

VITAL STATISTICS REPORT

Process of Producing

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NATIONAL STATISTICS BUREAU | BHUTAN
January 26, 2024



Content

1. Overview of the CRVS Project
2. Collaboration with Stakeholders
3. Training and Capacity Building
4. Implementation Process
5. Publication of Vital Statistics Report & Dissemination



Overview of the Project

1. Collaboration with UNESCAP

- Commitment to strengthening the use Administrative Data including the CRVS to complement the Official Statistics generated from the Censuses and Household Surveys.
- Part of commitment that Bhutan has made for Asia Pacific CRVS Decade (2014-2025)
- Technical Assistance received from the UNESCAP



Collaboration with the Stakeholders

1. Identified Stakeholders

- Department of Civil Registration and Census
- Department of Immigration
- Ministry of Health

2. Importance of Collaboration

- Access to vital registration records
- Comprehensive dataset for analysis



Training & Capacity Building

1. **Capacity Building Training at UNESCAP**
 - Empowered the project team
 - Confidence-building for data processing and analysis
2. **Importance of Training**
 - Enhance skills for producing vital statistics



Collaboration with the Stakeholders

ANNEXURE II: MEMORANDUM OF UNDERSTANDING



MEMORANDUM OF UNDERSTANDING BETWEEN THE NATIONAL STATISTICS BUREAU AND DEPARTMENT OF CIVIL REGISTRATION AND CENSUS, MINISTRY OF HOME AND CULTURAL AFFAIRS



I. PURPOSE AND SCOPE

The National Statistics Bureau, hereinafter referred to as "the recipient", in its effort towards supporting evidence-based decision making intends to publish annual Vital Statistics Report (VSR) based on the vital events data compiled by the Department of Civil Registration and Census, under Ministry of Home and Cultural Affairs, hereinafter referred to as "the provider". In accordance with the provisions of this agreement, the provider shall share data from the Bhutan Civil Registration System, hereinafter referred to as BCRS, to the recipient. The data will be published only at the aggregated level for vital statistics analysis.

II. OBJECTIVES

The objective of this MoU is to ensure that there is continuous and timely flow of BCRS data from the provider to the recipient to enable the publication of annual VSR.

III. RESPONSIBILITIES OF THE RECIPIENT

- A. The recipient promises to comply with all provisions of this agreement to ensure the annual publication of VSR;
- B. The recipient agrees that the BCRS data provided under this agreement shall be strictly restricted to officials assigned with the analysis and publication of the VSR;
- C. Authorized officials shall sign a non-disclosure form with the Chief of Social Statistics Division to ensure the confidentiality of the data;
- D. Authorized officials designated pursuant to this agreement shall not use the BCRS data for any other purpose other than the publication of VSR;
- E. The VSR intended for release or publication must not include or reveal the characteristics of an individual respondent and ensure that the information will be published only at the aggregated level;
- F. The recipient shall share a copy of all the signed non-disclosure form with the focal person of the provider annually; and
- G. The recipient may provide recommendation to the provider for the improvement of BCRS data collection.

(Handwritten initials)

I. RESPONSIBILITIES OF THE PROVIDER

- A. The provider promises to comply with all provisions of this agreement to ensure the annual publication of the VSR;
- B. The provider agrees to share the micro data of the BCRS;
- C. The provider shall share the BCRS data by 15th January of every year;
- D. The provider shall identify a focal for the same; and
- E. The provider may act on the recommendations made by the recipient on improving the data collection for the BCRS.

II. DURATION OF THIS AGREEMENT

All agreed clauses herein are effective from the date of signing of this MoU. This MoU shall be amended on mutual agreement between the recipient and the provider at any time.

III. TERMINATION OF MOU

This MoU may be terminated on mutual agreement between the recipient and the provider at any time.

IV. EFFECTIVE DATE AND SIGNATURE IN WITNESS WHEREOF

The recipient and the provider hereby have executed this MoU on the 09th October 2020 corresponding to 22nd day of 08th month of lunar calendar. On behalf of the National Statistics Bureau and on behalf of the Department of Civil Registration and Census, Ministry of Home and Cultural Affairs.

(Signature)
(Signature)

Name: Mr. Chhime Tshering
Director
National Statistics Bureau

(Signature)
(Signature)

Name: Tashi Tobgye
Director General
Department of Civil Registration and Census

Witnessed by:

(Signature)
(Signature)

Name: Tashi Dorjee
Chief Statistical Officer
National Statistics Bureau

(Signature)
(Signature)

Name: Thinley Wangchuk
Chief Civil Registration and Census Officer
Department of Civil Registration and Census

Collaboration with the Stakeholders

1

Ministry of Home Affairs

MOU was signed between MoHA and NSB. Focal from NSB email MoHA every year in January requesting for data.

2

National Statistics Bureau

NSB used projected population to from PHCB to calculate completeness rates, Age Specific Birth Rate and AGE Specific Death Rate.

3

Ministry of Health

The data from Annual Health Bulletin is used to see the top 10 causes of death.



Implementation Process

The report consist of 6 chapters:

1. Introduction and methodology
2. Bhutan Civil Registration System
3. Data Quality, Timeliness and Completeness of data
4. Live Births
5. Deaths
6. Summary Tables



Implementation Process

3. Planning and Implementation

- Data Processing, analysis, report drafting & dissemination

Data are validated by:

1. Comparing individual's CID with parent's CID
2. Checking inconsistency between parents CID
3. Duplicate Registration
4. Missing information
5. Rechecking the status of Birth and Death in BCRS file.
6. Merging data with BCRS

Implementation Process

3. Planning and Implementation

- Data Processing, analysis, report drafting & dissemination

BR_APP_no	CID_Numt	NAME	DOB	Gender	Birth_Vil	Birth_gew	Birth_Dz	Village_Nr	Gewog_Nr	Dzongkha	Person_St	placeofbir	Birth_cow	Birth
001_0055493			2016-01-1	M	Thim Thro	Thim Thro	Thimphu	Chamkhar	Chokhor	Bumthang	A	Hosep		
001_0056605			2016-01-C	F	Mongar	Mongar	Mongar	Chamkhar	Chokhor	Bumthang	A			
001_0055882			2016-02-C	F	Thim Thro	Thim Thro	Thimphu	Gyelkhar	Chokhor	Bumthang	A			
001_0056522			2016-01-2	M	Thim Thro	Thim Thro	Thimphu	Kharsa	Chokhor	Bumthang	A			
001_0056805			2016-01-C	F	Thim Thro	Thim Thro	Thimphu	Chamkhar	Chokhor	Bumthang	A			
001_0057784			2016-02-1	M	Thim Thro	Thim Thro	Thimphu	Dorjibe	Chokhor	Bumthang	A			
001_0057786			2016-02-2	M	Phuntshol	Phuntshol	Chukha	Samthang	Chokhor	Bumthang	A			
001_0058284			2016-02-1	F	Mongar	Mongar	Mongar	Dorjibe	Chokhor	Bumthang	A			
001_0058443			2016-02-1	M	Wangdich	Chokhor	Bumthang	Goling	Chokhor	Bumthang	A			
001_0058282			2016-01-C	M	Mongar	Mongar	Mongar	Kenchosu	Chokhor	Bumthang	A			
001_0059804			2016-03-2	M	Thim Thro	Thim Thro	Thimphu	Dhur Moe	Chokhor	Bumthang	A			
001_0059805			2016-05-C	F	Dhur Moe	Chokhor	Bumthang	Dhur Moe	Chokhor	Bumthang	A			

```

/*clear all
set more off

*** Change directory to phase 7
cd "D:\VS_Death\2022 VSR\jigme choden\birth"

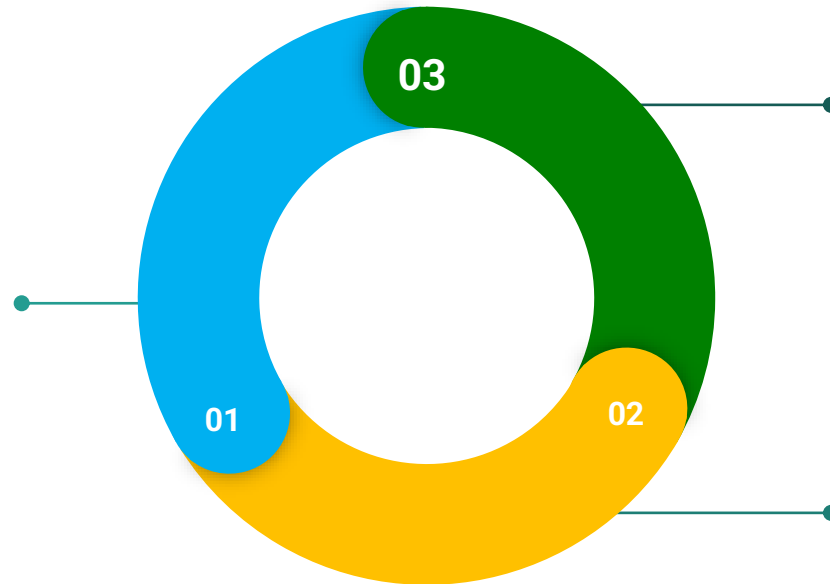
set excelxlslargefile on //set maximum excel length
import excel "D:\VS_Death\2022 VSR\Data\Final_data\1-birth 2016-2022_nopw.xlsx",
sheet("Sheet 1 - _SELECT
_ap_Application") firstrow allstring

save "D:\VS_Death\2022 VSR\jigme choden\birth\birthvr.1.dta"*/

```

Identifying missing variables/inconsistent data

During the data cleaning process, the missing values like Mother's place of Residence are noted..



Replacing the correct information

The information are corrected and replaced if it is available.

Sending the missing variables with details to MoHA to crosscheck

The missing variables are send to MoHA to cross check with their system.

Implementation Process

3. Planning and Implementation

- Data Processing, analysis, report drafting & dissemination

1. Check for duplicate entries (birth data based on date of birth)

br_app_no	cid_number	cidno	name	dateofbir	placeofbir	site_b	birth_cou	country_
001_0096862	12345555555	333333334						
001_0115091	12345555555	333333334						
001_0097900	12345555555	333333334						
001_0108737	12345555555	333333334						
001_0114164	12345555555	333333334						
001_0088833	12345555555	333333334						
001_0097661	12345555555	333333334						
001_0083594	12345555555	333333334						
001_0113437	12345555555	333333334						

code_prr	person_st	placeofbir	site_b	birth_cou	country_
arpang	A	Hospital	Health Fac	Bhutan	Bhutan
hukha	A			Bhutan	Bhutan
oang	A	Hospital	Health Fac	Bhutan	Bhutan
ta Gat	A			Bhutan	Bhutan
gdue	A			Bhutan	Bhutan
sa	A	Hospital	Health Fac	Bhutan	Bhutan
g	A	Hospital	Health Fac	Bhutan	Bhutan
ng	Yan	Hospital	Health Fac	Bhutan	Bhutan
Sajo Throi	Bajo Throi	Wangdue		Bhutan	Bhutan

STATUS "D" IN BIRTH FILE

BASED ON DATE OF REGISTRATION

BASED ON DATE OF BIRTH

cid_number	cid_number	Status
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D
2222222233	2222222233	D

Implementation Process

3. Planning and Implementation

- Number of Tables (Births) Published against UN Recommended Tables (20)

10

BIRTHS		
LB-1	Live births by place of occurrence and sex of child	1
LB-2	Live births by place of occurrence and place of usual residence of mother	2
LB-3	Live births by place of registration, month of occurrence and month of registration	3
LB-4	Live births by month, place of occurrence and place of usual residence of mother	4
LB-5	Live births by age, place of usual residence and legal marital status of mother	5
LB-6	Live births by age of father	6
LB-7	Live births by place of usual residence, age and educational attainment of mother	7
LB-8	Live births by educational attainment and age of mother, and live-birth order	
LB-9	Live births by place of usual residence and age of mother, sex of child and live-birth order	
LB-10	Live births by live-birth order and interval between last and previous live births to mother	
LB-11	Live births by place of birth, place of usual residence and age of mother	
LB-12	Live births by place of usual residence and age of mother and legitimacy status	
LB-13	Live births by place of occurrence, site of delivery and attendant at birth	8
LB-14	Live births by site of delivery, and birth weight	9
LB-15	Live births by birth weight and place of usual residence and educational attainment of mother	10
LB-16	Live births by gestational age, place of usual residence of mother and birth weight	
LB-17	Live births by birth weight, place of usual residence of mother and month in which prenatal care began	
LB-18	Live births by age and place of usual residence of mother and month in which prenatal care began	
LB-19	Live births by live-birth order, place of usual residence of mother and month in which prenatal care began	
LB-20	Live births by place of usual residence of mother and duration of residence at the current usual residence	

Implementation Process

3. Planning and Implementation

- Number of Tables (Deaths) Published against UN Recommended Tables (13)

9

DEATHS		
DE-1	Deaths by place of registration and sex of decedent	1
DE-2	Deaths by place of occurrence and place of registration and sex of decedent	2
DE-3	Deaths by month and place of occurrence of decedent	3
DE-4	Deaths by place of registration, month of occurrence and month of registration	4
DE-5	Deaths by place of occurrence and site of occurrence	5
DE-6	Deaths by place of registration, age and sex of decedent	6
DE-7	Deaths by age, sex, place of registration and marital status of decedent	7
DE-8	Deaths by place of registration, age, sex and educational attainment of decedent	8
DE-9	Deaths by sex, cause of death, place of registration and age of decedent	9
DE-10	Deaths by month of occurrence and cause of death	
DE-11	Deaths by place of occurrence, sex of decedent and type of certification	
DE-12	Maternal deaths by cause of death and age of woman	
DE-13	Deaths by age and type of usual activity of decedent deaths	

Implementation Process

3. Planning and Implementation

- Number of Tables (Infant Deaths) Published against UN Recommended Tables (5)

2

INFANT DEATHS		
ID-1	Infant deaths by place of occurrence and place of usual residence of mother	1
ID-2	Infant deaths by month of occurrence and sex and age of child	2
ID-3	Infant deaths by place of usual residence of mother and age and sex of child	
ID-4	Infant deaths by cause of death, place of usual residence of mother and sex and age of child	
ID-5	Infant deaths by place of usual residence of mother and incidence of birth registration	

Implementation Process

3. Planning and Implementation

- Number of Tables (Summary Tables) Published against UN Recommended Tables (9)



SUMMARY TABLES		
ST-1	Live births, deaths, and infant deaths by place of occurrence	1
ST-2	Crude birth rate, crude death rate, and infant mortality rate	2
ST-3	Time series of live births by place of usual residence of mother (past 4 years)	3
ST-4	Time series of deaths by place of occurrence of decedent (past 4 years)	4
ST-5	Time series of infant deaths by place of occurrence (past 4 years)	5
ST-6	Time series of foetal deaths by place of usual residence of mother (past 10 years)	
ST-7	Time series of marriages by place of usual residence of groom (past 10 years)	
ST-8	Time series of divorces by place of usual residence of husband (past 10 years)	
ST-9	Time series of vital events in the country (past 4 years)	6

Implementation

4. Preparation of Tables

Timeliness of Live Birth Registration

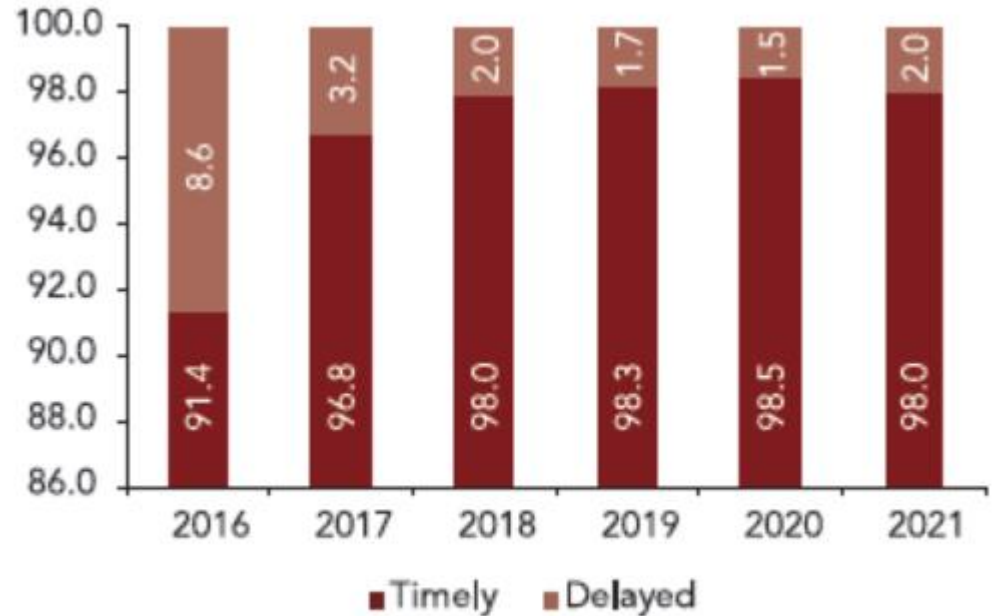


Figure 3.1 Timeliness of Registration of Live Births [Bhutan, 2016-2021]

Implementation Process

4. Preparation of Tables

Timeliness of Death Registration

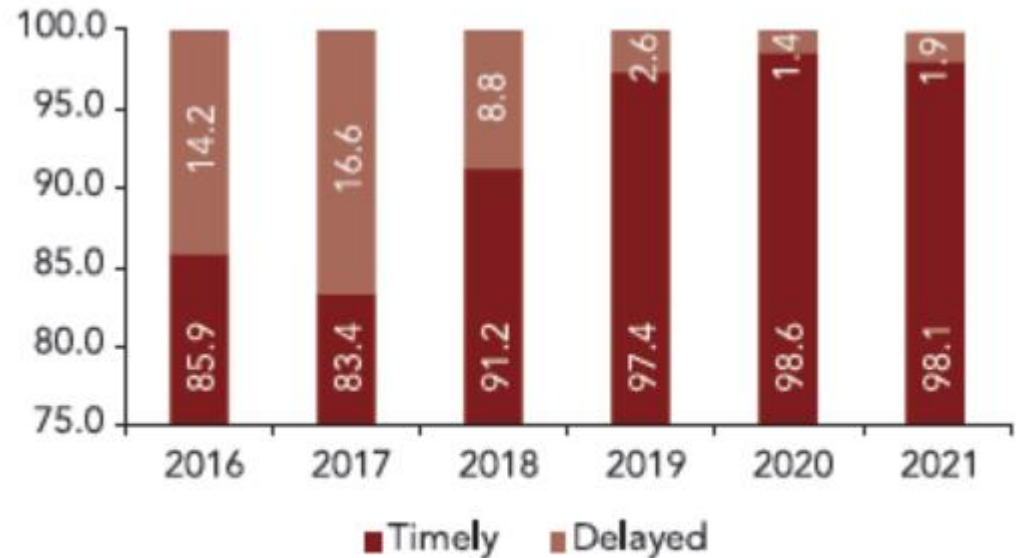


Figure 3.2 Timeliness of Registration of Deaths, [Bhutan, 2016-2021]

Implementation Process

4. Preparation of Tables

Matrix of Births by Year of Occurrence and Year of Registration

		Year of Registration (Births)					Total
Years		2016	2017	2018	2019	2020	
Year of Occurrence (Births)	2016	4,536	4,838	325	15	4	9,718
	2017	0	5,162	4,615	56	8	9,841
	2018	0	0	6,002	4,678	31	10,711
	2019	0	0	0	5,463	4,204	9,667
	Total	4,536	10,000	10,942	10,212	4,247	39,937

Implementation Process

4. Preparation of Tables

Matrix of Deaths by Year of Occurrence and Year of Registration

Year of Occurrence (Deaths)	Year of registration (Deaths)					Total	
	Years	2016	2017	2018	2019		2020
2016		2,501	663	221	125	31	3,541
2017		0	2,311	742	249	65	3,367
2018		0	0	2,509	700	155	3,364
2019		0	0	0	2,654	566	3,220
Total		2,501	2,974	3,472	3,728	817	13,492



COMPLETENESS OF BIRTH AND DEATH REGISTRATION

Year	Registered Births	Estimated Births	Completeness(%)	Registered Deaths	Estimated Deaths	Completeness(%)
2016	10,605	12,359	85.8	3,551	5,185	68.5
2017	10,754	12,342	87.1	3,402	5,178	65.7
2018	11,519	12,390	93.0	3,389	5,095	66.5
2019	10,384	12,407	83.7	3,271	5,105	64.1
2020	10,416	12,331	84.5	3,109	5,115	60.8
2021	10,755	12,306	87.4	3,187	5,127	62.2



Project Outcome

1. Completed Report

- Drafting and completion of Vital Statistics Report

2. Review by Experts

- Ensured accuracy and completeness

3. Endorsement of the Report

- Government Approval for publication





THANK YOU