

# Kiribati - Demographic and Health Survey 2009

**Kiribati National Statistics Office - Government of Kiribati**  
**Ministry of Health - Government of Kiribati**

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# Overview

## Identification

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### ID NUMBER

SPC\_KIR\_2009\_DHS\_v01\_M

## Version

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### VERSION DESCRIPTION

Version 01: Cleaned, labelled and de-identified version of the Master file.

### PRODUCTION DATE

2011-09

### NOTES

-The Household datasets (datasets which names start with "HH-" in the Datasets section) are the original datasets, which means they are following the questionnaire (provided as External Resources)'s structure.

-However, the two other records - Man (datasets starting with "M-") and Woman (datasets starting with "W-") are not following the questionnaire's structure as they all are recoded datasets. This means that some variables are being recoded by one, two or more questions from the questionnaire.

It is also to be noted that this is the de-identified version of the Master file which means all direct identifiers (names, days and months of birth) were removed from the datasets.

## Overview

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### ABSTRACT

The 2009 Kiribati Demographic and Health Survey was the first survey in phase two of Pacific DHS Project with funding support from ADB. The primary objective of this survey was to provide up-to-date information for policy-makers, planners, researchers and programme managers, for use in planning, implementing, monitoring and evaluating population and health programmes within the country. The survey was intended to provide key estimates of Kiribati's demographic and health situation.

The main objective of the 2009 Kiribati Demographic and Health Survey (2009 KDHS) is to provide current and reliable data on fertility and family planning behaviour, child mortality, adult and maternal mortality, children's nutritional status, the use of maternal and child healthcare services, and knowledge of HIV and AIDS. Specific objectives are to:

- collect data (at the national level) that will allow the calculation of key demographic rates;
- analyse the direct and indirect factors that determine the level and trends of fertility;
- measure the level of contraceptive knowledge and practice among women and men by method, urban-rural residence and region;
- collect high-quality data on family health, including immunisation coverage among children, prevalence and treatment of diarrhoea and other diseases among children under age 5 years, and maternity care indicators (including antenatal visits, assistance at delivery, and postnatal care);
- collect data on infant and child mortality;
- obtain data on child feeding practices, including breastfeeding, and collect 'observation' information to use in assessing the nutritional status of women and children;
- collect data on knowledge and attitudes of women and men about sexually transmitted infections (STIs), HIV and AIDS, and

evaluate patterns of recent behaviour regarding condom use; and

- collect data on knowledge and attitudes of women and men about tuberculosis.

#### KIND OF DATA

Sample survey data [ssd]

#### UNITS OF ANALYSIS

- Household,

- Individual.

## Scope

#### NOTES

The scope of the 2009 Demographic and Health Survey includes:

- Household: age, sex, relationship to the head of the household, characteristics of the household dwelling, such as the water source; type of toilet facilities; materials used for the roof, floors, and walls; possession of durable goods.

- Women and Men: education, residential history and media exposure, pregnancy history and childhood mortality, knowledge and use of family planning methods, fertility preferences, antenatal, delivery and postnatal care, breastfeeding and infant feeding practices, immunisation and childhood illnesses, marriage and sexual activity, their own work and their husband's background characteristics, and awareness and behaviour regarding HIV and other STIs.

#### KEYWORDS

Kiribati, Demographic, Health, DHS, Fertility, Family planning, Maternity, Sexual life, STI, Immunisation, Infant, Child mortality, Breastfeeding, Nutrition, Tuberculosis, Malaria

## Coverage

#### GEOGRAPHIC COVERAGE

National coverage.

#### UNIVERSE

The survey covered all de jure household members (usual residents), all women aged between 15-49 years, and all men aged between 15-49 years.

## Producers and Sponsors

#### PRIMARY INVESTIGATOR(S)

Name	Affiliation
Kiribati National Statistics Office	Government of Kiribati
Ministry of Health	Government of Kiribati

#### OTHER PRODUCER(S)

Name	Affiliation	Role
Pacific Community		Technical assistance

#### FUNDING

Name	Abbreviation	Role
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Name	Abbreviation	Role
Government of Kiribati		Funding
Asian Development Bank	ADB	Funding
Australian Agency for International Aid	AusAID	Funding
United Nations Population Fund	UNFPA	Funding

## OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
Pacific Community		Technical assistance

## Metadata Production

## METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Development Data Group	DECDG	The World Bank	Documentation of the DDI
Statistics for Development Division	SDD	Pacific Community	Review of the documentation

## DATE OF METADATA PRODUCTION

2014-02-04

## DDI DOCUMENT VERSION

Version 01 (February 2014)

Version 02 (May 2019): This is the review of the first documentation (done by the World Bank), which aims at providing a dataset and documenting it. Done in New Caledonia by the Statistics for Development Division (SDD).

## DDI DOCUMENT ID

DDI\_SPC\_KIR\_2009\_DHS\_v01\_M

# Sampling

## Sampling Procedure

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The primary focus of the 2009 Kiribati Demographic Health Survey (DHS) was to provide estimates of key population and health indicators, including fertility and mortality rates, for the country as a whole, for the urban area and rural areas (separately) - urban is South Tarawa and urban settlement on Kiritimati Island while the rest of Kiribati is defined as rural areas. The survey used the sampling frame provided by the list of census enumeration areas, with population and household information coming from the 2005 Kiribati Population and Housing Census.

The survey was designed to obtain completed interviews of 2,193 women aged 15-49. In addition, males aged 15-59 in every second household were interviewed. To take non-response into account, 1,480 households countrywide were selected: 640 in the urban area and 840 in rural areas.

## Response Rate

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In total, 1,477 households were selected for the sample, of which 1,451 were found to be occupied during data collection. Of these existing households, 1,422 were successfully interviewed, giving a household response rate of 98%.

In households, 2,193 women were identified as being eligible for the individual interview. Interviews were completed with 1,978 women, yielding a response rate of 90%. Of the 1,337 eligible men identified in the selected sub-sample of households, 85% were successfully interviewed. Response rates were higher in rural areas than in the urban area, with the rural-urban difference in response rates being the greatest among eligible men.

# Questionnaires

## Overview

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Three questionnaires were administered during the 2009 Kiribati Demographic Health Survey (KDHS): a Household questionnaire, a Women's questionnaire and a Men's questionnaire. These were adapted to reflect population and health issues relevant to Kiribati, and were presented at a series of meetings with various stakeholders, including government ministries and agencies, NGOs and international donors. The final draft of each questionnaire was discussed at a questionnaire design workshop organised by Kiribati National Statistics Office (KNSO) in March 2009 in Tarawa. Survey questionnaires were then translated into the local language (I-Kiribati) and pretested from 7–19 August 2009.

The Household questionnaire was used to list all the usual members and visitors in selected households, and to identify women and men who were eligible for the individual interview. Some basic information was collected on the characteristics of each person listed, including age, sex, education and relationship to the head of the household. For children under age 18 years, the survival status of their parents was ascertained. The Household questionnaire also collected information on characteristics of each household's dwelling unit, such as source of drinking water, type of toilet facility, material used for the floor, and ownership of various durable goods.

The Women's questionnaire collected information from all women aged 15–49 about:

- education, residential history and media exposure;
- pregnancy history and childhood mortality;
- knowledge and use of family planning methods;
- fertility preferences;
- antenatal, delivery and postnatal care;
- breastfeeding and infant feeding practices;
- immunisation and childhood illnesses;
- marriage and sexual activity;
- their own work and their husband's background characteristics; and
- awareness and behaviour regarding HIV and other STIs.

The Men's questionnaire was administered to all men aged 15–49 living in every second household. It collected much of the same information as the women's questionnaire, but was shorter because it did not contain questions about reproductive history or maternal and child health or nutrition.

# Data Collection

## Data Collection Dates

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Start	End	Cycle
2009-09-21	2009-12-18	N/A

## Data Collection Mode

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Face-to-face [f2f]

## Data Collection Notes

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### -Pretesting

Pretest training was conducted from 7–19 August. The purpose of pretesting was to test the suitability of the questionnaires such as the translation, skips (skips to next question if it is not applicable to the respondent) and filtering instructions. The training of future supervisors was also conducted at this time.

In total, 22 fieldworkers (15 women, 7 men) were trained as supervisors and interviewers. Pretest training consisted of classroom lectures, PowerPoint presentations, demonstration interviews, front-of class interviews, mock interviews, quizzes and tests, and some field practice that consisted of interviewing selected sample households. The interview team spent less than one week interviewing 20 households. After pretesting, the Kiribati Demographic Health Survey (KDHS) team reviewed and discussed the results. Pretesting revealed that the translation of some questions and skip instructions (skips to next question if it is not applicable to the respondent) needed revising.

### -Training

The main training of KDHS fieldworkers was from 17–29 August 2009. Interviewers were recruited two weeks prior to the training. Recruitment of fieldworkers involved interviewing and testing for selection. In total, 63 fieldworkers were trained, 56 of whom were selected to be supervisors, field editors and interviewers. The remaining seven were assigned as data editors and data entry operators.

This training was held at the Kiribati Institute of Technology, and was conducted in both English and I-Kiribati. Fieldworkers were taught the importance of the survey and each question, and how to ask each question. Training included an explanation of all questions in the questionnaire, and instructions on how to follow skips and filtering within the questionnaire. Fieldworkers were tested on their ability to understand the questionnaire and their performance in conducting an interview. Quiz and test results were used for selecting the best supervisors and field editors. In addition to classroom training, fieldworkers underwent several days of field practice to gain more experience in conducting interviews and handling fieldwork logistics.

During fieldwork practice, seven teams were formed, consisting of one supervisor, one field editor, four female interviewers and two male interviewers. Three days were assigned for fieldwork practice, with each team covering twelve households. During fieldwork practice, some issues were identified (e.g. some questionnaires were printed incorrectly and transport was insufficient). These were dealt with before the actual survey was conducted.

### -Fieldwork

Fieldwork was conducted from 21 September to 18 December, and fieldworkers were sent to their respected island the following week after the training.

Four teams were sent to the outer islands while the remaining three teams carried out interviews on South Tarawa in selected enumeration areas. For teams outside of South Tarawa, the supervisor and field editor were responsible for carrying out data quality control as well as team management. The supervisor's role was to ensure that all questionnaires were completed and sent back to the office for a control check and data processing. Similarly, it was the supervisor and field editor's responsibility to communicate with the KDHS manager about any issue the teams encountered in the field. This approach was also used in South Tarawa.

## Questionnaires

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## Data Collectors

Name	Abbreviation	Affiliation
Kiribati National Statistics Office	KNSO	Government of Kiribati
Ministry of Health	MOH	Government of Kiribati

## Supervision

There is one supervisor for each of the 7 data collection teams in the field.

For teams outside of South Tarawa, the supervisor and field editor were responsible for carrying out data quality control as well as team management. The supervisor's role was to ensure that all questionnaires were completed and sent back to the office for a control check and data processing. Similarly, it was the supervisor and field editor's responsibility to communicate with the Kiribati Demographic Health Survey (KDHS) manager about any issue the teams encountered in the field. This approach was also used in South Tarawa.



## Data Processing

### Data Editing

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Processing the 2009 Kiribati Demographic Health Survey (KDHS) results began three weeks after the start of fieldwork. Completed questionnaires were returned periodically from the field to the Kiribati National Statistics Office (KNSO) data processing center in South Tarawa, where the data were entered and edited by seven data processing personnel specially trained for this task. Data processing personnel were supervised by KNSO staff. Data entry and editing of questionnaires was completed by 30 March 2010. CSPRo was used for data processing.

### Other Processing

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CSPRo was used for data processing.

# Data Appraisal

## Estimates of Sampling Error

The sample of respondents selected in the 2009 Kiribati Demographic Health Survey (KDHS) is only one of many samples that could have been selected from the same population, using the same design and expected 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 all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

Sampling errors are the errors that result from taking a sample of the covered population through a particular sample design. Non-sampling errors are systematic errors that would be present even if the entire population was covered (e.g. response errors, coding and data entry errors, etc.).

For the entire covered population and for large subgroups, the KDHS sample is generally sufficiently large to provide reliable estimates. For such populations the sampling error is small and less important than the non-sampling error. However, for small subgroups, sampling errors become very important in providing an objective measure of reliability of the data.

Sampling errors will be displayed for total, urban and rural and each sample domain only. No other panels should be included in the sampling error table. The choice of variables for which sampling error computations will be done depends on the priority given to specific variables. However, it is recommended that sampling errors be calculated for at least the following variables, which was not case with Kiribati given the smallness of the sample compared to other countries in the Pacific.

Sampling errors are usually measured in terms of the standard error for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95% of all possible samples of identical size and design.

If the sample of respondents had been selected by simple random sampling, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2009 KDHS sample was the result of a multistage stratified design, and, consequently, it is necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2009 KDHS is the Integrated Sample Survey Analysis (ISSA) Sampling Error Module. This module uses the Taylor linearisation method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

In addition to the standard error, ISSA Software Program computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. ISSA also computes the relative error and confidence limits for the estimates.

Sampling errors for the 2009 KDHS are calculated for selected variables considered to be of primary interest for the women's survey and for men's surveys, respectively. The results are presented in this appendix for the country as a whole, and for urban and rural areas. The DEFT is considered undefined when the SE considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (example, as calculated for children ever born to women aged 40–49) can be interpreted as follows: the overall average from the national sample is 4.993 and its SE is 0.145. Therefore, to obtain the 95% confidence limits, one adds and subtracts twice the standard error to the sample estimate (i.e.  $4.993 \pm 2 \times 0.145$ ). There is a high probability (95%) that the true average number of children ever born to all women aged 40–49 is between 4.703 and 5.283. Sampling errors are analysed for the national woman sample and for two separate groups of estimates: 1) means and proportions, and 2) complex demographic rates. The SE/R for the means and proportions range between 0.9% and 27.5%; the highest SE/Rs are for estimates of very low values (e.g. currently using IUD). So in general, the SE/R for most estimates for the country as a whole is small, except for estimates of very small proportions. However, for mortality rates, the averaged SE/R for the five-year period mortality rates is generally higher than those related to the 10-year estimates. There are differentials in the SE/R for the estimates of sub-populations. For example, for the variable want no more children, the SE/Rs as a percent of the estimated mean for the whole country, and for the urban areas are 3.9% and 6.2%, respectively.

The sampling errors are fully described in Appendix B of "Kiribati 2009 DHS Final Report" pp.268-276 provided in the External Resources section.

## Other forms of Data Appraisal

A series of data quality tables are available to review the quality of the data and include the following:

- Household age distribution
- Age distribution of eligible and interviewed women
- Completeness of reporting
- Births by calendar years
- Reporting of age at death in days
- Reporting of age at death in months

The results of each of these data quality tables are shown in Appendix C of "Kiribati Demographic and Health Survey 2009 - Final Report" pp.277-282.

# Documentation

## Questionnaires

### Kiribati 2009 DHS Household Questionnaire

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Title	Kiribati 2009 DHS Household Questionnaire
Author(s)	Kiribati National Statistics Office
Date	2009-06-26
Country	Kiribati
Language	English
Description	This file is the Household questionnaire of the 2009 Kiribati Demographic Health Survey. was used to list all the usual members and visitors in selected households, and to identify women and men who were eligible for the individual interview. Some basic information was collected on the characteristics of each person listed, including age, sex, education and relationship to the head of the household. For children under age 18 years, the survival status of their parents was ascertained. The household questionnaire also collected information on characteristics of each household's dwelling unit, such as source of drinking water, type of toilet facility, material used for the floor, and ownership of various durable goods.
Filename	2009_KDHS_Appendix-E_HH-Questions.pdf

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### Kiribati 2009 DHS Men Questionnaire

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Title	Kiribati 2009 DHS Men Questionnaire
Author(s)	Kiribati National Statistics Office
Date	2009-06-26
Country	Kiribati
Language	English
Description	This file is the Man's questionnaire of the 2009 Kiribati Demographic Health Survey. It was used to collect information to all men aged 15-49 living in every second household. Here are the areas collected with this form: <ul style="list-style-type: none"> <li>- education, residential history and media exposure;</li> <li>- reproduction;</li> <li>- contraception;</li> <li>- marriage and sexual activity;</li> <li>- fertility preferences;</li> <li>- employment and gender roles;</li> <li>- HIV/AIDS;</li> <li>- Other health issues.</li> </ul>
Filename	2009_KDHS_APPENDIX-E_Men-Questions.pdf

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### Kiribati 2009 DHS Woman Questionnaire

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Title	Kiribati 2009 DHS Woman Questionnaire
Author(s)	Kiribati National Statistics Office
Date	2009-06-26
Country	Kiribati
Language	English

This file is the Woman's questionnaire of the 2009 Kiribati Demographic Health Survey. It is used to collect information from all women aged 15-49 about:

- education, residential history and media exposure;
- reproduction;
- contraception;
- pregnancy and postnatal care;

Description - child immunization and health and child's and woman's nutrition;  
 - marriage and sexual activity;  
 - fertility preferences;  
 - husband's background and woman's work;  
 - employment and gender roles;  
 - HIV/AIDS;  
 - other health issues.

Filename 2009\_KDHS\_APPENDIX-E\_Women-Questions.pdf

## Reports

### Kiribati 2009 DHS Final Report

Title	Kiribati 2009 DHS Final Report
Author(s)	Kiribati National Statistics Office
Date	2010-12-01
Country	Kiribati
Language	English
Description	<p>This file is the Final Report of the 2009 Kiribati Demographic Health Survey. This report is a comprehensive summary of the findings of the 2009 Kiribati Demographic and Health Survey (KDHS) implemented by the Kiribati National Statistics Office.</p> <ul style="list-style-type: none"> <li>-Chapter 1 Introduction: p.1</li> <li>-Chapter 2 Household Population and Housing Characteristics : p.8</li> <li>-Chapter 3 Characteristics of Respondents: p.26</li> <li>-Chapter 4 Fertility: p.48</li> <li>-Chapter 5 Family Planning: p.69</li> <li>-Chapter 6 Other Proximate Determinants of Fertility: p.90</li> </ul>
Table of contents	<ul style="list-style-type: none"> <li>-Chapter 7 Fertility Preferences: p. 103</li> <li>-Chapter 8 Infant and Child Mortality: p. 117</li> <li>-Chapter 9 Reproductive Health: p.139</li> <li>-Chapter 10 Child Health: p.156</li> <li>-Chapter 11 Nutritional Status of Children and Adults: p.175</li> <li>-Chapter 12 HIV and AIDS Related Knowledge, Attitudes and Behaviour: p.198</li> <li>-Chapter 13 : Women's Empowerment and Demographic Health Outcomes: p.238</li> <li>-References and Appendices : p.263</li> </ul>
Filename	KIR_2009_DHS_Reports_EN.pdf

### Kiribati 2009 DHS Fact Sheet

Title	Kiribati 2009 DHS Fact Sheet
Author(s)	Kiribati National Statistics Office
Date	2010-01-01
Country	Kiribati
Language	English
Description	<p>This file is the Fact Sheet of the 2009 Kiribati Demographic Health Survey. This document is presenting some of the main results collected during the survey through texts, tables and graphs.</p>
Filename	KIR_2009_DHS_Facts_EN.pdf

## Technical documents

## Kiribati 2009 DHS Survey Design

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Title	Kiribati 2009 DHS Survey Design
Author(s)	Kiribati National Statistics Office
Date	2009-01-01
Country	Kiribati
Language	English
Description	This file is the Survey Design Proposal. It provides information on the survey design for the Kiribati 2009 Demographic Health Survey (DHS).
Table of contents	<ul style="list-style-type: none"> <li>-1. Introduction: p.2</li> <li>-2. Sample Size and Allocation: p.2</li> <li>-3. Sample Selection: p.7</li> <li>-4. Fieldwork Teams: p.11</li> <li>-5. Timing of Activities: p.14</li> <li>-6. Other Issues to Address: p.15</li> <li>-7. Survey Budget: p.18</li> <li>-Appendices: p.20</li> </ul>
Filename	DHS Survey Design 2009.pdf

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