Overview

Identification

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Version

VERSION DESCRIPTION
Version 1.0 (edited/final)

PRODUCTION DATE
2008-12

Overview

ABSTRACT
This report is based on the Vanuatu Multiple Indicator Cluster Survey (MICS) conducted in 2007 by the Ministry of Health, Government of the Republic of Vanuatu (GoV) with financial and technical support from United Nations Children's Fund (UNICEF) - Pacific. The major objectives of the survey are to provide up-to-date information for assessing the situation of children and women in Vanuatu and furnish data needed for monitoring progress towards goals established by the Millennium Development Goals (MDGs) and the goals of A World Fit for Children (WFFC) as a basis for future action and development of a monitoring and evaluation system for Vanuatu's Poverty Reduction Strategy and United Nations Development Assistance Framework (UNDAF). The survey covered a nationally representative sample of 2,632 households; 2,692 women respondents aged 15-49 years and 1,634 under-five children. Data were collected through three questionnaires: 1) the Household Questionnaire, 2) the Individual Questionnaire for Women aged 15-49, and 3) the Questionnaire for Children under-five years of age. Independent samples for each domain (6 provinces and 2 cities) made it equivalent to 8 separate surveys to produce valid estimates for each domain simultaneously. National, and urban and rural estimates are obtained by combining these provincial data. The fieldwork began in 01 November, 2007 and concluded in 20 December, 2007.

Characteristics of the Household Population

A larger proportion of the population is in the younger age groups than in the older age groups indicating a young age structure of the population. About 41 percent of the population is below 15 years of age and only 3 percent is aged 65 and above. The average household size is 5 persons per household. The dependency ratio is 0.83 or 83 dependent population per 100 working population. Children aged 0-17 years composed of 47 percent of the total population and 53 percent is adult
population aged 18 and above. Overwhelming majority (91.9%) of the households are male-headed households, while 8 percent are female-headed households. Most of the households (84.4%) comprised of at least one child below 18 years of age, while 50 percent households have at least one child below five years. More than 85 percent households comprised of at least one woman of reproductive age of 15-49 years.

Characteristics of the Respondents

The respondents were mostly young women within their thirties, with an average age of 39 years. Around 16 percent of the women were aged 40 and above, while 18 percent were adolescent girl of age 15-19 years. About 39 percent of the women were aged 20-29 years, and 74 percent of the women have given birth to at least one child. Only 6 percent respondents were illiterate; while 63 percent completed primary and 30 percent secondary level of education.

Child mortality

The infant mortality rate is the probability of dying before the first birthday. The under-five mortality rate is the probability of dying before the fifth birthday. The infant mortality rate is estimated at 25 per thousand, while the under-5 mortality rate (USMR) is around 30 per thousand. These estimates have been calculated by averaging mortality estimates obtained from women age 25-29 and 30-34, and refer to mid 2001. Infant and under-5 mortality rates are lower in urban areas. There are also visible differences in mortality in terms of educational levels and wealth status.

Child Malnutrition

Nationally 16 percent children are moderately or severely underweight, 20 percent are moderately or severely stunted and 7 percent are moderately or severely wasted. The prevalence of malnutrition is higher among boys than girls. Mother's education and household wealth status show a negative effect on child malnutrition.

Breastfeeding

About 72 percent women initiated breastfeeding to their babies within one hour of birth, while 82 percent within one day of birth. About 40 percent of children aged less than 6 months are exclusively breastfed. At age 6-9 months, 62 percent of children are receiving breast milk and semisolid or solid food and the rate is higher in the rural area (65%) than the national average. By age of 12-15 months, 79 percent children are still being breastfed, and by age of 20-23 months about 32 percent of them are still being breastfed. Female children are more likely to receive continued breastfeeding till 12-15
months and 20-23 months of age than their male counterparts.

Salt Iodization

In the interviewed households, salt used for cooking was tested for iodine content using an iodine testing solution. About 11 percent households were reported to have no salt available at the time of survey. Nearly a quarter (22.9%) of the households consumes salt containing 15 Parts per Million (PPM) or more iodine in salt. It is higher in the urban area (43.8%) compared with the rural area (16.4%). The data also show that, households in the richest quintiles is more likely to consume iodized salt compared to the households in the poorest quintiles (49.4% vs. 7.5%).

Low Birth Weight

Among the weighed children, one in ten (10.2%) appeared as low birth weight (<2500 grams) children. No major difference visible between residential areas (urban: 9.2% and rural: 10.3%). Mother's education and household wealth status show some overall negative effect on low birth weight.

Child immunization

Over 79 percent of children aged 12-23 months received a BCG vaccine by the age of 12 months. 74 percent of them received the first dose of DTP. The proportion declines for subsequent doses of DPT, to 65 percent for the second dose and 58 percent for the third dose. Similarly, 75 percent of children received the first dose of polio vaccination by age 12 months but this declined to 55 percent by the third dose. The coverage for measles vaccination by 12 months was lower than for the other immunizations, at 37 percent.

Overall, 42 percent children 12-23 months of age (urban 48.7% and rural 39.9%) are fully immunized, far below the target of universal immunization. The proportion is slightly higher for girls (43.7%) than boys (39.5%). Provincial variations are visible, ranging from 31 to 57 percent across the provinces; highest in Shefa and the lowest in Sanma.

Tetanus Toxoid

Nearly half (49.2%) of the mothers with a birth in the 24 months preceding the survey are protected against neonatal tetanus. There is a little urban-rural variation in neonatal tetanus coverage (50.7% vs. 49.0%). Among the mothers being protected, 39 percent received at least two doses of tetanus toxoid (TT) during last pregnancy. Mother's education shows a strong positive effect on receiving at least two doses of TT during last pregnancy. Wealth status shows no consistent pattern on receiving at least two doses of TT during last pregnancy.
Diarrhoea

One in every 7 (13.8%) under-five children had diarrhoea in two weeks before the survey, with little urban-rural differentials (12.8% vs. 14.1%). Male children had slightly higher prevalence of diarrhoea than female children (14.4% vs. 13.3%). The prevalence of diarrhoea is the lowest among the children aged less than 6 months (6.2%), reaches its peak of 23 percent at the age of 6-11 months and then starts declining. Mother’s education and wealth quintiles show no consistent pattern of relationship with diarrhoea prevalence. More than half (53.7%) of the children with diarrhoea received Oral Rehydration Therapy (ORT), while 46 percent of the children with diarrhoea received no treatment. Overall, 16 percent of the diarrhoeal cases are managed at home during the episode and 43 percent children received increased fluids and continued food.

Acute Respiratory Infection (ARI)

Nearly 3 percent children reportedly had some symptoms of ARI in two weeks preceding the survey. Most of them sought treatment from government health facilities. About 48 percent of children underfive with suspected pneumonia got antibiotic treatment; 63 percent received the treatment from an appropriate provider. Only 8 percent mothers could correctly identify the two danger signs of pneumonia.

Malaria

More than 90 percent (93.0%) of the respondents correctly identified mosquito bite as the main cause of malaria, and 83 percent of them were able to correctly mention three preventive measures. Among the three measures, the most prominent are ‘using mosquito net’ (68.2%), ‘destroying mosquito breeding sites’ (39.3%) and ‘taking medicine’ (16.1%). Health workers (85.0%) appeared as the most prominent source of knowledge about prevention of malaria. Overwhelming majority of the households (overall: 86.5%, urban: 89.0%, rural: 85.7%) were reportedly taking some measure to prevent malaria, among them 68 percent household have at least one long-lasting net. About 66 percent of under-five year children slept under a bed-net during the previous night while 56 percent slept under an insecticide treated long lasting bed-net, and the proportion is quite high in rural areas.

Water and Sanitation

Overall, 85 percent of the population had access to improved drinking water sources - 98 percent in urban and 81 percent in rural areas. Still, 15 percent of the population uses drinking water from unimproved sources namely unprotected well (3.5%), unprotected spring (4.4%), and surface water (7.0%). Use of unsafe surface water is higher in Tafea (22.1%). Only 15 percent household treats water
for drinking. About half of the households (48.7%) have drinking water on their premises (urban 70.5%, rural 42.1%). It takes less than 15 minutes to get to the water source and bring water in 36 percent households; while only 4 percent and 2 percent of the households spend 30 minutes to less than one hour, and one hour or more time for this purpose respectively.

More than 60 percent (63.5%) of the surveyed population lives in the households that use improved sanitation facilities (urban 91.2% and rural 55.1%). Unimproved sanitation facilities include pit latrine without slab (32.8%) and open field (3.2%).

Multiple Indicator Cluster Survey, Vanuatu, 2007 xx

Use of Contraception

Overall, 38 percent of the women aged 15-49 years, married or in-union, are currently using any contraceptive method, of which 37 percent are using modern methods and nearly 2 percent are using traditional methods. Pill is by far the most popular modern contraceptive method used by 16 percent eligible women followed by injectables used by 11 percent and female sterilization by 6 percent women.

Urban women are more likely to use family planning methods than that of rural women and the rate varies widely across the provinces. Contraceptive prevalence rate increased to a peak of 48 percent for the women aged 30-34 years and then decreased to a rate of 24 percent for the women aged 45-49 years. Women’s educational level and household wealth status are strongly associated with contraceptive prevalence.

Antenatal Care (ANC)

One or more ANC visit during pregnancy is almost universal in Vanuatu, as, 98 percent of the pregnant women had one or more ANC visits during pregnancy, and 84 percent pregnant women received ANC from a skilled provider (i.e., doctor, nurse, or midwife) at least once during their last pregnancies. An additional 14 percent received ANC from an unskilled provider. Only 2 percent of them did not receive any ANC.

Assistance during Delivery

About 80 percent women aged 15-49 years had their child birth in health facilities and 74 percent child births were attended by skilled personnel; low in Sanma rural. The proportion of deliveries attended by skilled personnel is lower than the deliveries in the health facilities, because people bring the pregnant to the nearest health facility for delivery though there might not be any trained personnel there.

Delivery attended by skilled personnel is positively associated with education of pregnant and wealth
Child Development

For most of the under-five children (90.6%), an adult household member engaged in four or more activities that promote children's learning and school readiness. Adult engagement in activities with children varies little with gender of the children (91.9% for male and 89.2% for female). Mothers' and fathers' education show a positive relationship with the engagement of the activities promoting child development. Adults engaged with children on an average in 5.2 activities, while the mean number of activities that father engaged in with the child is 2.6. About 16 percent children are living in the households without their natural fathers. The proportion is higher in the rural area than in urban area (16.1% vs. 13.7%).

Pre-school Participation, Primary and Secondary School Participation

Nearly one-fourth (23.4%) of the children aged 36-59 months are attending pre-school. There is no gender and urban-rural differentials in pre-school attendance. Overall, 96 percent of the children who attended pre-school in the previous year are currently attending the first grade of primary school. Girls are almost universally (98.5%) attending in the first grade of primary school, while the rate is 94 percent for their boy counterparts. More than one-third (37.1%) of the children of primary school entry age were attending Grade-1 at the time of the survey. Overall, 73 percent of the primary school age children attend primary or secondary school. The rate is higher in the urban area than in the rural (78.6% vs. 71.2%) and among the richest than poorer.

Adult Literacy

About 77 percent women aged 15-24 are literate. The literacy rate is the highest in Port Vila (83.7%) and the lowest in Tafea (67.8%). It is higher in the urban area (85.6%) than the rural area (73.3%). Similar to other educational indicators, adult literacy rate is positively associated with the wealth status of the households.

Birth Registration

Birth registration still remain very low with only one-fourth (25.6%) of under-five births have been registered. Children from the richest households were more likely to be registered than the children from the poorest family. Mother's education also shows a strong positive effect on birth registration. The most common reasons for non-registration include "did not think it an urgent matter" (40.1%), "did not know that child should be registered" (28.3%), "did not know where to register" (9.7%),
“must travel too far” (7.6%) and “costs too much” (4.3%).

Early Marriage

About 7 percent of the married

**KIND OF DATA**
Sample survey data [ssd]

**UNITS OF ANALYSIS**
Household, individual (including adult women and children aged 5 and below)

**Scope**

**NOTES**
The Vanuatu Multiple Indicator Cluster Survey - 2007 has the following primary objectives:

1. To provide up-to-date information for assessing the situation of children and women both at national and sub-national (provincial and urban/rural) levels.
2. To furnish data needed for monitoring progress towards goals established by the Millennium Development Goals (MDGs) and the goals of A World Fit for Children (WFFC) as a basis for future action.
3. To contribute to the improvement of data and monitoring systems, and to strengthen technical expertise in the design, implementation and analysis of such systems.

**TOPICS**

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**Coverage**

**GEOGRAPHIC COVERAGE**
The sample was designed with the intention of providing reliable estimates for the key MICS indicators at the national level and also for urban and rural areas separately, as well as for the 6 Provinces of Malampa, Penama, Sanma, Shefa, Tafea and Torba. Port Vila under Shefa Province and Luganville under Sanma province are the two major cities considered as two domains under the urban stratum.

**UNIVERSE**
The survey covered the whole resident sedentary population, with the exception of homeless.
### Producers and Sponsors

**PRIMARY INVESTIGATOR(S)**

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### Metadata Production

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**DATE OF METADATA PRODUCTION**

2006-04-25

**DDI DOCUMENT VERSION**

Version 1.0 (IHSN)

**DDI DOCUMENT ID**

DDI-VUT-MICS-2007-1.0
**Sampling**

**Sampling Procedure**

The sample for MICS Vanuatu - 2007 is a probability-based, stratified cluster sample of 3000 households. They were selected in 120 clusters, each of size 25 households. The sample was designed with the intention of providing reliable estimates for the key MICS indicators at the national level and also for urban and rural areas separately, as well as for the 6 Provinces of Malampa, Penama, Sanma, Shefa, Tafea and Torba. Port Vila under Shefa Province and Luganville under Sanma province are the two major cities considered as two domains under the urban stratum. The Shefa and Sanma provinces mentioned here exclude these two cities of corresponding provinces and bear rural character. The entire areas of all other provinces are considered as rural. The sample was allocated to the provinces/cities and by urban-rural in an optimum fashion to secure enough sample cases in each domain for reliable estimates to be obtained. That is, independent samples for each domain (6 provinces and 2 cities) made it equivalent to 8 separate surveys to produce valid estimates for each domain simultaneously. National, and urban and rural estimates are obtained by combining these provincial data.

The sample frame was the enumeration areas (EA) that made up the 1999 Population Census of Vanuatu, which had been updated in the 2006 Agricultural Census. Primary sampling units, or PSUs, were defined as either single EA or combinations of EAs. Combining EA was necessary whenever an EA contained fewer than 25 households, because the cluster size to be interviewed was set at 25 households as mentioned above.

The sample was selected in two stages. The first stage consisted of first stratifying the PSUs by province and within-province by urban/rural in two provinces namely Shefa and Sanma and then selecting 120 PSUs with probability proportionate to size or pps. At the second-stage, a fixed sample size of exactly 25 households was selected from each PSU, using systematic, equal-probability sampling or epsem. Thus a total of 3000 households were selected (120 clusters times 25 households). A household was defined as "a group of people those are eating from the same pot". Sample sizes for six rural provinces are 300 households each, while 500 and 700 households for Luganville and Port Vila cities respectively. It is to be noted here that the cities of Port Vila and Luganville are the urban part of the Shefa and Sanma provinces respectively. Total areas of other provinces are considered as rural. The resulting sample was not theoretically self-weighing; and sample weights have been used to adjust for major variations among the provinces and urban/rural EA with regard to different estimates. Detail sampling plan and sample allocation is shown in Appendix A.

It can be also mentioned here that, every fourth households in each cluster were selected for a nutrition component of the survey, which was additional to MICS nutrition modules. Thus the sample size for the additional nutrition component was exactly one-fourth of the MICS sample size in each domain and at national level.

**Deviations from Sample Design**

There was no deviation from sample design.

**Response Rate**

Of the 2,963 households selected for the sample, 2,959 were found to be occupied. Among the occupied households, 2,632 were successfully interviewed with a household response rate of 89 percent. In the interviewed households, 3,261 eligible women (aged 15-49) were identified for interview and 2,692 were successfully interviewed, giving women response rate of 83 percent. Among the interviewed households, 1,741 under-five children were identified. Of them, mothers/caretakers of 1,634 children were successfully interviewed, yielding children response rate of 94 percent. The overall response rates of women and children were found to be 73 percent and 84 percent respectively (Table HH.1).
The sample response rates vary to some extent by urban-rural areas and by provinces. Urban area shows higher response rate for household and children than those of rural area. However, there is little variation in women response rate between rural and urban area. The response rate varied widely among the provinces/urban domains. The household response rate ranges from 71 percent in Sanma to as high as 99 percent in Port Vila. Women's response rate varies from 76 percent in Malampa to 89 percent in Penama and Sanma. Children’s response rate vary in a narrow range among the provinces/domains, with 90 percent in Luganville to 97 percent in Sanma and Torba (Table HH.1)

Weighting

Because the sample was stratified by region, it is not self-weighting. For reporting the national level results, sample weights were used. Variable hhweight is to be used to weigh records at the household level. Variables wmweight and chweight have been computed respectively to weigh records at the women and child level.
Questionnaires

Overview

The questionnaires for the [Country] MICS were based on the MICS Model Questionnaire with some modifications and additions. A household questionnaire was administered in each household, which collected various information on household members including sex, age, literacy, marital status, and orphanhood status. The household questionnaire also includes education, child labor, water and sanitation, and salt iodization modules.

In addition to a household questionnaire, questionnaires were administered in each household for women age 15-49 and children under age five. For children, the questionnaire was administered to the mother or caretaker of the child.

The questionnaire for women contains the following modules:
- Child mortality
- Tetanus toxoid
- Maternal and newborn health
- Contraceptive use
- HIV/AIDS.

The questionnaire for children under age five includes modules on:
- Birth registration and early learning
- Vitamin A
- Breastfeeding
- Care of Illness
- Malaria
- Immunization
- Anthropometry.

From the MICS model English version, the questionnaires were translated into two languages: A and B. The questionnaires were pretested during November 1999. Based on the results of the pretest, modifications were made to the wording and translation of the questionnaires.
Data Collection

Data Collection Dates

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Data Collection Mode

Face-to-face [f2f]

DATA COLLECTION NOTES

The field staff was trained for five days in early January 2000.

SUPERVISION

In each district a team of people was selected – one supervisor for the district, controllers (one controller per 5-6 interviewers) and interviewers (whose number depended on the number of clusters in the region). For conducting the fieldwork, 10 teams were established - each was composed of three to four people, two interviewers (health workers), one laboratory technician and one driver. The MICS Coordinator provided overall supervision.

Several levels of control system were imposed:
1. During the field work, the controllers from the Ministry of Health conducted the first level of control immediately after receiving questionnaires from the interviewers.
2. Controllers and supervisors from the Ministry of Health conducted a second level of control on a sample of 10% of households.
3. The third level of control was carried out by supervisors from the WHO, UNICEF and Ministry of Health on a sample of 5% of households.
Data Processing

Data Editing

The data were entered in 5 microcomputers using the specially prepared software in CsPro. The data were entered in the regional offices of the CSO, with 10 staff trained prior to data processing. In order to ensure quality control, the software was programmed to check the internal consistency of data entered. Procedures and standard programs developed under MICS and adapted to the Popstan questionnaire were used throughout. The SPSS-10 statistical package was used for data tabulation and analysis.
Data Appraisal

Estimates of Sampling Error

To estimate the standard errors for MICS indicators we used the estimation of variance for the proportion given in the formula:

\[ Vp' = \text{Def} \cdot p \cdot (1-p)/(n-1), \]
where:
- \( p \) – proportion for the variance estimate,
- \( n \) – sample size, and
- \( \text{Def} \) – effect of sample planning for the observed group of indicators.

The standard error is the square root of \( \text{Var} \cdot x' \).

To calculate the variance for the whole population, the estimations of variance for the separate domains were summed. The approximate design effect was derived from the estimation of the variance of the simple random sample, and from the estimation of the variance proposed in the ultimate cluster method. The design effect was calculated for all groups of variance and separately for all observed domains. All differences denoted as significant in the text are significant at the 95 percent confidence level, unless otherwise indicated.

Other forms of Data Appraisal

As a basic check on the quality of the survey data, the percentage of cases missing information on selected questions is shown in Table 3 in the Survey Report. Fewer than one percent of household members have missing information on their level of education but three percent are missing data on the year of education. Among female respondents, 0.2 percent did not report a complete birth date (i.e., month and year). Three percent of women who had a birth in the 12 months prior to the survey did not report the date of their last tetanus toxoid injection. These low levels of missing data suggest that there were not significant problems with the questions or the fieldwork.

The data on weight and height are the most likely among the selected information to be missing. Approximately five percent of children are missing this information, which may be the result of the child not being present, refusal, or some other reason. By international standards, this percentage is relatively low in comparison to other surveys in which anthropometric measurements are taken.

The single year age distribution of household members by sex exhibits some distortions centered around age 15 for females and on age two for males. There appears to be significant heaping of women on ages 14-17 and perhaps a slight dearth of women ages 18-19. For both sexes, some digit preference is evident for ages ending in 0 and 5, a pattern typical of populations in which ages are not always known.