

SENEGAL - Mlomp HDSS INDEPTH Core Dataset 1985-2014 (Release 2017)

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Overview

Identification

ID NUMBER

INDEPTH.SN012.CMD2014.v1

Version

VERSION DESCRIPTION

CMD2014.v1: For public distribution

PRODUCTION DATE

2017-05-20

Overview

ABSTRACT

In 1985 the population and health observatory was established at Mlomp, in the region of Ziguinchor, in southern Senegal (see map). The objective was to complement the two rural population observatories then existing in the country, Bandafassi, in the south-east, and Niakhar, in the centre-west, with a third observatory in a region - the south-west of the country (Casamance) - whose history, ethnic composition and economic situation were quite different from those of the regions where the first two observatories were located. It was expected that measuring the demographic levels and trends on those three sites would provide better coverage of the demographic and epidemiological diversity of the country.

Following a population census in 1984-1985, demographic events and causes of death have been monitored yearly. During the initial census, all women were interviewed concerning the birth and survival of their children. Since 1985, yearly censuses, usually conducted in January-February, have been recording demographic data, including all births, deaths, and migrations. The completeness and accuracy of dates of birth and death are cross-checked against those of registers of the local maternity ward (_95% of all births) and dispensary (all deaths are recorded, including those occurring outside the area), respectively. The study area comprises 11 villages with approximately 8000 inhabitants, mostly Diola. Mlomp is located in the Department of Oussouye, Region of Ziguinchor (Casamance), 500 km south of Dakar.

On 1 January 2000 the Mlomp area included a population of 7,591 residents living in 11 villages. The population density was 108 people per square kilometre. The population belongs to the Diola ethnic group, and the religion is predominantly animist, with a large minority of Christians and a few Muslims. Though low, the educational level - in 2000, 55% of women aged 15-49 had been to school (for at least one year) - is definitely higher than at Bandafassi. The population also benefits from much better health infrastructure and programmes. Since 1961, the area under study has been equipped with a private health centre run by French Catholic nurses and, since 1968, a village maternity centre where most women give birth. The vast majority of the children are totally immunized and involved in a growth-monitoring programme (Pison et al.,1993; Pison et al., 2001).

KIND OF DATA

Event history data

UNITS OF ANALYSIS

Individual

Scope

NOTES

It specifically only includes the events defining the resident exposure of individuals under surveillance as well as the delivery events of resident women. Each type of event contains minimal attributes describing the event:

Attributes common to each event:

Event Type,

Event Date

Observation date

Migration

Orign & Destination

Death:

Cause

Delivery:

Live born and Still born counts

Parity

TOPICS

Topic	Vocabulary	URI
Demography [N01.224]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Age Distribution [N01.224.033]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Censuses [N01.224.175]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Emigration and Immigration [N01.224.625.350]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Residential Mobility [N01.224.791.700]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Sex Distribution [N01.224.803]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Vital Statistics [N01.224.935]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Life Expectancy [N01.224.935.464]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Mortality [N01.224.935.698]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Birth Rate [N01.224.935.849.500]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Rural Population [N01.600.725]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Parity [N06.850.490.812.600]	MeSH	http://www.ncbi.nlm.nih.gov/mesh
Survival Analysis [N06.850.520.830.998]	MeSH	http://www.ncbi.nlm.nih.gov/mesh

KEYWORDS

Fertility, Mortality, Migration

Coverage

GEOGRAPHIC COVERAGE

The Mlomp DSS site, about 500 km from the capital, Dakar, in Senegal, lies between latitudes 1236' and 1232'N and longitudes 1633' and 1637'E, at an altitude ranging from 0 to 20 m above sea level. It is in the region of Ziguinchor, Dpartement of Oussouye (Casamance), in southwest Senegal. It is locates 50 km west of the city of Ziguinchor and 25 kms north of the border with Guinea Bissau. It covers about half the Arrondissement of Loudia-Ouolof. The Mlomp DSS site is about 11 km 7 km and has an area of 70 km2. Villages are households grouped in a circle with a 3-km diameter and surrounded by lands that are flooded during the rainy season and cultivated for rice. There is still no electricity.

UNIVERSE

At the census, a person was considered a member of the compound if the head of the compound declared it to be so. This definition was broad and resulted in a de jure population under study. Thereafter, a criterion was used to decide whether and when a person was to be excluded or included in the population.

A person was considered to exit from the study population through either death or emigration. Part of the population of

Mlomp engages in seasonal migration, with seasonal migrants sometimes remaining 1 or 2 years outside the area before returning. A person who is absent for two successive yearly rounds, without returning in between, is regarded as having emigrated and no longer resident in the study population at the date of the second round. This definition results in the inclusion of some vital events that occur outside the study area. Some births, for example, occur to women classified in the study population but physically absent at the time of delivery, and these births are registered and included in the calculation of rates, although information on them is less accurate. Special exit criteria apply to babies born outside the study area: they are considered emigrants on the same date as their mother.

A new person enters the study population either through birth to a woman of the study population or through immigration. Information on immigrants is collected when the list of compounds of a village is checked ("Are there new compounds or new families who settled since the last visit?") or when the list of members of a compound is checked ("Are there new persons in the compound since the last visit?"). Some immigrants are villagers who left the area several years before and were excluded from the study population. Information is collected to determine in which compound they were previously registered, to match the new and old information.

Information is routinely collected on movements from one compound to another within the study area. Some categories of the population, such as older widows or orphans, frequently move for short periods of time and live in between several compounds, and they may be considered members of these compounds or of none. As a consequence, their movements are not always declared.

Producers and Sponsors

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FUNDING

Name	Abbreviation	Role
Institut de Recherches pour le Dveloppement	IRD	Current Funder
Institut National d'Etudes Dmographique	INED	Current Funder

OTHER ACKNOWLEDGEMENTS

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Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
iSHARE2 Technical Team	iS2TT	INDEPTH Network	Documentation of the study

Name	Abbreviation	Affiliation	Role
INDEPTH Network	int.indepth	INDEPTH Network	agency
Emilie Volpi	ON	Institut de Recherche pour le Dveloppement	DDI author

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DDI DOCUMENT VERSION

CMD2014.V1: 2017-05-20

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DDI.INDEPTH.SN012.CMD2014.v1

Sampling

Sampling Procedure

No samplaing is done

Deviations from Sample Design

None

Response Rate

On an average the response rate is about 99% over the years for each round.

Weighting

Not applicable

Questionnaires

Overview

List of questionnaires

Household book

- used to register informations needed to define outmigrations

Delivery questionnaire

-used to register information of dispensaire ol mlomp

New household questionnaire

New member questionnaire

Marriage and divorce questionnaire

Birth and marital histories questionnaire (for new member)

Death questionnaire

- used to register the date of death

Data Collection

Data Collection Dates

Start	End	Cycle
1985-10-01	2014-12-31	Release Coverage

Time Periods

Start	End	Cycle
1985-10-01		Round1
1988-02-01		Round2
1990-01-01		Round3
1991-02-01		Round4
1992-02-01		Round5
1993-02-28		Round6
1994-02-28		Round7
1995-02-28		Round8
1996-02-28		Round9
1997-02-28		Round10
1998-02-28		Round11
1999-02-28		Round12
2000-02-28		Round13
2001-02-28		Round14
2002-02-28		Round15
2003-02-28		Round16
2004-02-28		Round17
2005-02-28		Round18
2006-02-28		Round19
2007-02-28		Round20
2009-02-28		Round21
2010-02-28		Round22
2011-02-28		Round23
2012-02-28		Round24
2013-02-28		Round25
2014-02-28		Round26
2015-02-28		Round27

Data Collection Mode

Proxy Respondent [proxy]

DATA COLLECTION NOTES

Field procedures

INITIAL CENSUS - The initial census was followed by several surveys designed to improve the information of the census and collect other data needed for subsequent studies. These included an age survey to estimate ages of adults and children or improve the unreliable data collected on these during the census. It also included a genealogical survey to collect genealogies, going up to known ascendants and down to living collateral relatives. One use of the genealogies in the project is to get detailed information on the relationships between members of a compound and in particular the relationship of each one to the head of the compound (Pison 1985). Finally, a union- and birth-histories survey was conducted for adult men and women.

At the census, a person was considered a member of the compound if the head of the compound declared it to be so. This definition was broad and resulted in a de jure population under study. Thereafter, a criterion was used to decide whether and when a person was to be excluded or included in the population.

A person was considered to exit from the study population through either death or emigration. Part of the population of Mlomp engages in seasonal migration, with seasonal migrants sometimes remaining 1 or 2 years outside the area before returning. A person who is absent for two successive yearly rounds, without returning in between, is regarded as having emigrated and no longer resident in the study population at the date of the second round. This definition results in the

inclusion of some vital events that occur outside the study area. Some births, for example, occur to women classified in the study population but physically absent at the time of delivery, and these births are registered and included in the calculation of rates, although information on them is less accurate. Special exit criteria apply to babies born outside the study area: they are considered emigrants on the same date as their mother.

A new person enters the study population either through birth to a woman of the study population or through immigration. Information on immigrants is collected when the list of compounds of a village is checked ("Are there new compounds or new families who settled since the last visit?") or when the list of members of a compound is checked ("Are there new persons in the compound since the last visit?"). Some immigrants are villagers who left the area several years before and were excluded from the study population. Information is collected to determine in which compound they were previously registered, to match the new and old information.

Information is routinely collected on movements from one compound to another within the study area. Some categories of the population, such as older widows or orphans, frequently move for short periods of time and live in between several compounds, and they may be considered members of these compounds or of none. As a consequence, their movements are not always declared.

REGULAR UPDATE ROUNDS - The Mlomp DSS is a multiround demographic surveillance, with annual rounds. Once each year, in February and March, all compounds are visited, and information on events occurring since the last visit is collected. This is done in three steps. First, the list of people present in each compound at the preceding visit is checked, and information is obtained on new births, marriages, migrations, deaths, and current pregnancies. Information is provided by the head of the compound or key informants in the village or hamlet. The information on events is recorded directly on the nominative list.

CONTINUOUS SURVEILLANCE - Information provided by local registers is matched with that collected independently during the surveillance. Information from registers with fair quality is used to systematically correct errors and complete the information collected at the yearly rounds. These are maternity-clinic registers (for prenatal visits and deliveries), civil and parish registers (for births), and dispensary or hospital registers (for death, growth monitoring, and vaccinations). The local dispensary collaborates with the research project, and one completes several registers, in particular a death register. Although the local registers rarely cover the entire population and are sometimes subject to errors, using them improves the quality and the precision of data. Verbal autopsies (VAs) have been performed for all deaths since the beginning of the study. For each death identified in the first step of the annual surveillance, information on its cause is obtained from a close relative of the dead person, usually the mother in the case of a child's death, using a VA questionnaire.

Data management and analysis

Information collected during the baseline and follow-up surveys has been coded and stored in databases designed in 1980s, with some adaptations since then. The information collected during each annual surveillance is processed in two steps: in the villages, it is entered into laptops, with state-of-the-art software, during the surveillance; thereafter, the information is verified and added to the database, using PostgreSQL software.

Data Collectors

Name	Abbreviation	Affiliation
MLOMP HDSS	SN012	

SUPERVISION

There are five fieldworkers supervised by two supervisors alternate days. One of this supervisors is the data manager (O. Ndiaye)

Data Processing

Data Editing

On data entry data consistency and plausibility were checked by 455 data validation rules at database level. If data validation failure was due to a data collection error, the questionnaire was referred back to the field for revisit and correction. If the error was due to data inconsistencies that could not be directly traced to a data collection error, the record was referred to the data quality team under the supervision of the senior database scientist. This could request further field level investigation by a team of trackers or could correct the inconsistency directly at database level.

No imputations were done on the resulting micro data set, except for:

- a. If an out-migration (OMG) event is followed by a homestead entry event (ENT) and the gap between OMG event and ENT event is greater than 180 days, the ENT event was changed to an in-migration event (IMG).
- b. If an out-migration (OMG) event is followed by a homestead entry event (ENT) and the gap between OMG event and ENT event is less than 180 days, the OMG event was changed to an homestead exit event (EXT) and the ENT event date changed to the day following the original OMG event.
- c. If a homestead exit event (EXT) is followed by an in-migration event (IMG) and the gap between the EXT event and the IMG event is greater than 180 days, the EXT event was changed to an out-migration event (OMG).
- d. If a homestead exit event (EXT) is followed by an in-migration event (IMG) and the gap between the EXT event and the IMG event is less than 180 days, the IMG event was changed to an homestead entry event (ENT) with a date equal to the day following the EXT event.
- e. If the last recorded event for an individual is homestead exit (EXT) and this event is more than 180 days prior to the end of the surveillance period, then the EXT event is changed to an out-migration event (OMG)

In the case of the village that was added (enumerated) in 2006, some individuals may have outmigrated from the original surveillance area and settled in the the new village prior to the first enumeration. Where the records of such individuals have been linked, and individual can legitimately have and outmigration event (OMG) followed by and enumeration event (ENU). In a few cases a homestead exit event (EXT) was followed by an enumeration event in these cases. In these instances the EXT events were changed to an out-migration event (OMG).

Data Appraisal

Estimates of Sampling Error

Not applicable

Other forms of Data Appraisal

CenterId	Metric	Table	QMetric	Illegal	Legal	Total	Metric	Rundate
SN012	MicroDataCleaned	Starts	18756	2017-05-19	00:00			
SN012	MicroDataCleaned	Transitions	0	45136	45136	0	2017-05-19	00:00
SN012	MicroDataCleaned	Ends	18756	2017-05-19	00:00			
SN012	MicroDataCleaned	SexValues	38	45098	45136	0	2017-05-19	00:00
SN012	MicroDataCleaned	DoBValues	204	44932	45136	0	2017-05-19	00:00

File Description

Variable List

SN012.CMD2014.v1

Content	vent history Micro Data Set for Mlomp HDSS
Cases	60083
Variable(s)	14
Structure	Type: Keys: ()
Version	CMD2014.v1
Producer	Mlomp HDSS
Missing Data	

Variables

ID	Name	Label	Type	Format	Question
V1	RecNr	RecNr	contin	numeric	
V2	CountryId	CountryId	discrete	numeric	
V3	CentrelId	CentrelId	discrete	character	
V4	IndividualId	IndividualId	contin	numeric	
V5	Sex	Sex	discrete	numeric	
V6	DoB	DoB	discrete	character	
V7	EventCount	EventCount	discrete	numeric	
V8	EventNr	EventNr	discrete	numeric	
V9	EventCode	EventCode	discrete	character	
V10	EventDate	EventDate	discrete	character	
V11	ObservationDate	ObservationDate	discrete	character	
V12	LocationId	LocationId	contin	numeric	
V13	MotherId	MotherId	contin	numeric	
V14	DeliveryId	DeliveryId	discrete	numeric	

RecNr (RecNr)

File: SN012.CMD2014.v1

Overview

Type: Continuous	Valid cases: 60083
Format: numeric	Invalid: 0
Decimals: 0	Minimum: 1
Range: 1-21650	Maximum: 60083
	Mean: 30042
	Standard deviation: 17344.6

Description

A sequential number identifying each record in the data file

CountryId (CountryId)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60083
Format: numeric	Invalid: 0
Decimals: 0	
Range: 686-686	

Description

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

CentreId (CentreId)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60083
Format: character	Invalid: 0
Width: 5	

Description

An identifier issued by INDEPTH to each member centre of the format CCCSS, where CCC is a sequential centre identifier and SS is a sequential identifier of the site with the centre in the case of multiple sites.

IndividualId (IndividualId)

File: SN012.CMD2014.v1

Overview

Type: Continuous	Valid cases: 60083
Format: numeric	Invalid: 0
Decimals: 0	Minimum: 1
Range: 1-13309	Maximum: 18766
	Mean: 9280.7
	Standard deviation: 5353.5

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 identify the individual.

Sex (Sex)

File: SN012.CMD2014.v1

Sex (Sex)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60083
Format: numeric	Invalid: 0
Decimals: 0	
Range: 0-9	

Description

Sex of the individual.

DoB (DoB)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60069
Format: character	Minimum: NaN
	Maximum: NaN

Description

The date of birth of the individual. Format : YYYY/MM/DD

EventCount (EventCount)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60083
Format: numeric	Invalid: 0
Decimals: 0	
Range: 2-8	

Description

THE TOTAL NUMBER OF EVENTS ASSOCIATED WITH THIS INDIVIDUAL IN THIS DATA

EventNr (EventNr)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60083
Format: numeric	Invalid: 0
Decimals: 0	
Range: 1-8	

Description

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

EventCode (EventCode)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60083
Format: character	Invalid: 0
Width: 3	

Description

A code identifying the type of event that has occurred.

EventDate (EventDate)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 60083
Format: character	Minimum: NaN
	Maximum: NaN

Description

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

ObservationDate (ObservationDate)

File: SN012.CMD2014.v1

Overview

Type: Discrete	Valid cases: 0
Format: character	

Description

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

LocationId (LocationId)

File: SN012.CMD2014.v1

Overview

Type: Continuous	Valid cases: 60083
Format: numeric	Invalid: 0
Decimals: 0	Minimum: 1
Range: 1-1731	Maximum: 1850
	Mean: 922.8
	Standard deviation: 535.2

Description

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

MotherId (MotherId)

File: SN012.CMD2014.v1

Overview

Type: Continuous	Valid cases: 10744
Format: numeric	Invalid: 49339
Decimals: 0	Minimum: 9
Range: 4-13307	Maximum: 18760
	Mean: 8907.5
	Standard deviation: 5251.9

Description

The individualId of the mother. only provided for BTH events

DeliveryId (DeliveryId)

File: SN012.CMD2014.v1

Overview

DeliveryId (DeliveryId)

File: SN012.CMD2014.v1

Type: Discrete
Format: numeric
Decimals: 0
Range: 1-1

Valid cases: 10744
Invalid: 49339

Description

The RecNr of the delivery event associated with birth.

