

# COD-PS Benin

## 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	Benin
Source(s)	INSAE Benin (baseline), US Census Bureau (projections)
Source(s) Link(s)	Baseline - <a href="https://instad.bj">https://instad.bj</a> , Projections - <a href="https://www.census.gov/data/tables/time-series/demo/international-programs/subnationalpopulation.html">https://www.census.gov/data/tables/time-series/demo/international-programs/subnationalpopulation.html</a>
Population Data Type (Census enumeration, Direct estimate, or Population projection)	Population projection
Year of the Baseline Population	2013
Reference year of this COD-PS	2023
Publication year of this COD-PS	2023
ADM-1 Name	Département
ADM-1 Number of Units	12

Item	Metadata
ADM-1 Sex and Age Disaggregation	Sex and age disaggregated by 5-year age groups
ADM-1 Open-ended Age Group	80+
ADM-2 Name	Commune
ADM-2 Number of Units	77
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	N/A
ADM-3 Number of Units	N/A
ADM-3 Sex and Age Disaggregation	N/A
ADM-3 Open-ended Age Group	N/A
General Notes	This COD-PS is based on the projections prepared by the US Census Bureau (USCB) projections. It should also be noted that this COD-PS includes Koualou, which is a disputed area with Burkina Faso.
Data Limitations	The USCB projections, on which this COD-PS is based, does not take into account unique national or subnational population dynamics. It is because the USCB subnational projections are built on the predication that population growth rates follow an S-curve progression of initially being slow, accelerating, peaking, and finally tapering, a path that is consistent with Malthusian theory.
COD-PS Demographic Data Quality Assessment	The COD-PS was assessed against ADM-0 estimates and projections published in the World Population Prospects (2022 Revision) by the United Nations Department of Economic and Social Affairs (UN-DESA).

## 2. Methodological Documentation

Item	Methodological Documentation
Methodology Used	The estimates for the population totals of 12 departments were calculated using the Logistic Growth Rate method, based on population trends between the 2002 and 2013 censuses. The estimates for sex-specific 5-year age groups for the 77 communes were calculated using Iterative Proportional Fitting, based on the age group proportions from the 2013 census. Furthermore, in general the impacts of cataclysmic events such as

Item	Methodological Documentation
	earthquakes or tsunamis are factored into the calculations for the subnational age and sex group population estimates for the affected areas - contingent on obtaining the numbers of fatalities and displacements ascertained from authoritative sources, as well as numbers reflecting the trajectories of the recoveries of those areas.
Baseline Population	2013 census
Post-enumeration survey (PES)	The 2013 census report claims PES took place, but no report can be found.
Assessment and Adjustment of the Baseline Population	There is no evidence of assessing and adjusting the baseline population prior to building the projections on which this COD-PS is based. The source file states that the U.S. Census Bureau cannot guarantee the accuracy of non-U.S. census and survey data.
Fertility (births)	No fertility assumptions. It is because the projections on which this COD-PS is based were built on the predication that population growth rates follow an S-curve progression of initially being slow, accelerating, peaking, and finally tapering, a path that is consistent with Malthusian theory - rather than following the national or subnational population dynamics unique to each country.
Mortality (deaths)	No mortality assumptions. It is because the projections on which this COD-PS is based were built on the predication that population growth rates follow an S-curve progression of initially being slow, accelerating, peaking, and finally tapering, a path that is consistent with Malthusian theory - rather than following the national or subnational population dynamics unique to each country.
International migration (net migration)	No international migration (net migration) assumptions. It is because the projections on which this COD-PS is based were built on the predication that population growth rates follow an S-curve progression of initially being slow, accelerating, peaking, and finally tapering, a path that is consistent with Malthusian theory - rather than following the national or subnational population dynamics unique to each country.
Internal migration (migration within country)	No internal migration (migration within country) assumptions. It is because the projections on which this COD-PS is based were built on the predication that population growth rates follow an S-curve progression of initially being slow, accelerating, peaking, and finally tapering, a path that is consistent with Malthusian theory - rather than following the national or subnational population dynamics unique to each country.

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

At ADM-0, the postcensal (2013-2023) population growth rates implied by this COD-PS are 3.50% (F: 3.40%, M: 3.59%), which remain consistently higher than the rates implied by WPP (2014: 2.96%, 2017:

2.94%, 2020: 2.79%, 2022: 2.67%).

At ADM-1, the postcensal (2013-2023) population growth rates implied by this COD-PS reflect a rapidly growing population overall. The departments with the highest population growth rates are: Alibori (4.34%), Atlantique (5.06%), Borgou (4.50%). Atlantique is on the coast and an extension of the economic centre of Benin, Cotonou. Alibori and Borgou are the largest departments of Benin and benefits from cross-border trades with Nigeria. The departments with the lowest population growth rates are: Littoral (-0.15%), Collines (2.39%), Mono (2.64%). Littoral comprises of just one commune/city, Cotonou, Benin's largest city and its economic capital - therefore it may not have had room to grow further since the last census in 2013, and in fact may have had the growing population around Cotonou spill into Atlantique instead.

ADM-1	Last Census, Female	Last Census, Male	CODPS, Female	CODPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Alibori	436,106	431,357	667,564	672,084	4.26	4.43	4.34
Atacora	391,814	380,448	516,220	507,171	2.76	2.87	2.82
Atlantique	711,482	686,747	1,168,659	1,151,985	4.96	5.17	5.06
Borgou	607,236	607,013	943,281	960,294	4.40	4.59	4.50
Collines	363,885	353,592	459,029	452,285	2.32	2.46	2.39
Couffo	396,754	348,574	527,652	468,452	2.85	2.96	2.91
Donga	272,376	270,754	393,479	396,709	3.68	3.82	3.75
Littoral	353,140	325,872	343,688	324,965	-0.27	-0.03	-0.15
Mono	255,689	241,554	330,842	316,435	2.58	2.70	2.64
Plateau	322,307	300,065	457,060	431,095	3.49	3.62	3.56
Zou	444,550	407,030	593,229	550,099	2.89	3.01	2.95
Total	4,555,339	4,353,006	6,400,703	6,231,574	3.40	3.59	3.50

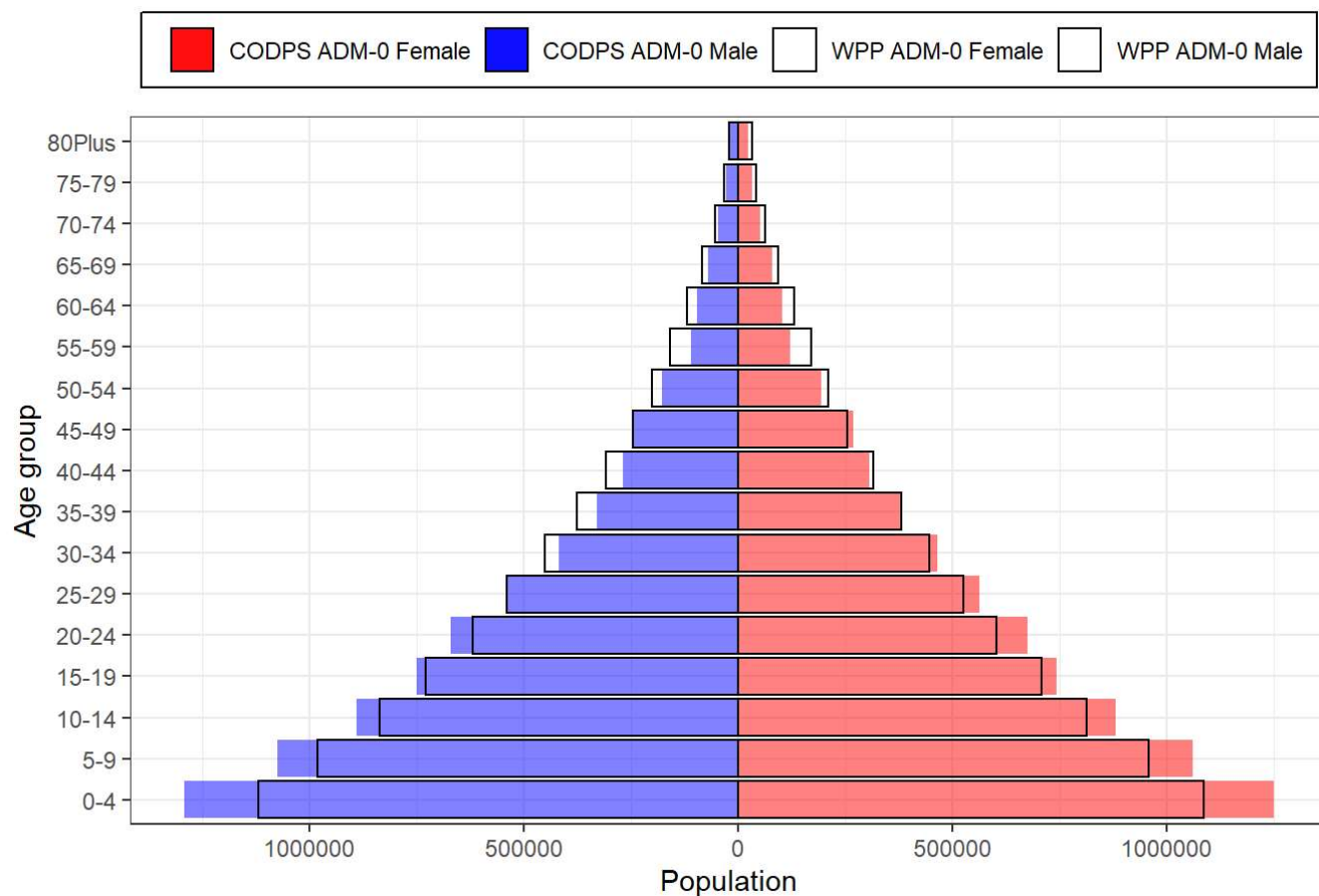
## 4. Population Counts by age and sex (ADM-0)

Below, we compare the population structure across sex and age groups between the USCB and WPP projections at the national level. The sex and age specific population counts of this COD-PS at ADM-0 among 0-24 year olds for both sexes are higher than the WPP estimates. The greatest differences where the USCB projections are higher than WPP are found among 0-4 year olds (F: 15.17%, M: 15.49%) and 5-9 year olds (F: 10.82%, M: 9.51%). From 25 years and beyond, the USCB and WPP projections match closely in general.

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
0-4	164,864	15.17	173,242	15.49
5-9	103,672	10.82	93,360	9.51

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
10-14	66,542	8.17	52,942	6.33
15-19	34,537	4.87	19,536	2.68
20-24	73,361	12.18	51,823	8.37
25-29	37,574	7.13	-1,912	-0.35
30-34	19,978	4.48	-34,094	-7.55
35-39	504	0.13	-47,626	-12.64
40-44	-10,111	-3.20	-39,161	-12.76
45-49	12,583	4.92	-1,407	-0.58
50-54	-18,126	-8.57	-22,216	-11.14
55-59	-48,964	-28.60	-49,592	-31.08
60-64	-27,509	-20.98	-25,198	-21.04
65-69	-14,266	-15.23	-13,178	-15.82
70-74	-10,192	-16.24	-6,770	-12.94
75-79	-9,976	-23.06	-4,840	-15.44
80Plus	-8,372	-25.49	-3,930	-18.62

### WPP ADM-0 vs CODPS ADM-0





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

Below compares relative population proportions by sex and age between USCB ADM-1 and WPP ADM-0 projections. The USCB projects for Littoral, economic centre, a population where the working-age adult proportions are higher and those of 0-19 year olds lower than both WPP and other departments. Other departments follow proportions similar to USCB ADM-0 projection.

