size for Torba and Sanma urban and some teams of 2 interviewers that will achieve 320 households each (2 teams will be required in other provinces).

xii) The proposed design in Table 2 from the Document Sample Design (provided as External Resources) shows a total sample size of 4,640 households and a higher level of accuracy of the estimate of the variable of interest in all the stratas. Only Shefa rural shows a RSE higher than 5%, which will be still acceptable. The high intraclass correlation in Shefa rural impacts the variance of the estimates and lead to an increase the sample size or a decrease of the number of households to interview per EA which is logistically and financially not recommended.

Response Rate

The final response rate was 98%. Torba had the lowest response rate (92%) with 40 households not responding.
For each enumeration area, field staff were provided with a list of primarily selected households (Set A) and a list of replacement households (Set B). Replacements households were to be interviewed in the case of non-response from the primary selected households (for reasons such as refusals, unable to contact the household). In the circumstance whereby the list of replacement households (Set B) was exhausted, enumerators were instructed to randomly select a household within the EA (these ate Set C).

91% of responding households were from Set A, 9% from Set B and 1% from Set C.

Below is the final response rate for each province:
-Torba: 92%
-Sanma - urban: 100%
-Sanma - rural: 98%
-Penama: 100%
-Malampa: 99%
-Shefa - urban: 100%

-Shefa - rural: 99%
-Tafea: 96%
-NATIONAL: 98%

Weighting

The weighting process started with the computation of the raw weights that correspond to the inverse of the probability of selection. The second step consists in the adjustment of the weights based on the provincial population projection (mid 2019). Finally the set of weights were adjusted based on the age and sex structure of the population projection.

Questionnaires

Overview

The questionnaire was developed in English using the World Bank software Survey Solutions. This questionnaire is divided into 18 modules that are detailed below.

-Introduction (geographic areas, list of household members)
-Module 1: Demographic characteristics: ethnicity, marital status;
-Module 2: Wellbeing: culture and wellbeing, sports;
-Module 3: Education: language, traditional knowledge and skills, school attendance and attainment;
-Module 4: Health: illness, meals, functioning difficulties;
-Module 5: Individual expenses: communication, narcotics, other;
-Module 6: Labour force and individual income: activities, income, allowance, cash transfer amount;
-Module 7: Civic responsibility and satisfaction;
-Module 8: Household details: Dwelling characteristics, energy, water, transport;
-Module 9: Household assets: land, robbery, furniture, asset details;
-Module 10: Other household items and services: home maintenance and construction, vehicles, vehicle details, international private travel, domestic private travel, household services and taxes, financial support, other household expenditures;
-Module 11: Ceremonies;
-Module 12: Remittances;
-Module 13: Shocks;
-Module 14: Productive sector activity: livestock and aquaculture, fishing seafood collection and hunting, agriculture farming activities, handicraft;
-Module 15: Food recall;
-Module 16: Non-food recall;
-Module 17: Food away from home;
-Module 18: Food security.

Data Collection

Data Collection Dates

Start
2019-02-18

End
2020-02-17

Cycle
N/A

Data Collection Mode

Computer Assisted Personal Interview [capi]

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-Module 11: Ceremonies;
-Module 12: Remittances;
-Module 13: Shocks;
-Module 14: Productive sector activity: livestock and aquaculture, fishing seafood collection and hunting, agriculture farming activities, handicraft;
-Module 15: Food recall;
-Module 16: Non-food recall;
-Module 17: Food away from home;
-Module 18: Food security.

Supervision

A total of 19 interviewers and 13 supervisors were required for undertaking this survey.

Data Processing

Data Editing

Data editing was done using the software Stata.

Other Processing

Data entry was done using the World Bank's software Survey Solutions.

Data Appraisal

No content available

Documentation

Questionnaires

Questionnaire - Vanuatu 2019 HIES

Title	Questionnaire - Vanuatu 2019 HIES
Author(s)	Vanuatu National Statistics Office.
Date	2019-01-01
Country	Vanuatu
Language	English
Description	This file is the final questionnaire of the 2019-2020 Household Income and Expenditure Survey (HIES) of Vanuatu. Published in English, it contains the following Modules: -Introduction (geographic areas, list of household members) -Module 1: Demographic characteristics: ethnicity, marital status; -Module 2: Wellbeing: culture and wellbeing, sports; -Module 3: Education: language, traditional knowledge and skills, school attendance and attainment; -Module 4: Health: illness, meals, functionning difficulties; -Module 5: Individual expenses: communication, narcotics, other; -Module 6: Labour force and individual income: activities, income, allowance, cash transfer amount; -Module 7: Civic responsibility and satisfaction; -Module 8: Household details: Dwelling characteristics, energy, water, transport; -Module 9: Household assets: land, robbery, furniture, asset details; -Module 10: Other household items and services: home maintenance and construction, vehicles, vehicle details, international private travel, domestic private travel, household services and taxes, financial support, other household expenditures; -Module 11: Ceremonies; -Module 12: Remittances; -Module 13: Schocks; -Module 14: Productive sector activity: livestock and aquaculture, fishing seafood collection and hunting, agriculture farming activities, handicraft; -Module 15: Food recall; -Module 16: Non-food recall; -Module 17: Food away from home; -Module 18: Food security.
Filename	Vanuatu 2019 NSDP Baseline Survey (1).pdf
Format	Document, PDF [application/pdf]

Technical documents

COICOP classification - Vanuatu 2019 HIES

Title	COICOP classification - Vanuatu 2019 HIES
Author(s)	Vanuatu National Statistics Office.
Date	2019-01-01
Country	Vanuatu
Language	English
Description	This file is the COICOP (Classification of Individual Consumption According to Purpose) classification of the 2019-2020 Household Income and Expenditure Survey of Vanuatu. It contains all the COICOP codes and labels present in the Expenditure dataset.
Filename	Vanuatu COICOP.xlsx
Format	Document, Microsoft Excel [application/msexcel]

PACCOI classification - Vanuatu 2019 HIES

Title	PACCOI classification - Vanuatu 2019 HIES
Author(s)	Vanuatu National Statistics Office.
Date	2019-01-01
Country	Vanuatu
Language	English
Description	This file is the PACCOI (Pacific Classification of Income) classification of the 2019-2020 Household Income and Expenditure Survey of Vanuatu. It contains all the PACCOI codes and labels present in the Income dataset.
Filename	Vanuatu PACCOI.xlsx
Format	Document, Microsoft Excel [application/msexcel]

Sample design - Vanuatu 2019 HIES

Title	Sample design - Vanuatu 2019 HIES
Author(s)	Vanuatu National Statistics Office.
Date	2019-01-01
Country	Vanuatu
Language	English
Description	This file is the Sample design of the 2019-2020 Household Income and Expenditure Survey of Vanuatu. It contains the methodology and information on how the sample design was developped.
Filename	Vanuatu Baseline Survey 2019 - sample design.pdf
Format	Document, PDF [application/pdf]