COD-PS Türkiye
Update Year 2023 / Reference Year 2022

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	Turkiye
Source(s)	Turkish Statistical Institute (Türkiye Istatistik Kurumu / TÜIK) and the Presidency of Migration Management of the Ministry of Interior
Source(s) Link(s)	ABPRS - https://biruni.tuik.gov.tr/medas/?kn=95&locale=en, Syrian under temporary protection - https://www.goc.gov.tr/gecici-koruma5638
Population Data Type (Census enumeration, Direct estimate, or Population projection)	Direct estimate
Year of the Baseline Population	2021
Reference year of this COD-PS	2022 (annual reference date of 31 December)
Publication year of this COD-PS	2023
ADM-1 Name	Province
ADM-1 Number of Units	81

Item	Metadata
ADM-1 Sex and Age Disaggregation	Sex and age disaggregated by 5-year age groups
ADM-1 Open-ended Age Group	90+
ADM-2 Name	District
ADM-2 Number of Units	973
ADM-2 Sex and Age Disaggregation	Sex and age disaggregated by 5-year age groups
ADM-2 Open-ended Age Group	90+
General Notes	The resident population in this COD-PS is derived from the Address Based Population Registration System (ABPRS), as part of the country's register-based census undertaken in 2021. It closely aligns the country's civil registration data, adminsitrative migration data and address register. It therefore provides a data-driven accounting of population dynamics, avoiding heavy reliance on assumptions about future fertility, mortality and migration in the aftermath of a traditional population and housing census. ABPRS does not include information on Turkish citizens abroad as well as foreigners holding visas or residence permits shorter than 3 months with the purpose of training, tourism, scientific research, etc. Furthermore, this COD-PS includes the district (ADM-2) level estimates of the 3,500,964 Syrians under temporary protection (as of 03 February 2023) using the best information available at the time of building this COD-PS. Note that, according to the Ministry of Interior, only 1.36% of them (47,467) live in temporary accommodation centers [informally known as 'camps']. Due to the lack of information, this COD-PS does not include refugees or refugee-like people from countries other than Syria.
Data Limitations	Per its architecture, refugees under temporary protection are not included in the ABPRS. This COD-PS includes the population estimates of Syrians under temporary protection at the district (ADM-2) level, but the estimates may not be accurate in some areas. It is because the ADM-2 estimates of Syrians were derived using the best information available at the time: (1) sex and age disaggregation at the national (ADM-0) level, (2) subnational geographic distribution at the provincial (ADM-1) level, and (3) proportion of district (ADM-2) resident popualtions to their respective provincial (ADM-1) populations. For example, the estimated number of Syrians under temporary protection in the district of Elbeyli in this COD-PS is 3,306, but it should be a minimum of 7,393 residing in the camps as of 03 February 2023. But the numbers of Syrians under temporary protection in 5 other districts of this COD-PS were checked and revealed to exceed the populations in the camps in these districts [Altinozu: 12,693 - greater than 3,975 in camps, Yayladagi: 7,741 - greater than 3,141 in camps, Dulkadiroglu: 17,621 - greater than 9,691 in camps, Yayladagi: 19,534 -

Item	Metadata
	greater than 7,435 in camps, Yayladagi: 24,445 - greater than 15,832 in camps.].
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 Ministry of Interior information on Syrians living under temporary protection, and UNHCR Data Finder on refugee and refugee-like populations. This COD-PS was also checked against a report from the Global Task Force on Migration, 'Global Compact on Refugees: Good Practices & Innovative Approaches by Cities', for spot-checking the aggregate number of refugees in the districts where information was available within the report.

2. Methodological Documentation

Item	Methodological Documentation
Methodology Used	The subnational resident population of Türkiye within this COD-PS comes from the results of the Address-Based Population Registration System (ABPRS) as of 31 December 2022. ABPRS was first established in 2007 to obtain updated information on the size and characteristics of the population by localities and to follow population movements regularly. Since then, annual registry-based censuses using ABPRS has replaced the traditional and combined censuses. The Syrian population under temporary protection within this COD-PS comes from the official figures of the Ministry of Interior as of 03 February 2023. To estimate their sex and age disaggregated distribution at the district (ADM-2) level with the best information available, first, their sex and age disaggregation at the national (ADM-0) level was applied uniformly to their subnational geographic distribution at the provincial (ADM-1) level. Then, the provincial (ADM-1) level sex and age disaggregated estimates of Syrians under temporary protection were further split by the proportions of district (ADM-2) resident popualtions to their respective provincial (ADM-1) populations, because there was no sufficient or systematic information available for the Syrians under temporary protection at the district (ADM-2) level.
Baseline Population	2021 registry-based census
Post-enumeration survey (PES)	N/A. The Turkish Statistical Institute's Institutional Quality Report says that, since the data is obtained from administrative registers, no revision is made.
Assessment and Adjustment of the Baseline Population	N/A. The Turkish Statistical Institute publishes the ABPRS results annually with the reference date of 31 December of each year.

Item	Methodological Documentation
Fertility (births)	The ABPRS receives annual update on births from the Central Civil Registration System (CCRS - 'MERNIS').
Mortality (deaths)	The ABPRS receives annual update on deaths from the Central Civil Registration System (CCRS - 'MERNIS').
International migration (net migration)	The ABPRS receives annual update on international migration from the National Address Database (NAD - 'UAVT').
Internal migration (migration within country)	The ABPRS receives annual update on international migration from the National Address Database (NAD - 'UAVT').

3. Intrinsic Population Growth Rates (ADM-0 & 1) [Excluding Syrians under temporary protection]

At ADM-0, the postcensal (2021-2022) population growth rates of this COD-PS (0.71% per year: female 0.76%, male 0.65%) are generally consistent with the growth rates of the UN's population projections published in WPP 2022 (2020: 0.77% per year, 2021: 0.75% per year, 2022: 0.59% per year).

During the postcensal period, the northern province of Gumushane experienced the lowest population growth (-3.79% per year: female -3.52%, male -4.05%), followed by four northeastern provinces bordering Georgia and Armenia: Ardahan (-2.62%: female -2.72%, male -2.52%), Kars (-2.24%: female -1.90%, male -2.58%), Mus (-1.50%: female -1.50%, male -1.49%), and Agri (-2.70%: female -2.64%, male -2.77%). In the same period, 10 provinces in the north-western parts of the country experienced the highest rates of population growths.

ADM-1	Last Census, Female	Last Census, Male	CODPS, Female	CODPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Adana	1,132,511	1,130,862	1,136,651	1,137,455	0.36	0.58	0.47
Adiyaman	313,529	318,619	314,992	320,177	0.47	0.49	0.48
Afyonkarahisar	372,758	371,421	374,096	373,459	0.36	0.55	0.46
Agri	252,755	271,889	246,161	264,465	-2.64	-2.77	-2.70
Aksaray	214,228	214,841	216,072	216,983	0.86	0.99	0.92
Amasya	168,298	167,033	169,069	169,198	0.46	1.29	0.88
Ankara	2,903,916	2,843,409	2,925,806	2,856,479	0.75	0.46	0.60
Antalya	1,305,077	1,314,755	1,336,302	1,351,702	2.36	2.77	2.56
Ardahan	45,764	49,168	44,535	47,946	-2.72	-2.52	-2.62
Artvin	83,591	85,952	84,457	84,946	1.03	-1.18	-0.07
Aydin	570,994	563,037	578,950	569,291	1.38	1.10	1.24

ADM-1	Last Census, Female	Last Census, Male	CODPS, Female	CODPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Balikesir	625,083	625,527	631,160	626,430	0.97	0.14	0.55
Bartin	101,751	99,960	102,382	100,969	0.62	1.00	0.81
Batman	310,567	315,752	313,590	320,901	0.97	1.62	1.29
Bayburt	41,640	43,402	41,390	42,851	-0.60	-1.28	-0.94
Bilecik	109,431	118,903	111,055	117,618	1.47	-1.09	0.19
Bingol	140,063	143,049	140,045	142,511	-0.01	-0.38	-0.20
Bitlis	170,464	181,813	171,061	182,927	0.35	0.61	0.48
Bolu	161,434	158,580	162,120	158,704	0.42	0.08	0.25
Burdur	136,344	137,372	137,216	136,583	0.64	-0.58	0.03
Bursa	1,574,456	1,573,362	1,598,851	1,595,869	1.54	1.42	1.48
Canakkale	276,942	280,334	279,967	279,416	1.09	-0.33	0.38
Cankiri	97,237	99,278	97,152	98,614	-0.09	-0.67	-0.38
Corum	264,916	261,366	263,775	260,355	-0.43	-0.39	-0.41
Denizli	527,558	523,498	530,973	525,359	0.65	0.35	0.50
Diyarbakir	887,185	904,188	894,408	910,472	0.81	0.69	0.75
Duzce	200,364	200,612	202,181	202,950	0.90	1.16	1.03
Edirne	204,252	207,863	206,386	208,328	1.04	0.22	0.63
Elazig	296,708	291,380	299,101	292,396	0.80	0.35	0.58
Erzincan	116,984	120,367	118,137	121,086	0.98	0.60	0.79
Erzurum	379,632	377,261	376,379	373,375	-0.86	-1.04	-0.95
Eskisehir	450,608	447,761	455,282	451,335	1.03	0.80	0.92
Gaziantep	1,055,023	1,075,409	1,066,288	1,087,763	1.06	1.14	1.10
Giresun	225,774	224,380	225,687	225,175	-0.04	0.35	0.16
Gumushane	74,638	75,481	72,059	72,485	-3.52	-4.05	-3.79
Hakkari	131,605	146,613	131,765	143,568	0.12	-2.10	-0.99
Hatay	830,515	840,197	838,915	847,128	1.01	0.82	0.92
Igdir	98,213	104,946	98,663	104,931	0.46	-0.01	0.22
Isparta	224,979	220,699	225,485	219,840	0.22	-0.39	-0.09
Istanbul	7,907,214	7,933,686	7,952,131	7,955,820	0.57	0.28	0.42
Izmir	2,226,502	2,199,287	2,246,340	2,215,716	0.89	0.74	0.81
Kahramanmaras	576,522	594,776	579,432	598,004	0.50	0.54	0.52
Karabuk	124,763	124,524	125,842	126,216	0.86	1.35	1.10

ADM-1	Last Census, Female	Last Census, Male	CODPS, Female	CODPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Karaman	129,287	129,551	130,558	130,280	0.98	0.56	0.77
Kars	136,681	144,396	134,105	140,724	-1.90	-2.58	-2.24
Kastamonu	189,476	186,116	191,213	186,902	0.91	0.42	0.66
Kayseri	715,296	719,061	719,714	721,809	0.62	0.38	0.50
Kilis	72,023	73,803	73,415	74,504	1.91	0.95	1.43
Kirikkale	138,314	137,654	138,408	138,638	0.07	0.71	0.39
Kirklareli	179,919	186,444	182,306	187,041	1.32	0.32	0.82
Kirsehir	122,643	120,301	123,587	120,932	0.77	0.52	0.64
Kocaeli	1,005,666	1,027,775	1,028,329	1,050,743	2.23	2.21	2.22
Konya	1,145,094	1,131,923	1,155,141	1,141,206	0.87	0.82	0.84
Kutahya	293,901	284,739	293,868	286,833	-0.01	0.73	0.36
Malatya	405,085	403,607	407,182	405,398	0.52	0.44	0.48
Manisa	725,418	731,208	730,391	737,888	0.68	0.91	0.80
Mardin	430,469	432,288	434,013	436,361	0.82	0.94	0.88
Mersin	946,753	944,392	957,790	958,642	1.16	1.50	1.33
Mugla	503,180	517,961	514,817	533,368	2.29	2.93	2.61
Mus	198,853	206,375	195,887	203,315	-1.50	-1.49	-1.50
Nevsehir	155,814	152,189	157,099	152,912	0.82	0.47	0.64
Nigde	181,509	182,216	182,597	182,822	0.60	0.33	0.46
Ordu	381,172	379,700	382,193	380,997	0.27	0.34	0.31
Osmaniye	274,165	278,847	277,481	281,924	1.20	1.10	1.15
Rize	172,232	173,430	171,829	172,187	-0.23	-0.72	-0.48
Sakarya	529,510	531,366	538,631	541,449	1.71	1.88	1.79
Samsun	693,202	678,072	691,690	676,798	-0.22	-0.19	-0.21
Sanliurfa	1,064,005	1,079,015	1,076,112	1,093,998	1.13	1.38	1.25
Siirt	163,099	168,881	163,405	167,906	0.19	-0.58	-0.19
Sinop	109,936	108,472	110,899	109,900	0.87	1.31	1.09
Sirnak	263,062	283,527	266,560	291,045	1.32	2.62	1.97
Sivas	317,167	318,954	316,906	318,018	-0.08	-0.29	-0.18
Tekirdag	543,045	570,355	559,437	583,014	2.97	2.20	2.58
Tokat	303,210	299,357	300,012	296,442	-1.06	-0.98	-1.02
Trabzon	411,637	405,047	411,962	406,061	0.08	0.25	0.16

ADM-1	Last Census, Female	Last Census, Male	CODPS, Female	CODPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Tunceli	39,222	44,423	39,825	44,541	1.53	0.27	0.90
Usak	187,292	185,891	188,761	186,693	0.78	0.43	0.60
Van	559,070	581,945	553,296	575,453	-1.04	-1.12	-1.08
Yalova	145,261	145,740	148,429	147,904	2.16	1.47	1.81
Yozgat	209,854	208,646	208,628	209,814	-0.59	0.56	-0.01
Zonguldak	297,862	291,822	296,656	291,854	-0.41	0.01	-0.20
Total	42,252,172	42,428,101	42,575,441	42,704,112	0.76	0.65	0.71

4. Population Counts by age and sex (ADM-0) [Excluding Syrians under temporary protection]

Below, we compare the population structure across sex and age groups between the NSO estimates and WPP projections at the national level. At ADM-0, the age- and sex-specific population counts of this COD-PS are somewhat consistent with the WPP 2022 projection, with the greatest differences among those aged 0-4 years (NSO < WPP by female -11.85%, male -11.75%).

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
0-4	-370,914	-11.85	-386,644	-11.75
5-9	-143,418	-4.25	-148,293	-4.17
10-14	-22,272	-0.71	-20,377	-0.61
15-19	16,044	0.53	24,632	0.76
20-24	9,482	0.29	-27,307	-0.80
25-29	-111,028	-3.33	-136,069	-3.92
30-34	-182,659	-5.54	-224,854	-6.57
35-39	-89,047	-2.75	-137,100	-4.09
40-44	190,124	6.14	147,836	4.66
45-49	54,280	1.93	24,910	0.87
50-54	-70,198	-2.72	-77,076	-2.94
55-59	96,218	4.32	34,622	1.52
60-64	221,373	12.71	184,166	10.77
65-69	99,750	6.39	254,862	20.09
70-74	116,445	10.44	186,882	22.12
75-79	48,112	6.17	72,854	13.39

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
80-84	45,309	9.16	62,334	21.42
85-89	40,022	16.38	68,390	70.30
90Plus	49,006	46.25	37,916	180.24

WPP ADM-0 vs CODPS ADM-0
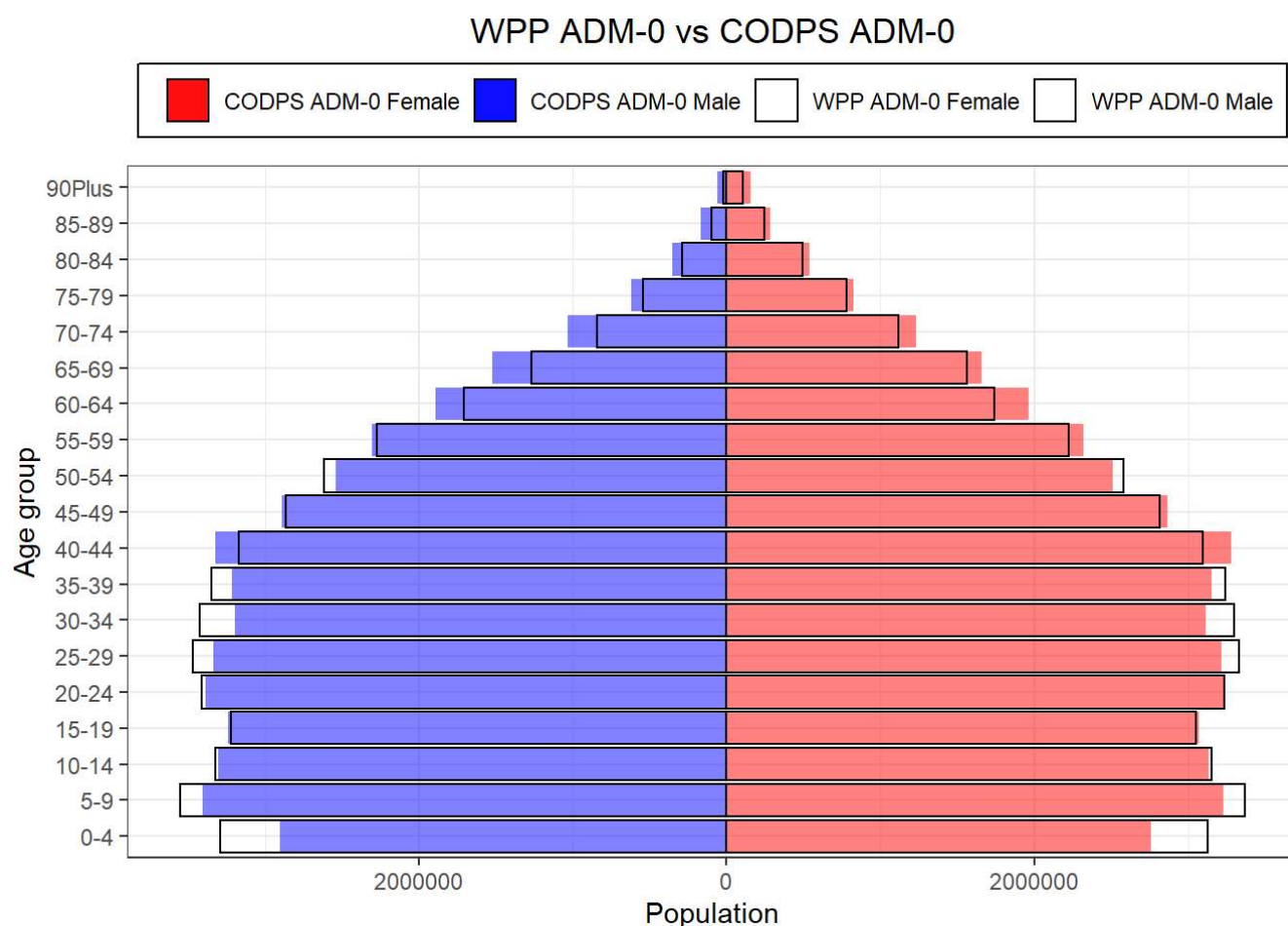
5. Relative population size by age and sex (ADM-1) [Excluding Syrians under temporary protection]

Below, we compare the relative population proportions for 5-year age groups by sex between the NSO ADM-1 estimates and the WPP ADM-0 projection. The majority of the provinces show low fertility and high degree of ageing. There is a handful of provinces showing high fertility: Agri, Batman, Bitlis, Diyarbakir, Gaziantep, Igdir, Kilis, Mardin, Mus, Sanliurfa, Siirt, Sirnak, and Van. There are some provinces which display relatively higher proportions of young adults in their 20s: Bayburt, Bilecik, Burdur, Cannakale, Erzincan, Gumushane, Hakkari, Isparta, Karabuk, and Tunceli.