

# Tanzania - Ifakara Rural INDEPTH Core Dataset 1997-2014 (Release 2017)

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Visit our data catalog at: <http://www.indepth-ishare.org/index.php>

## Overview

### Identification

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**ID NUMBER**

INDEPTH.TZ011.CMD2014.V1

### Version

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**VERSION DESCRIPTION**

CMD2014.v1: Edited dataset for public distribution

**PRODUCTION DATE**

2017-05-20

### Overview

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**ABSTRACT**

Longitudinal data gathered from health surveillance is very essential, when combined with detailed demographic information, can provide invaluable insight into public health needs and importance. Ifakara DSS is one of the oldest site that managed by Ifakara Health Institute in Tanzania. It is located in remote area of the river valley of Kilombero in Morogoro region. The site was set up on 1996 with the main focus on the impact evaluation of malaria intervention on child health and survival. In early 2000s, it extends its initiatives on population monitoring and evaluation of community health intervention programs and researches on adult health and older people of Kilombero and Ulanga districts. Since its inception the HDSS has been very instrumental in producing population evidence base with the potential to guide policy and action in public health related needs and population changes over time.

The Ifakara DSS is continuous demographic surveillance, consisting of initial and repeat censuses of the chosen population after every four months, registering each individual resident and recording their associated information, such as household socioeconomic status, Individual education status, marital status, bed net ownership, pregnancy and pregnancy outcome. Health outcomes and vital events (e.g. births, deaths, in and out migration) in the DSS area are then linked to individual demographic records for precise estimate. This help to understand the dynamism of the population over time in terms of fertility, mortality and migration. It provides data for calculating the denominators of demographic rates. The cause of death for specific age group is also administered through standardized verbal autopsy questionnaire adopted from the In-depth network.

The objectives of Ifakara DSS

- To collect accurate information on child health and survival,
- To provide a framework for population based health research which is relevant to the local health priorities and needs,
- To evaluate/test health tools and community well being interventions
- To monitor some of the NSGRP/MDG indicators.
- To document all births, deaths, In and out migration on the DSS area
- To quantify the impact of health and poverty reduction strategies and intervention
- To document the trend of cause specific mortality (burden of disease) of Kilombero and Ulanga districts

The access for Ifakara demographic data is currently abided by the institutional data sharing policy and procedure fall under the data centralization team ([dc@ihi.or.tz](mailto:dc@ihi.or.tz)) while the forms for data requisition and extraction are online available at [www.ihipdata.org](http://www.ihipdata.org). All requests of data by either online or physical should be subjected to institutional committee for ethical approval and being only accepted by field researchers with regards to specified objectives or the existing collaboration between two parts

**KIND OF DATA**

Event history data

## UNITS OF ANALYSIS

Individual

## Scope

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### NOTES

The Ifakara HDSS collects and updates detailed information from the study area of Kilombero and Ulanga districts. Some of these include Homestead information: such as Latitude, longitude, altitude, village name, village code, name of hamlet and location identifier (Location ID). Other related issues are Household Information like household names and household heads.

The term household is referred by HDSS as a group of individuals who share, or eat from, the same cooking pot.

On Individuals, information like names (Given name, Middle name and Family name), sex, birth date, marital-status, relation to household head, occupation, education level and individual ID.

While on residency, the information of residency status is also captured for instance; resident, died or out-migrated), marital status to members equal to 13 years of age, pregnancy status for women aged 13-49 years, location ID and Individual ID.

Pregnancy outcome related information: In this theme information of live birth, number of babies, still birth, abortion, date of birth, place of birth, names, sex of child, mother's personal identity number (link), father's personal identity number are collected. Death: In this theme information collected are date of death, place of death, age at Death and individual ID are collected.

Verbal Autopsy is also done to identify the probable cause of death.

In-migration: In this theme the following information are collected: Date of in-migration, Individual ID, names, sex, date of birth of migrant, reason for in-migration, relation to household head, origin of migration episode and whether the migrant had a previous residence within the Rufiji HDSS.

Out-migration: Date of out-migration, Individual ID, reason for out-migration and destination of migration episode. Finally, the social economic status information is updated once per year.

### TOPICS

Topic	Vocabulary	URI
Demography [N01.224]	MeSH	<a href="http://www.ncbi.nlm.nih.gov/mesh">http://www.ncbi.nlm.nih.gov/mesh</a>
Emigration and Immigration [N01.224.625.350]	MeSH	<a href="http://www.ncbi.nlm.nih.gov/mesh">http://www.ncbi.nlm.nih.gov/mesh</a>
Mortality [N01.224.935.698]	MeSH	<a href="http://www.ncbi.nlm.nih.gov/mesh">http://www.ncbi.nlm.nih.gov/mesh</a>
Birth Rate [N01.224.935.849.500]	MeSH	<a href="http://www.ncbi.nlm.nih.gov/mesh">http://www.ncbi.nlm.nih.gov/mesh</a>

### KEYWORDS

Fertility, Mortality, Migration

## Coverage

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### GEOGRAPHIC COVERAGE

The Ifakara Health and Demographic Surveillance System (HDSS) area is located in southern Tanzania in parts of two districts, Kilombero and Ulanga both in Morogoro region (latitude 8 00.'to 8 35'S, altitude 35 58 to 36 48'E). Cover a total of 25 villages in rural area of Ulanga nd Kilombero districts, with a population of about 124,000 people in 28,000 households.

### UNIVERSE

The Ifakara Rural DSS covered a total of 25 villages in Ulanga and Kilombero districts comprising 127,450 people residing in 22,670 households. In 2007, the Ifakara HDSS extended its area of coverage by including 5 villages of Ifakara town which comprised by 45000 people residing in approximately 12000 households. This is a home of about 25% of the African population with social, economic and demographic importance.

## Producers and Sponsors

### PRIMARY INVESTIGATOR(S)

Name	Affiliation
Eveline Geubbels	Thematic group leader of M&E Ifakara Health Institute

### OTHER PRODUCER(S)

Name	Affiliation	Role
Mr Imani Irema	Ifakara Health Institute	Data Officer
Dr. Rose Nathan	Ifakara Health Institute	Technical assistance in questionnaire design:
Dr. Honorati Masanja	Ifakara Health Institute	Technical assistance in questionnaire design:
Mr. Oskar Mukasa	Ifakara Health Institute	Technical assistance in questionnaire design:
Dr. Rose Nathan	Ifakara Health Institute	Technical assistance in sampling methodology/selection:
Dr. Honorati Masanja	Ifakara Health Institute	Technical assistance in sampling methodology/selection:
Mr. Oskar Mukasa	Ifakara Health Institute	Technical assistance in sampling methodology/selection:
Mr Amri Shamte	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr Chrisostom Mahutanga	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr Jensen Charles	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr. Advocatus Kakorozya	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr. Tumaini Kilimba	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr. Aurelio DiPasquale	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr. Nicolas Maire	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr Ramadhan Abdul	Ifakara Health Institute	Technical assistance in data processing
Mr Jumanne Kisweka	Ifakara Health Institute	Technical assistance in data processing
Mr Jackson Francis	Ifakara Health Institute	Technical assistance in data processing
Dr Rose Nathan	Ifakara Health Institute	Technical assistance in data analysis
Mr. Francis Levira	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Dr. Honorati Masanja	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Dr. Eveline Geubbels	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr Ramadhan Abdul	Ifakara Health Institute	Technical assistance in data collection and system upgrading
Mr Amri Shamte	Ifakara Health Institute	Technical assistance in data collection and system upgrading

### FUNDING

Name	Abbreviation	Role
Ministry of Health and Social Welfar	MoHSW	
Swiss Tropical Institute	STI	
Bill and Melinda Gates Foundation	BMGF	
Global Fund for to Fight HIV/AIDS, TB and Malaria	GFATM	
Doris Duke Charitable Foundation	DDCF	
Comic Relief, UK	Comic Relief, UK	
Novatus Foundation for Suitable Development	NFSD	
United State Urgency for International Development	USAID	

Name	Abbreviation	Role
World Bank	WB	
World Health Organization	WHO	
UK Department for International Development	DFID	

**OTHER ACKNOWLEDGEMENTS**

Name	Affiliation	Role
Fieldworkers	Ifakara Health Institute	
IT Support staffs	Ifakara Health Institute	
Field supervisors	Ifakara Health Institute	
Data Clerks	Ifakara Health Institute	
Key Informants	Community	
Village Leaders	Community	

## Metadata Production

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**METADATA PRODUCED BY**

Name	Abbreviation	Affiliation	Role
iSHARE2 Technical Team	iS2TT	INDEPTH Network	Documentation of the study
INDEPTH Network	int.indepth	INDEPTH Network	agency
Imani Irema	II	Ifakara Health Institute	DDI Author

**DATE OF METADATA PRODUCTION**

2017-05-20

**DDI DOCUMENT VERSION**

CMD2014.v1: 2017-05-20

**DDI DOCUMENT ID**

DDI.INDEPTH.TZ011.CMD2014.v1

## Sampling

### Sampling Procedure

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Not Applicable

### Deviations from Sample Design

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None

### Response Rate

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98% of the residents from the Ifakara DSS area accept to participate on surveillance studies. All refusal are documented and being followed by the field management team to identify its causal or reasons. To ensure effective community engagement on health researches, the Ifakara HDSS have introduced several programs such the use of Community Advisory Board which comprised by members from the grass root of the community. Their main responsibility is to raise community awareness and sensitization and sending feedback to the community about ongoing research activities form the platform. Besides that the Ifakara DSS team uses Key Informants (KIs) and hamlet leaders as a community representative to convene various meetings over the field areas and giving out the progressive reports to feedback the community. Also newsletters and fliers are distributed to the community. This tool is reconstructed in a lay language that everyone can understand. Through these programs strong relation are built as a result of improving community participation on health research activities.

### Weighting

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Not Applicable

# Questionnaires

## Overview

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The questionnaires are designed to capture the core HDSS information which includes the baseline, birth, immigration, outmigration and death along with the other questionnaires.

## Data Collection

### Data Collection Dates

Start	End	Cycle
1997-01-01	2014-12-31	Release Coverage

### Time Periods

Start	End	Cycle
1996-09-01		Baseline
1997-01-01		Round 1 to Round 48
2013-01-15		Round 49 (First round of 2013)
2013-07-15		Round 50 (second round of year 2013)
2014-02-05		Round 51 (Fisrt round of 2014)
2014-07-21		Round 52 (Second round of 2014)
2015-01-01		Round 53 (First round of 2015)
2015-07-01		Round 54 (Second round of 2015)

### Data Collection Mode

Proxy Respondent [proxy]

### Data Collectors

Name	Abbreviation	Affiliation
Omary Kayuga		
Gloria Shirima		Data Clerk
Johnson Ngenga		Data Clerk
Constantine Lyambiko		Data Clerk
Upendo salamtwa		Data Clerk
Rehema Erasto		Data Clerk
Novatus Chagodola		Data Clerk
Halima Mbulete		Data Clerk
Kalimbo Nkuba		Data Clerk
Honestia Mzyangizyangi		Data Clerk
Dionesia Mponsidawa		Data Clerk
Ally Mpangile		Data Clerk
Beatrice Njavike		Data Clerk
Alhaji Hangahanga		Data Clerk
Agnes Mhala		Data Clerk
Joseph Mwoja		Data Clerk
Expetus Ligofo		Data Clerk
Enhadi Mhesi		Data Clerk
Fariji Mwamtobe		Data Clerk
Serafim Sali		Data Clerk
Eligius Mpwagi		Data Clerk



## **Data Processing**

### **Other Processing**

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Currently, the information from the field is captured through the use of Open HDS system (electronic devices tablets). The collected data are uploaded daily to the central server through the use of network connectivity from the workstation however; the HDSS used customized designed software called the Household Registration System 2 (HRS 2) which developed in Visual FoxPro 6 since its establishment on 1996.

## Data Appraisal

### Other forms of Data Appraisal

The qualities of information collected by Ifakara DSS are highly prioritized from the initial point of data collection from the field section up to data management level. For-instance in the field section 90% of field managers' time spent on the field while the quality of information is monitored through validation process where 3-5% of households are randomly sampled for re-interview by a field supervisor who validates the previous collected information. Moreover, sport checks and accompanied visit is done by field management team to evaluate every field interviewer if they comply or adhere with code of conduct and standard operating procedure (ethics) when they are collecting field information.

Further more the HDSS data is collected through the use of electronic devices (tablets) to ensure timely access of quality, consistent and accurate data. Beside that on the data management section, the HRS2 software is used to track some of the inconsistencies from the data base for immediate follow-up. Some of them are edited online and others are printed and reported back to the field for more clarification and correction. Finally the clean data base is archived for report generation.

```

Centred MetricTable QMetric Illegal Legal Total Metric RunDate
TZ011 MicroDataCleaned Starts 311047 2017-05-18 18:38
TZ011 MicroDataCleaned Transitions 0 727834 727834 0 2017-05-18 18:39
TZ011 MicroDataCleaned Ends 311047 2017-05-18 18:40
TZ011 MicroDataCleaned SexValues 74 727760 727834 0 2017-05-18 18:40
TZ011 MicroDataCleaned DoBValues 727834 2017-05-18 18:40

```

# File Description

# Variable List

**TZ011.CMD2014.v1**

Content	This file contains event history micro dataset of Ifakara Rural HDSS
Cases	933634
Variable(s)	14
Structure	Type: Keys: ()
Version	CMD2015.v1
Producer	Ifakara Rural HDSS
Missing Data	

**Variables**

ID	Name	Label	Type	Format	Question
V1	RecNr	Record Numbe	contin	numeric	
V2	CountryId	Country ID	discrete	numeric	
V3	CentreId	Centre ID	discrete	character	
V4	IndividualId	Individual ID	contin	numeric	
V5	Sex	Sex	discrete	numeric	
V6	DoB	Date of Birth	discrete	character	
V7	EventCount	Event Count	discrete	numeric	
V8	EventNr	Event Number	discrete	numeric	
V9	EventCode	Event Code	discrete	character	
V10	EventDate	Event Date	discrete	character	
V11	ObservationDate	Observation Date	discrete	character	
V12	LocationId	Location ID	contin	numeric	
V13	MotherId	Mother ID	contin	numeric	
V14	DeliveryId	Delivery ID	contin	numeric	



**Record Numbe (RecNr)**

File: TZ011.CMD2014.v1

**Overview**

Type: Continuous	Valid cases: 933634
Format: numeric	Invalid: 0
Decimals: 0	Minimum: 1
Range: 1-765197	Maximum: 933634
	Mean: 466817.5
	Standard deviation: 269517.1

**Description**

A sequential number uniquely identifying each record in the data file

**Country ID (CountryId)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: numeric	Invalid: 0
Decimals: 0	
Range: 834-834	

**Description**

ISO 3166-1 numeric code of the country where the surveillance site is situated

**Centre ID (CentreId)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: character	Invalid: 0
Width: 5	

**Description**

An identifier issued by INDEPTH to each member centre of the format CCNNS, Where CCNNS is the INDEPTH Member site code, constructed as follows:- CC the ISO 3166-1 alpha-2 code of the country where the site is situated- NN is a sequential number uniquely identifying an INDEPTH member centre within the country. Starting with 01 to 99, for a maximum of 99 centres per country-S is a sequential character uniquely identifying the geographical surveillance site. Starting with 1 to 9, thereafter A to Z, for a maximum of 35 sites per centre

**Individual ID (IndividualId)**

File: TZ011.CMD2014.v1

**Overview**

Type: Continuous	Valid cases: 933634
Format: numeric	Invalid: 0
Decimals: 0	Minimum: 1
Range: 1-297229	Maximum: 312350
	Mean: 155435.4
	Standard deviation: 89785.8

**Description**

A number uniquely identifying all the records belonging to a specific individual in the data file. This number is not the same as the identifier used by a contributing centre to be identify the individual

**Sex (Sex)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: numeric	Invalid: 0
Decimals: 0	
Range: 0-2	

**Description**

Sex of the individual  
 1=Male  
 2=Female

**Date of Birth (DoB)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: character	Minimum: NaN
	Maximum: NaN

**Description**

The date of birth of the individual Format YYYY-MM-DD

**Event Count (EventCount)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: numeric	Invalid: 0
Decimals: 0	
Range: 2-12	

**Description**

The total number of events associated with this individual in this data set

**Event Number (EventNr)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: numeric	Invalid: 0
Decimals: 0	
Range: 1-12	

**Description**

A number increasing from 1 to EventCount for each event record in order of event occurred

**Event Code (EventCode)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: character	Invalid: 0
Width: 3	



**Event Code (EventCode)**

File: TZ011.CMD2014.v1

**Description**

A code which identifies the type of event that has occurred

**Event Date (EventDate)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933634
Format: character	Minimum: NaN
	Maximum: NaN

**Description**

The date on which the event occurred Format: YYYY-MM-DD

**Observation Date (ObservationDate)**

File: TZ011.CMD2014.v1

**Overview**

Type: Discrete	Valid cases: 933481
Format: character	Minimum: NaN
	Maximum: NaN

**Description**

Date on which the event was observed (recorded), also known as surveillance visit date Format YYYY-MM-DD

**Location ID (LocationId)**

File: TZ011.CMD2014.v1

**Overview**

Type: Continuous	Valid cases: 933634
Format: numeric	Invalid: 0
Decimals: 0	Minimum: 1
Range: 1-55179	Maximum: 56902
	Mean: 28396.3
	Standard deviation: 16471.1

**Description**

Unique identifier associated with a residence unit within the site and is the location where the individual was or became resident, when the event occurred. this identifier is not the same as the identifier used internally by the contributing centre

**Mother ID (MotherId)**

File: TZ011.CMD2014.v1

**Overview**

Type: Continuous	Valid cases: 97606
Format: numeric	Invalid: 836028
Decimals: 0	Minimum: 32
Range: 3-297218	Maximum: 312047
	Mean: 155467.4
	Standard deviation: 89905.8

**Description**

The individual of the mother, only provided for BTH events

## Delivery ID (DeliveryId)

File: TZ011.CMD2014.v1

### Overview

Type: Continuous  
Format: numeric  
Decimals: 0  
Range: 1-45517

Valid cases: 97606  
Invalid: 836028  
Minimum: 1  
Maximum: 53356  
Mean: 26469.6  
Standard deviation: 15335.7

### Description

The RecNr of the delivery event associated with this birth

