COD-PS Niger
Update Year 2023 / Reference Year 2023

Objective of This Explanatory Technical Note

This explanatory technical note provides supplementary notes on the strengths and limitations of each Common Operational Dataset on Population Statistics (COD-PS) against the projections by the WPP 2022 Revision of the UN to enable informed humanitarian decision-making.

Structure of Supplementary Note

This supplementary note is organized into the following sections:
1. Metadata
2. Methodological Documentation
3. Intrinsic Population Growth Rates (ADM-0 & 1)
4. Population counts by age and sex (ADM-0)
5. Relative population size by age and sex (ADM-1)

1. Metadata

Item	Metadata
Country	Niger
Source(s)	INS Niger
Source(s) Link(s)	https://www.stat-niger.org/projections
Population Data Type (Census enumeration, Direct estimate, or Population projection)	Population projection
Year of the Baseline Population	2012
Reference year of this COD-PS	2023
Publication year of this COD-PS	2023
ADM-1 Name	Région
ADM-1 Number of Units	8
ADM-1 Sex and Age Disaggregation	Sex and age disaggregated by 5-year age groups

Item	Metadata
ADM-1 Open-ended Age Group	80+
ADM-2 Name	Département
ADM-2 Number of Units	67
ADM-2 Sex and Age Disaggregation	Sex and age disaggregated by 5-year age groups
ADM-2 Open-ended Age Group	80+
ADM-3 Name	Commune
ADM-3 Number of Units	266
ADM-3 Sex and Age Disaggregation	Sex and age disaggregated by 5-year age groups
ADM-3 Open-ended Age Group	80+
General Notes	The population projections within this COD-PS contain underlying uncertainties, because it is unclear whether the NSO actually conducted PES after the 2012 census to adjust the census results accordingly. Furthermore, this COD-PS assumes constant sex ratios at birth of the RGPH 2012 in each region (ADM-1) and constant population growth rates of in urban and rural areas until 2035.
Data Limitations	The subnational projections within this COD-PS may not reflect most accurately the subnational population dynamics due to the following reasons: (1) the lack of post-enumeration survey (PES / EPC in French) and subsequent adjustment of census results prior to projection, (2) the assumption that sex ratios at the regional level (ADM-1) from the 2012 census remain constant until 2035, and (3) the assumption that the urban and rural growth rates from the previous intercensal period (2001-2012) are kept constant for each region until 2035, as well as the average number of people per urban household.
COD-PS Demographic Data Quality Assessment	The COD-PS was assessed against ADM-0 estimates and projections published by the World Population Prospects (2022 Revision) from the United Nations Department of Economic and Social Affairs (UN-DESA). The Niger DHS 2017 is not available for comparison because the distribution of data and results was cancelled, and there has not been a MICS conducted in Niger to date.

2. Methodological Documentation

Item	Methodological Documentation
Methodology Used	Cohort component method was applied to the baseline population of the 2012 census to build the 2012-2035 projections, on which this COD-PS is based.
Baseline Population	2012 census
Post-enumeration survey (PES)	There was no record of post-enumeration survey (PES) after the 2012 census.
Assessment and Adjustment of the Baseline Population	To establish the baseline population of best quality possible, the 2012 census data was reconciled with the DHS 2012 and 2012-2013 administrative records from the ministry of health and ministry of education.
Fertility (births)	This COD-PS assumes that the total fertility rate (TFR) drops each year by 0.06 per year between 2012 and 2035 in each region, from 7.5 children per woman (2012) to 6.17 per woman (2035). This corresponds to the annual progression at the national level to reach the level estimated by the National Institute for Demographic Studies (INED) for Niger in 2035. Similarly, the sex ratios at birth of the 2012 census are kept constant at the level of each region until 2035.
Mortality (deaths)	For the mortality assumption, in this COD-PS life expectancy at birth increases by 0.14 years each year for men and women in each region, from 63.5 years (2012) to 67 years (2035): from 64.4 years to 67.7 years for women, from 62.8 years to 66.4 years for men.
International migration (net migration)	This COD-PS assumes that the international migratory balance remains constant at the level of each region during the period 2012-2035. The National Survey on International Migration (ENAMI) conducted in 2011 served as a basis for determining the net migration. ENAMI found that the internal migrants represent 5.9% of the population; while emigrants, represent 1.1% of the total population; overall nine out of ten emigrants (93.1%) are male; the emigrant population is largely (61.4%) made up of young people and adults aged 20 to 35; and that most of them are headed out to Nigeria.
Internal migration (migration within country)	In terms of internal migration. this COD-PS assumes that the urbanisation rates of each region from the 2012 census, as well as the urban and rural growth rates from the intercensal period (2001-2012), are kept constant for each region until 2035, as well as the average number of people per urban household.

3. Intrinsic Population Growth Rates (ADM-0 & 1)

At ADM-0, the implied postcensal (2012-2023) population growth rates of this COD-PS (3.66% per year: female 3.66%, male 3.66%) are generally consistent with the post-2015 growth rates of the UN's

population projections published in the 2019 revision of the World Population Prospects (WPP) (2010-2015: 3.89%, 2015-2020: 3.82%, 2020-2025: 3.70%).

The NSO predicts relatively high postcensal population growth rates across all regions. The NSO predicts the lowest postcensal growth rate for Agadez (3.34% per year for both sexes) and Diffa (3.29% per year for both sexes), both of which are covered mostly in desert. The NSO predicts higher population growth rates for all other regions with non-desert terrain, with the exception of the capital city Niamey (3.27% per year for both sexes).

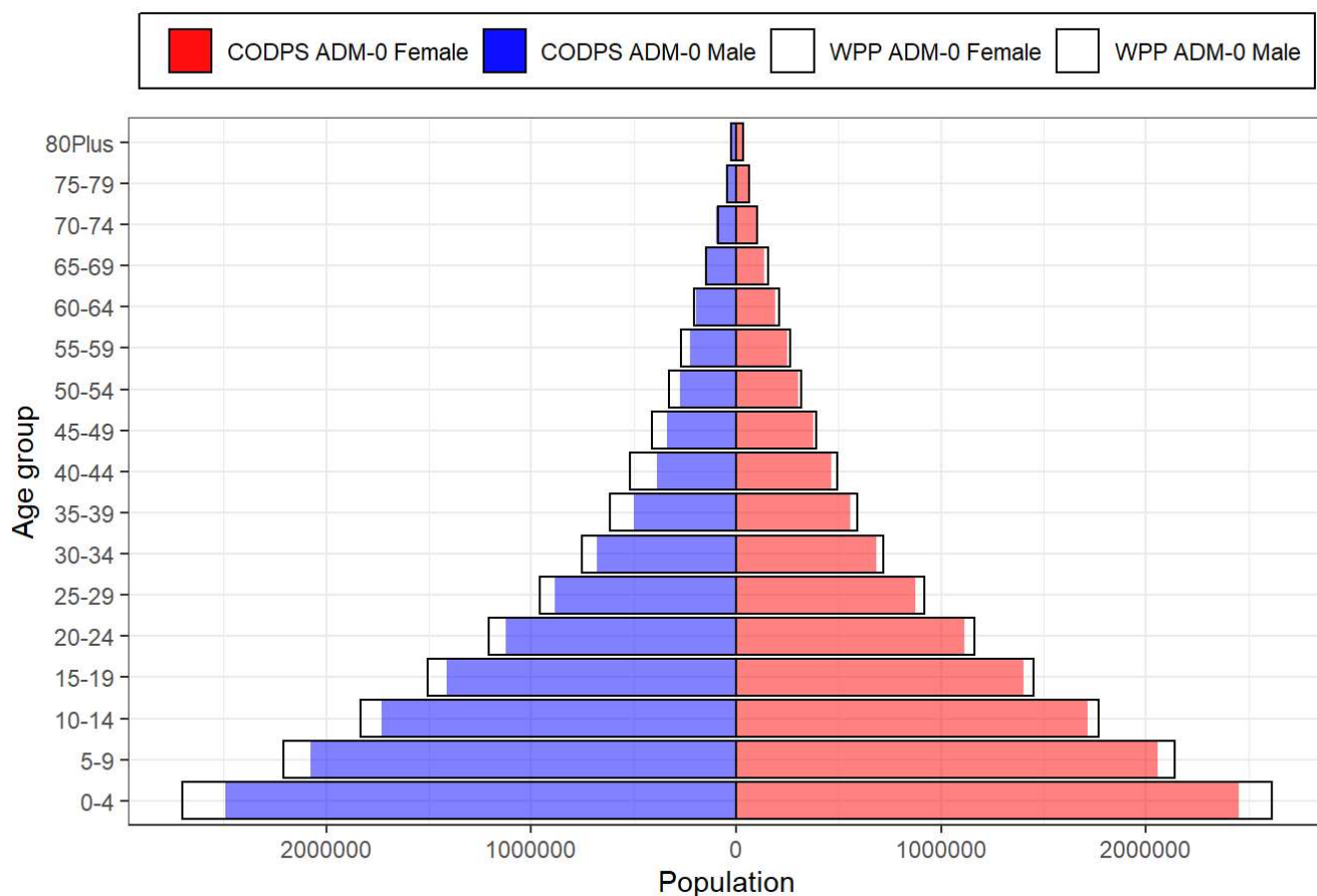| ADM-1	Last Census, Female	Last Census, Male	CODPS, Female	CODPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Agadez	232,091	246,738	335,156	356,270	3.34	3.34	3.34
Diffa	286,076	300,582	411,264	432,106	3.30	3.30	3.30
Dosso	1,030,368	1,003,970	1,547,832	1,508,202	3.70	3.70	3.70
Maradi	1,709,805	1,655,912	2,577,915	2,503,984	3.73	3.76	3.74
Niamey	509,947	505,489	728,084	721,710	3.24	3.24	3.24
Tahoua	1,655,322	1,648,863	2,481,744	2,472,103	3.68	3.68	3.68
Tillaberi	1,365,539	1,335,841	2,047,413	2,002,896	3.68	3.68	3.68
Zinder	1,757,496	1,748,831	2,649,462	2,641,511	3.73	3.75	3.74
Total	8,546,644	8,446,226	12,778,870	12,638,782	3.66	3.66	3.66

4. Population Counts by age and sex (ADM-0)

Below, we compare the population structure across sex and age groups between the NSO and WPP projections at the national level. At ADM-0, the age- and sex-specific population counts of this COD-PS are only somewhat consistent with the WPP 2019 Revision projection. The NSO projections are smaller than WPP across all age groups. While the differences among women are centred around 5%, the differences among men are centred around 7-8%.

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
0-4	-162,599	-6.21	-210,527	-7.79
5-9	-82,049	-3.84	-129,291	-5.86
10-14	-53,105	-3.00	-98,448	-5.38
15-19	-51,248	-3.53	-88,920	-5.92
20-24	-50,040	-4.30	-81,934	-6.79
25-29	-46,578	-5.06	-71,538	-7.48
30-34	-35,670	-4.96	-68,905	-9.19
35-39	-32,708	-5.55	-116,504	-18.88

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
40-44	−26,442	−5.38	−132,122	−25.52
45-49	−15,986	−4.08	−71,164	−17.34
50-54	−15,391	−4.81	−56,378	−17.21
55-59	−17,496	−6.58	−40,542	−15.20
60-64	−18,146	−8.64	−10,138	−4.94
65-69	−15,176	−9.83	−5,491	−3.79
70-74	−5,394	−5.31	10,980	12.74
75-79	−1,806	−2.84	6,780	15.48
80Plus	3,149	8.90	5,636	25.10

WPP ADM-0 vs CODPS ADM-0

5. Relative population size by age and sex (ADM-1)

Below, we compare the relative population proportions for 5-year age groups by sex between the NSO ADM-1 projections and the WPP ADM-0 projections. There is little variation of population proportions among the ADM-1 units and they are generally consistent with the population proportions of the WPP ADM-0 level projection. This may not come as a surprise because of the high total fertility rate (TFR) of Niger at the start of the projection period (national TFR at 7.6, ranging from the capital city Niamey TFR

at 5.3 to Maradi TFR at 8.4) [1] and the low urbanisation rate (16% in 2012 and 17% by 2021; on average, 42% for Sub-Saharan Africa excluding high-income countries; 57% for the World) [2].

[1] Niger DHS 2012 Final Report (French), https://dhsprogram.com/publications/publication-fr277-dhs-final-reports.cfm [2] World Bank - Urban population (% of total population), https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS