Thailand - Multiple Indicator Cluster Survey 2015-2016

United Nations Children's Fund, National Statistical Office

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Identification

SURVEY ID NUMBER
THA_2015_MICS_v01_M

TITLE
Multiple Indicator Cluster Survey 2015-2016

COUNTRY/ECONOMY

Name	Country code
Thailand	THA

STUDY TYPE
Multiple Indicator Cluster Survey - Round 5 [hh/mics-5]

SERIES INFORMATION
Since its inception in 1995, the Multiple Indicator Cluster Surveys, known as MICS, has become the largest source of statistically sound and internationally comparable data on women and children worldwide. In countries as diverse as Costa Rica, Mali and Qatar, trained fieldwork teams conduct face-to-face interviews with household members on a variety of topics – focusing mainly on those issues that directly affect the lives of children and women. MICS has been a major source of data on the Millennium Development Goals (MDG) indicators and will be a major data source in the post-2015 era.

The Multiple Indicator Cluster Survey, Round 5 (MICS5) is the fifth round of MICS surveys, previously conducted around 1995 (MICS1), 2000 (MICS2), 2005-2007 (MICS3) and 2009-2011 (MICS4). MICS was originally developed to support countries measure progress towards an internationally agreed set of goals that emerged from the 1990 World Summit for Children.

The fifth round of Multiple Indicator Cluster Surveys (MICS5) is scheduled for 2013-2016 and survey results are expected to be available from 2015 onwards. Data collected in MICS5 will play a critical role in the final assessment of the MDGs in September 2015 and subsequent surveys in MICS6 will provide the baselines for the Sustainable Development Goals that will follow.

Information on more than 130 internationally agreed-upon indicators is being collected through MICS5. In addition to collecting information on intervention coverage, MICS also explores knowledge of and attitudes to certain topics, and specific behaviors of women, men and children, enabling analysts to gain insights into behaviours that may affect women's and children's lives. MICS routinely disaggregates data so that disparities associated with age, gender, education, wealth, location of residence, ethnicity and other characteristics are revealed.

ABSTRACT
The Thailand Multiple Indicator Cluster Survey (MICS 2015-2016) was conducted from November 2015 to March 2016 by the National Statistical Office (NSO). Technical and financial support for the survey was mainly provided by the United Nations Children's Fund (UNICEF) in Thailand. The Thailand MICS, 2015-2016 provides valuable information and the latest evidence on the situation of children and women in Thailand, updating information from the previous MICS and other relevant household surveys. The survey presents data from an equity perspective by indicating disparities by sex, area, region, education, household wealth and other characteristics. The Thailand MICS, 2015-2016 is based on a sample of 28,652 households that were interviewed and provides a comprehensive picture of children, women and men in the five regions of Thailand.

The 2015-2016 Thailand MICS has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in Thailand;

- To generate data for the critical assessment of the progress made in various areas, and to commit additional efforts to those areas that require more attention;

- To furnish data needed for monitoring progress towards goals established in the Millennium Declaration and other internationally agreed upon goals, as a basis for future action;

- To collect disaggregated data for the identification of disparities to allow for evidence-based policymaking aimed at social inclusion of the most vulnerable;

- To contribute to the generation of baseline data for the 2030 agenda;

- To validate data from other sources and the results of focused interventions.

KIND OF DATA
Sample survey data [ssd]

UNIT OF ANALYSIS
- Individuals

- Households

Version

VERSION DESCRIPTION
- v01: Edited, anonymous datasets for public distribution.

Scope

NOTES
The Scope of the Multiple Indicator Cluster Survey 2015-2016 includes:

- HOUSEHOLD: List of Household Members, Education, Child Discipline, Household Characteristics, Water and Sanitation, Handwashing and Salt Iodization.

- INDIVIDUAL WOMEN: Woman’s Background, Fertility2, Desire for Last Birth, Maternal and Newborn Health, Contraception, Unmet Need, Attitudes Toward Domestic Violence, Marriage/Union and HIV/AIDS.

- INDIVIDUAL MEN: Man’s Background, Fertility, Attitudes Toward Domestic Violence, Marriage/Union and HIV/AIDS.

- CHILDREN: Age, Birth Registration, Early Childhood Development, Breastfeeding and Dietary Intake, Immunization, Care of Illness and Anthropometry.

Coverage

GEOGRAPHIC COVERAGE
The Thailand Multiple Indicator Cluster Survey was to produce statistically reliable estimates of most indicators, at the national level, for urban and rural areas, and for five regions (Bangkok, Central, North, Northeast and South) of the country. Urban and rural areas in each of the provinces were defined as the sampling strata (Bangkok had only urban areas).

UNIVERSE
The survey covered all de jure household members (usual residents), all women aged 15-49 years, all men aged 15-49 years and children under the age of five.

Producers and sponsors

PRIMARY INVESTIGATORS

Name
United Nations Children’s Fund
National Statistical Office

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role

United Nations Children's Fund	UNICEF	Financial and Technical Support

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

Name
Ministry of Public Health
Ministry of Education
Ministry of Social Development and Human Security
Ministry of Labour
Office of the National Economic and Social Development Board
International Health Policy Program
Thai Health Promotion Foundation
Institute for Population and Social Research

Sampling

SAMPLING PROCEDURE

The sample for the Thailand Multiple Indicator Cluster Survey was designed to provide estimates for a large number of indicators on the situation of children and women at the national level, for urban and rural areas, and for five regions: Bangkok, Central, North, Northeast and South. In addition, the results are produced for 14 individual provinces. The urban and rural areas by province were identified as the main sampling strata, and the sample was selected in two stages. Within each stratum, a specified number of census enumeration areas were selected systematically with probability proportional to size. After a household listing was carried out within the selected enumeration areas, a systematic sample of 20 households was drawn in each sample enumeration area: 10 households with under-five children and 10 without under-five children. The sample was stratified by province, urban and rural areas, and is not self-weighting. For reporting all survey results, sample weights are used.

The sample size for the Thailand MICS was calculated as 31,580 households. For the calculation of the sample size, the key indicator used was the stunting prevalence among children age 0-4 years.

The resulting number of households from this exercise was 3,000 households, which is the sample size needed in each region. The survey also provided estimates for 14 provinces, so the number of households in these 14 provinces was 1,320 households per province (Except Songkhla 1,560 households) - thus yielding 31,580 in total.

The number of households selected per cluster for the Thailand MICS was determined as 20 households, based on a number of considerations, including the design effect, the budget available, and the time that would be needed per team to complete one cluster. Dividing the total number of households by the number of sample households per cluster, it was calculated that 150 sample clusters would need to be selected in each region and 66 sample clusters would need to be selected in each of the 14 province except Songkhla, with 78 sample clusters.

Equal allocation of the total sample size to five regions was used. Therefore, 150 clusters were allocated to each region (150 clusters * 5 regions * 20 sample households per cluster), 66 clusters each to 13 provinces, and 78 clusters in 1 province (66 clusters * 13 provinces * 20 sample households per cluster and 78 clusters * 1 province * 20 sample households per cluster) with the final sample size calculated as 31,580 households. In each region, the clusters (primary sampling units) were distributed to the urban and rural domains proportionally to the size of urban and rural populations in that region. The table below shows the allocation of clusters to the sampling strata.

The sampling frame which was used for the selection of PSUs was from the 2015 Household Information Survey (HIS) (the master sampling frame) which was prepared in Oct-Dec 2014. This survey is carried out every year, and provided an up-to-date listing of 2,985 PSUs per year, taken from the 2010 census. It was the frame that was used for several national surveys (e.g. Labor Force Survey and Socio Economic Survey). The sample design for the HIS was stratified, single-stage cluster sampling. The Enumeration Area (EA) was the sampling unit and Probability proportional to size (PPS) was applied for selecting the EAs in each stratum. The measure of size was the number of households in each EA.

A more detailed description of the sample design can be found in Appendix A of the Final Report.

RESPONSE RATE

Of the 31,010 households selected for the sample, 29,375 were found to be occupied. Of these, 28,652 were successfully interviewed, for a household response rate of 97.5 per cent.

In the interviewed households, 26,033 women (aged 15-49 years) were identified. Of these, 25,614 were successfully interviewed, yielding a household response rate of 98.4 per cent.

In the interviewed households, 23,642 men (aged 15-49) were identified. Questionnaires were completed for 23,183 eligible men, which corresponds to a response rate of 98.1 per cent within eligible interviewed households.

There were 12,313 children under 5 years of age listed in the household questionnaires. Questionnaires were completed for 12,250 of these children, which corresponds to a response rate of 99.5 per cent within interviewed households.

Overall response rates of 96.0 per cent, 95.6 per cent, and 97.0 per cent are calculated for the individual interviews of women, men and children under 5.

WEIGHTING

The Thailand Multiple Indicator Cluster Survey sample is not self-weighting. Essentially, by allocating an equal number of households to each province, different sampling fractions were used in each province since the size of the provinces varied. For this reason, sample weights were calculated and these were used in the subsequent analyses of the survey data.

The major component of the weight is the reciprocal of the sampling fraction employed in selecting the number of sample households in that particular sampling stratum (h), PSU (i) and group (j), where the groups correspond to households with and without children under age 5 years:

$Whij = 1/fhij$

The term fhij, the sampling fraction for the j-the group in the i-th sample PSU of the h-th stratum, is the product of probabilities of selection at every stage in each sampling stratum:

$Fhij = P1hi * P2hij$

where Pshij is the probability of selection of the sampling unit at stage s for the j-th group in the i-th sample PSU of the h-th sampling stratum.

Since the estimated number of households in each enumeration area (PSU) in the sampling frame used for the first stage selection, the updated number of households in the enumeration area from the listing were different, and the number of households with and without children varied by EA, individual sampling fractions for households in each sample enumeration area (cluster) were calculated separately for the groups of households with and without children under age 5. The sampling fractions for households in each enumeration area (cluster) therefore included the first stage probability of selection of the enumeration area in that particular sampling stratum and the second stage probability of selection of a household in the sample enumeration area (cluster), separately for households with and without children.

A second component in the calculation of sample weights takes into account the level of non-response for the household and individual interviews. The adjustment for household non-response is equal to the inverse value of:

RRh = Number of interviewed households in stratum h/ Number of occupied households selected in stratum h

These responses rates were also calculated separately for the groups of households with and without children. The non-response adjustment factors for women's, men’s and under-5's questionnaires are applied to the adjusted household weights. The numbers of eligible women, men and under-5 children were obtained from the roster of household members in the Household Questionnaire for households where interviews were completed.

The design weights for the households were calculated by multiplying the above factors for each enumeration area, separately for the groups of households with and without children. These weights were then standardized (or normalized), one purpose of which is to make the weighted sum of the interviewed sample units equal to the total sample size at the national level. Normalization is achieved by dividing the full sample weights (adjusted for nonresponse) by the average of these weights across all households at the national level. This is performed by multiplying the sample weights by a constant factor equal to the unweighted number of households at the national level divided by the weighted total number of households (using the full sample weights adjusted for nonresponse). A similar normalization procedure was followed in obtaining standardized weights for the women’s, men’s and under-5’s questionnaires. In the 1,579 sample enumeration areas (clusters) the normalized household weights varied between 0.002912 and 16.191260; the normalized women weights

varied from 0.003287 to 18.207244; the normalized men weights varied from 0.003129 to 17.401282 and the normalized children weights varied from 0.006530 to 33.906927.

Data Collection

DATES OF DATA COLLECTION

Start	End
2015-11	2016-05

DATA COLLECTION MODE
Face-to-face [f2f]

DATA COLLECTION NOTES
Training for the fieldwork was conducted for 10 days during September 15-29, 2015 for the first batch and during 18-29 October for the second batch in a central location (Bangkok). Due to large number of participants, each batch was split into two groups. Sixteen provinces with large number of clusters were included in the first batch, while staffs from remaining 61 provinces attended the second. In some provinces, there was a gap between the end of training and the start of fieldwork. In those provinces, two-day special refresher trainings were arranged before starting the actual data collection on 1 November 2015.

The main training included lectures on interviewing techniques and the contents of the questionnaires as well as mock interviews between trainees to gain practice in asking questions. Towards the end of the training period, trainees spent one day on interviewing practice in Bangkok. Moreover, for both batches, experts from the Ministry of Public Health were invited to speak about maternal and newborn health issues such as contraception, antenatal care and vaccination. The knowledge and information acquired through the training were useful for the interview process and the accuracy of the survey results.

In Bangkok, the fieldwork was carried out under the responsibility of the Field Administration Bureau, while Provincial Statistical Officers were responsible for the fieldwork undertaken in the other 76 provinces.

The data were collected by 98 teams from the respective provinces; each team on average was comprised of 3 interviewers and a supervisor. All the field team members were NSO staff and have been working with NSO on various regular and ongoing surveys for many years. Most of them had experience using android-based tablet surveys, including from the previous round of the Thailand MICS. In order to facilitate data collection in areas in which non-Thai households were prevalent, a specific translator was also a part of team. Fieldwork concluded in March, 2016.

DATA COLLECTORS

Name	Abbreviation
National Statistical Office of Thailand	NSO

Questionnaires

QUESTIONNAIRES
Four sets of questionnaires were used in the survey:

1. a household questionnaire which was used to collect basic demographic information on all de jure household members (usual residents), the household and the dwelling;

2. a questionnaire for individual women administered in each household to all women aged 15-49 years;

3. a questionnaire for individual men administered in each household to all men aged 15-49 years; and

4. a questionnaire for children under the age of five, administered to mothers (or caretakers) for all children under 5 living in the household.

The questionnaires are based on the MICS5 model questionnaire. From the MICS5 model English version, the questionnaires were customised and translated into Thai and were tested through three rounds of pre-test in Sing Buri and Phra Nakhon Si

Ayutthaya (during July 13-17, 2015), Bangkok (July 27, 2015) and Satun (during August 9-18, 2015). Based on the results of the pre-test, modifications were made to the wording and translation of the questionnaires.

In addition to the administration of questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine content, observed the place for handwashing, and measured the weights and heights of children under 5 years.

Data Processing

DATA EDITING

The Thailand MICS, 2015-2016 used window-based tablets to collect the data. CSPro software, version 5.0.3 was used for data collection and entry. Robust data transfer mechanism was developed to immediately transfer collected data to the central office. Data processing began simultaneously with data collection in November 2015 and was completed in early May 2016. Data were analyzed using the Statistical Package for Social Sciences (SPSS) software, Version 21. Model syntax and tabulation plans developed by UNICEF were customized and used for this purpose.

Data Appraisal

ESTIMATES OF SAMPLING ERROR

The sample of respondents selected in the Thailand Multiple Indicator Cluster Survey is only one of the samples that could have been selected from the same population, using the same design and size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between the estimates from all possible samples. The extent of variability is not known exactly, but can be estimated statistically from the survey data.

The following sampling error measures are presented in this appendix for each of the selected indicators:

- Standard error (se): Standard error is the square root of the variance of the estimate. For survey indicators that are means, proportions or ratios, the Taylor series linearization method is used for the estimation of standard errors. For more complex statistics, such as fertility and mortality rates, the Jackknife repeated replication method is used for standard error estimation.

- Coefficient of variation (se/r) is the ratio of the standard error to the value (r) of the indicator, and is a measure of the relative sampling error.

- Design effect (deff) is the ratio of the actual variance of an indicator, under the sampling method used in the survey, to the variance calculated under the assumption of simple random sampling based on the same sample size. The square root of the design effect (deft) is used to show the efficiency of the sample design in relation to the precision. A deft value of 1.0 indicates that the sample design of the survey is as efficient as a simple random sample for a particular indicator, while a deft value above 1.0 indicates an increase in the standard error due to the use of a more complex sample design.

- Confidence limits are calculated to show the interval within which the true value for the population can be reasonably assumed to fall, with a specified level of confidence. For any given statistic calculated from the survey, the value of that statistic will fall within a range of plus or minus two times the standard error (r + 2.se or r - 2.se) of the statistic in 95 per cent of all possible samples of identical size and design.

For the calculation of sampling errors from MICS data, programs developed in CSPro Version 5.0, SPSS Version 21 Complex Samples module and CMRJack have been used.

The results are shown in the tables that follow. In addition to the sampling error measures described above, the tables also include weighted and unweighted counts of denominators for each indicator. Given the use of normalized weights, by comparing the weighted and unweighted counts it is possible to determine whether a particular domain has been under-sampled or over-sampled compared to the average sampling rate. If the weighted count is smaller than the unweighted count, this means that the particular domain had been over-sampled. As explained later in the footnote of Table SE.1, there is an exception in the case of indicators 4.1 and 4.3, for which the unweighted count represents the number of sample households, and the weighted counts reflect the total population.

Sampling errors are calculated for indicators of primary interest, for the national level, for urban and rural areas, and for all regions. Seven of the selected indicators are based on households members, 17 are based on women, 5 are based on men, and 15 are based on children under 5. Table SE.1 shows the list of indicators for which sampling errors are calculated,

including the base population (denominator) for each indicator.

Access policy

CONTACTS

Name	Affiliation	Email	URL
General Inquiries	UNICEF	childinfo@unicef.org	Link
MICS Programme Manager	UNICEF	mics@unicef.org	Link
UNICEF Thailand Country Office	UNICEF	thailandao@unicef.org	Link

CONFIDENTIALITY

Users of the data agree to keep confidential all data contained in these datasets and to make no attempt to identify, trace or contact any individual whose data is included in these datasets.

CITATION REQUIREMENTS

Use of the dataset must be acknowledged using a citation which would include:
- the Identification of the Primary Investigator
- the title of the survey (including country, acronym and year of implementation)
- the survey reference number
- the source and date of download.

Example,

United Nations Children's Fund, Thailand National Statistical Office. Thailand - Multiple Indicator Cluster Survey (MICS) 2015-2016, Ref. THA_2015_MICS_v01_M. Dataset downloaded from [url] on [date].

ACCESS AUTHORITY

Name	Affiliation	Email	URL
Childinfo	UNICEF	mics@unicef.org	Link

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Metadata production

DDI DOCUMENT ID

DDI_THA_2015_MICS_v01_M_WB

PRODUCERS

Name	Abbreviation	Affiliation	Role
Development Economics Data Group	DECDG	The World Bank	Documentation of the DDI

DATE OF METADATA PRODUCTION

2017-09-06

DDI DOCUMENT VERSION

Version 01 (September 2017)

Data Dictionary

Data file	Cases	Variables
hl Household members	108242	40
mn Men (age 15-49 years)	23642	82
ch Children under five	12313	268
hh Households	31010	120
wm Women (age 15-49 years)	26033	203