



Using Census Data for Generating Sustainable Development Indicators

9th Session of OIC-StatCom
28th Sept- 01 Oct 2020

Content

- Background of SDGs in Turkey
- Data Sources for SDG
- Censuses in Turkey
- Leaving No One Behind : Data Disaggregation
- Use of census data for monitoring SDG Indicators
- Potential use of Census data in SDGs
- Possible indicators from censuses
- TurkStat's assessment on the possible indicators
- A Case Study for Using Census Data as Complimentary Purposes
- Upcoming Censuses and Future Plans
- How to integrate SDGs into the census plans?
- Future Plans

Background of SDGs in Turkey

eurostat  EU SDI



2007

Starting point for studies on Sustainable Development

PRESS RELEASE

2010

Press Release
2005-2008

PRESS RELEASE

2012

Press Release
2000-2011

PRESS RELEASE

2014

Press Release
2012-2013



SUSTAINABLE DEVELOPMENT GOALS

PRESS RELEASE



2019

Press Release
2010-2017

- HLPF – Voluntary National Review (VNR)
- 11th Development Plan
- 2nd Workshop
- 2nd Inventory Study
- Court of Account audit



2018

Establishment of a dedicated SDI Group at TurkStat

- 1st Workshop



2016

- HLPF – Voluntary National Review (VNR)
- 1st Inventory Study
- SDG involvement in Official Statistical Programme (OSP), 2017-2021

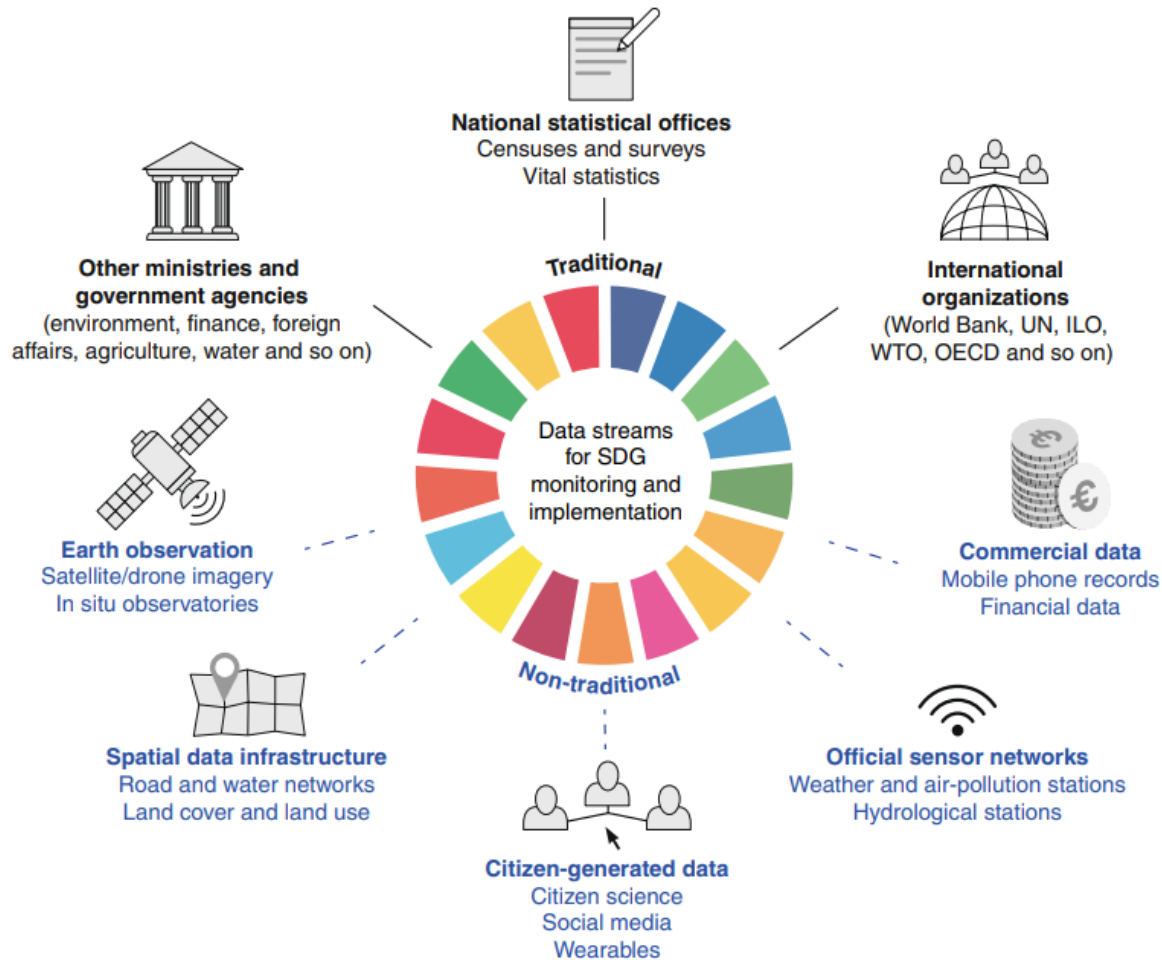
PRESS RELEASE

2020

Press Release
2010-2018

- 2nd Inventory Study
- National road map
- Web portal

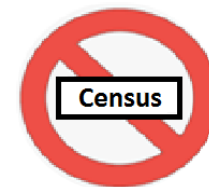
Data Sources for SDG



Source : Article "Citizen science and the United Nations Sustainable Development Goals", Nature Sustainability ,Vol 2, October 2019, pg 922–930

Population Censuses in Turkey

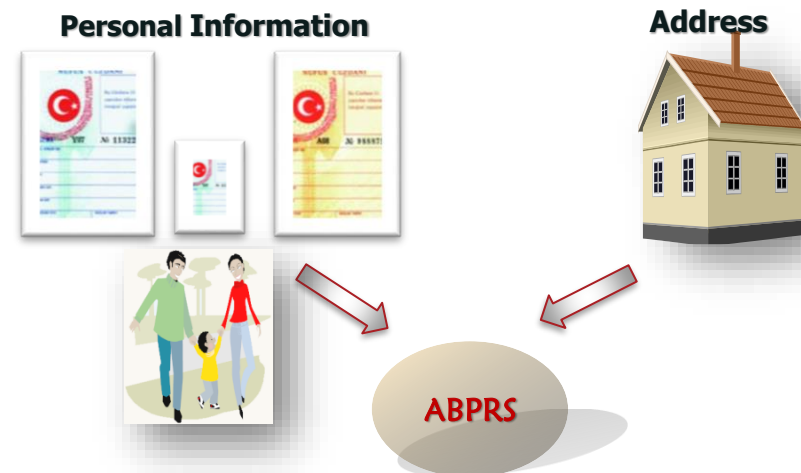
- Totally 14 traditional population censuses
 - First census in 1927
 - Second census in 1935
 - Every five years between 1935-1990
 - Last census in 2000
- Method
 - Traditional census method (face to face interview)
 - Standard questionnaire
 - De facto population census
 - One day application with national curfew
- Current situation
 - Address Based Population Registration System (ABPRS)



Population Censuses in Turkey

Address Based Population Registration System (ABPRS)

- Covering information on usual place of residence of all people living in the country established in 2007.
- Population results referring 31 December based on the new system are announced to the public every year in January.
 - Population by localities (province, district, sub-district and village)
 - Age and sex structure,
 - Internal migrations,
 - Legal marital status,
 - Place of registration,
 - Educational status,
 - Nationality of persons living in Turkey (Turkish citizens and foreigners)



2011 Population And Housing Census

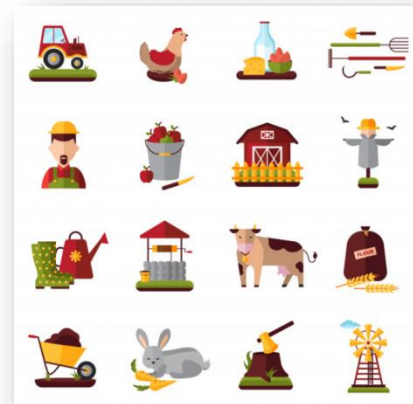


Scope	Turkey has conducted the census in 2011 in the scope of the 2010 World Population and Housing Census Programme
Census Model	Combined model was used (by using population registers and by conducting a big sample survey)
Application Method	Face to face interview with netbooks (CAPI) and by using paper based questionnaires. In this round, Turkey changed the (traditional) census methodology, and at first time; ○ used the population registers ○ applied a census according to the de jure population definition ○ conducted a census with the 2-3 month field application instead of one-day application
Application Period	October-November, 2011
Main Purpose	To obtain information that are not available in the ABPRS, other administrative registers and that can not be obtained from regular household surveys in province and district level. 2011 PHS was conducted in order to obtain the information nationally needed and internationally recommended on demographic, social, economic and housing characteristics of the population.
Registers Used 	Following registers were used to provided data about at least some basic population topics, determining the address frame, reducing response burden and to improve the quality of the census information: ○ National Address Database (NAD) was used as an address frame ○ Address Based Population Registration System (ABPRS) was mainly used to avoid multiple records to reduce response burden ○ Central Population Registration System (MERNIS) and social security records were used to improve the quality of the census information.

Agricultural Censuses in Turkey



- Conducted in 1927, 1952, 1963, 1970, 1980, 1991, 2001
- For the 2001 Agricultural Census:
 - The proposals in The FAO World Programme for the Census of Agriculture 2000 and the EU legislation were examined.
 - The information was compiled from two sources: Headman (Headman and Elderly Council) and households.
 - Three different studies have been conducted:
 1. Agricultural Holdings List
 2. Village General Information Survey
 3. Agricultural Holdings (Household) Survey
 - Some indicators obtained from the Census data:
Number and area of holdings, by size, Tenure of land, Legal status, Land use, Irrigation, Main temporary / permanent crops, Livestock, Machinery ...



Leaving No One Behind : Data Disaggregation

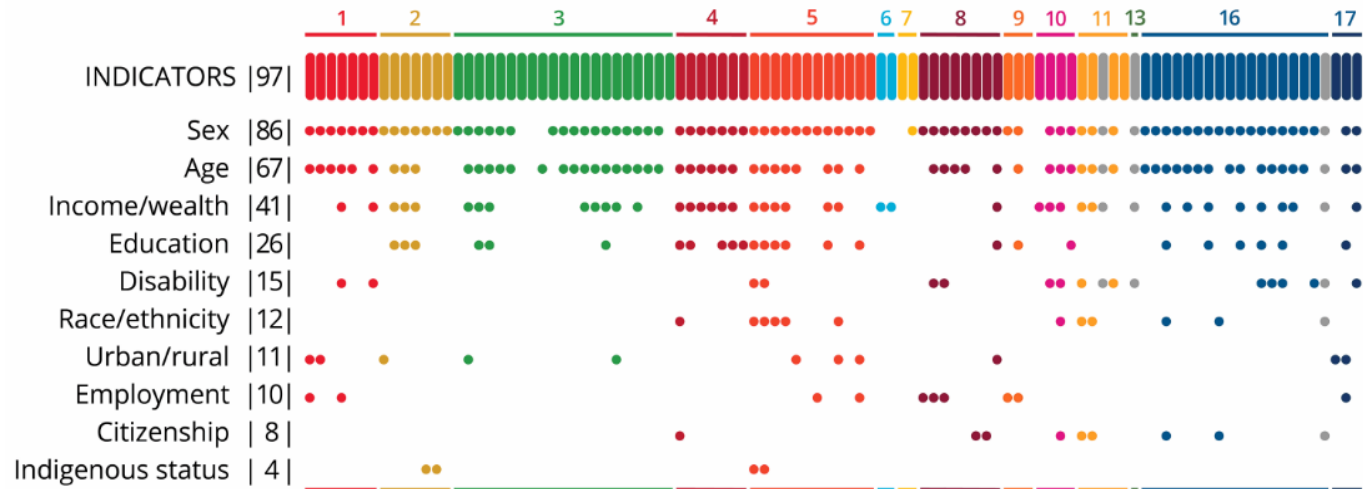
- SDG Indicators should be disaggregated, where relevant, by :
 - Age
 - Sex
 - Income
 - Migration status
 - Disability
 - Geographic location etc.

to allow an in-depth look at trends across different population groups, especially most vulnerable groups



Leaving No One Behind : Data Disaggregation

Required types of disaggregation by SDG indicators (on individuals)



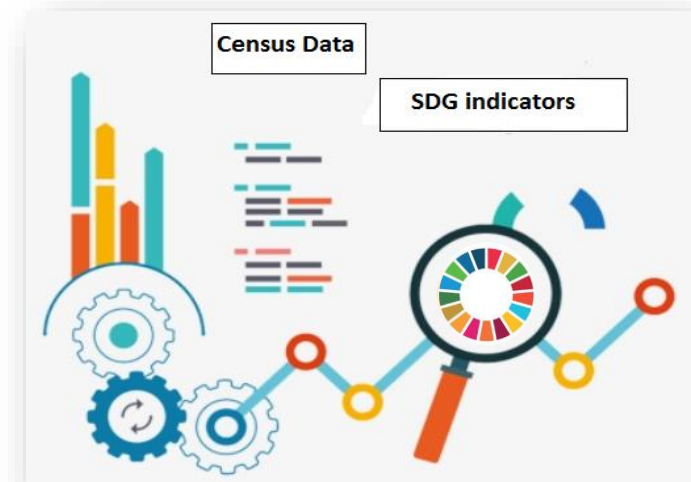
Data based on calculations by Open Data Watch.
Repeated indicators appear in gray but are not included in totals.



SDG indicators requiring data on individuals and families.

Use of census data for monitoring SDG Indicators

- Direct estimation of some SDG indicators
 - Data available for a wide range of topics
- Data disaggregation by age, sex, migration status, disability, geographic location,
- Reference population for special population groups
- A sample frame
- Geospatial data analysis



Potential use of Census data in SDGs



Censuses (Population/Population and Housing/Agriculture) can provide data for

- **13** out of 17 Goals and
- **36** out of 231 indicators

regarding the data source in metadata of indicators

Possible indicators from censuses



Indicator Code	Indicator	Census - Population - Housing - Agriculture	Status of Production	Data Source
1.1.1	Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)	Population	-	
1.2.1	Proportion of population living below the national poverty line, by sex and age	Population	Produced	TurkStat, Income and Living Conditions Survey
1.2.2	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Population	-	
1.4.1	Proportion of population living in households with access to basic services	Housing	Produced (Proxy)	TurkStat, Income and Living Conditions Survey
2.3.1	Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size	Agriculture	-	
2.3.2	Average income of small-scale food producers, by sex and indigenous status	Agriculture	-	
2.4.1	Proportion of agricultural area under productive and sustainable agriculture	Agriculture	-	
2.5.2	Proportion of local breeds classified as being at risk of extinction	Agriculture	-	

Possible indicators from censuses



Indicator Code	Indicator	Census - Population - Housing - Agriculture	Status of Production	Data Source
3.1.1	Maternal mortality ratio	Population	Produced	Ministry of Health
3.2.1	Under-5 mortality rate	Population	Produced	TurkStat, Death Statistics
3.2.2	Neonatal mortality rate	Population	Produced	TurkStat, Death Statistics
3.7.2	Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group	Population	Produced	TurkStat, Birth Statistics
3.8.1	Coverage of essential health services	Population	-	
3.c.1	Health worker density and distribution	Population	Produced	Ministry of Health
4.1.1	Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	Population	Produced	TIMSS
4.1.2	Completion rate (primary education, lower secondary education, upper secondary education)	Population	-	
4.2.2	Participation rate in organized learning (one year before the official primary entry age), by sex	Population	Produced	MONE
4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	Population	Produced	TurkStat, Adult Education Survey



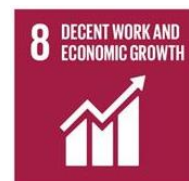
Possible indicators from censuses



Indicator Code	Indicator	Census - Population - Housing - Agriculture	Status of Production	Data Source
5.3.1	Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18	Population	Produced (Proxy)	TurkStat, Marriage Statistics
5.5.1	Proportion of seats held by women in (a) national parliaments and (b) local governments	Population	Produced	TurkStat; Election of Representatives Statistics, Election of Local Administration Statistics
5.a.1	(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure	Population	-	
6.1.1	Proportion of population using safely managed drinking water services	Housing	Produced	TurkStat; Municipal Water Statistics, Village Water Statistics (General Directorate of Local Administrations Registers)
6.2.1	Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	Housing	Produced (Proxy)	TurkStat, Income and Living Conditions Survey



Possible indicators from censuses



Indicator Code	Indicator	Census - Population - Housing - Agriculture	Status of Production	Data Source
7.1.1	Proportion of population with access to electricity	Housing	Produced	Turkish Electricity Distribution Corporation, Electricity Distribution and Consumption Statistics
7.1.2	Proportion of population with primary reliance on clean fuels and technology	Housing	Produced (Proxy)	Energy Market Regulatory Authority TurkStat, Address Based Population Registration System (ABPRS)
8.5.2	Unemployment rate, by sex, age and persons with disabilities	Population	Produced	TurkStat, Household Labour Force Survey
8.6.1	Proportion of youth (aged 15–24 years) not in education, employment or training	Population	Produced	TurkStat, Household Labour Force Survey
8.7.1	Proportion and number of children aged 5–17 years engaged in child labour, by sex and age	Population	Produced (Proxy)	TurkStat; Household Labour Force Survey, The Child Labour Survey
9.1.1	Proportion of the rural population who live within 2 km of an all-season road	Population	-	
9.2.2	Manufacturing employment as a proportion of total employment	Population	Produced	TurkStat, Household Labour Force Survey

Possible indicators from censuses



Indicator Code	Indicator	Census - Population - Housing - Agriculture	Status of Production	Data Source
11.1.1	Proportion of urban population living in slums, informal settlements or inadequate housing	Housing	-	
11.2.1	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities	Housing	Produced	TurkStat, Income and Living Conditions Survey
12.3.1	(a) Food loss index and (b) food waste index	Housing	-	
16.7.1	Proportions of positions in national and local institutions, including (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities and population groups	Population	-	
16.9.1	Proportion of children under 5 years of age whose births have been registered with a civil authority, by age	Population	Produced	Hacettepe University Institute of Population Studies, Turkey Demographic and Health Survey
17.19.2	Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100 per cent birth registration and 80 per cent death registration	Population and Housing Census	-	

TurkStat's assessment on the possible indicators

Indicator Code	Indicator	Census - Population - Housing - Agriculture	Status of Production	Data Source
11.1.1	Proportion of urban population living in slums, informal settlements or inadequate housing	Housing	-	
11.2.1	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities	Housing	Produced	TurkStat, Income and Living Conditions Survey
12.3.1	(a) Food loss index and (b) food waste index	Agriculture	-	
16.7.1	Proportions of positions in national and local institutions, including (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities and population groups	Population	-	
16.9.1	Proportion of children under 5 years of age whose births have been registered with a civil authority, by age	Population	Produced	Hacettepe University Institute of Population Studies, Turkey Demographic and Health Survey
17.19.2	Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100 per cent birth registration and 80 per cent death registration	Population and Housing Census	-	

- Surveys **can contribute directly** to the calculation of 11 SDG indicators shown in the table
- For the rest of the possible indicators, censuses **may have indirect contributions** for the production of those indicators.
- It is seen in the former tables that TurkStat has used **other surveys and administrative registers** instead of censuses for the related SDG indicators.

A Case Study for Using Census Data as Complimentary Purposes

Although we addressed 25 census related indicators as well reported, SDGs will sure have additional contributions wherever possible:

Lots of disaggregation are required

(not only in metadata but in 2030 Agenda as well) => **Leave no one behind**

A Case Study is provided by Migration Data Portal by using Census Microdata



A Case Study for Using Census Data as Complimentary Purposes

The case study explores SDGs **8.6.1**:

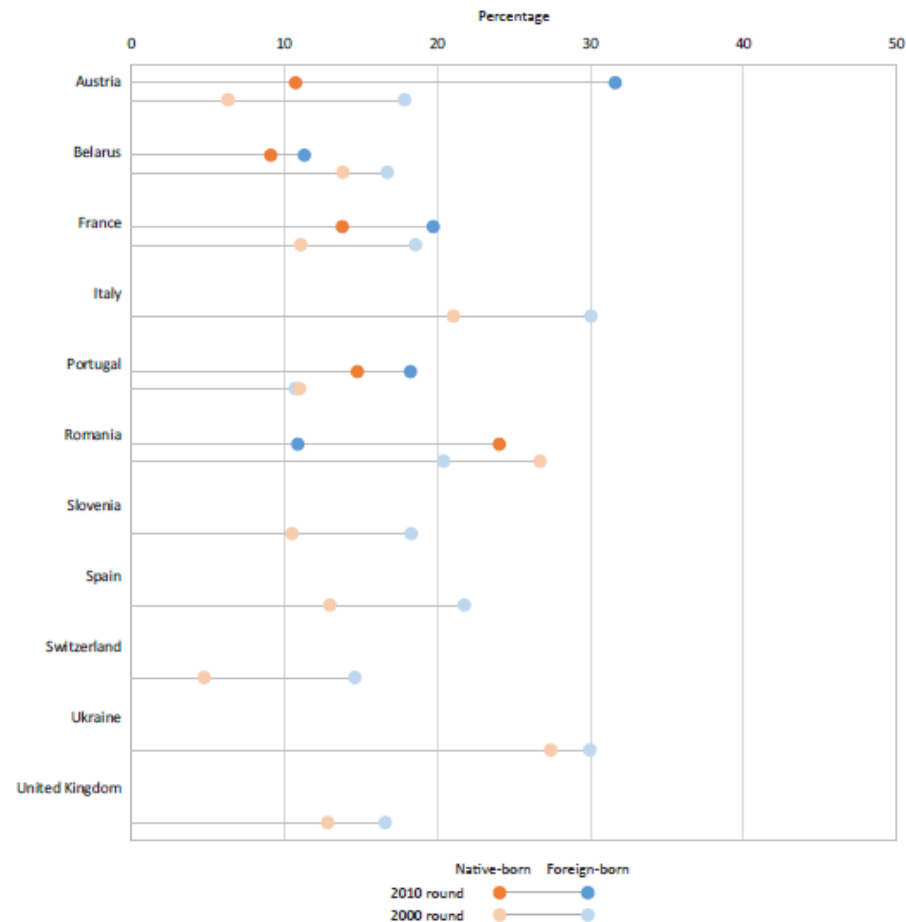
**Proportion of youth (aged 15-24 years)
not in employment, education or training
(NEET)**

This pilot study explored countries NEET by region for **migratory status** and compared them with 2000 and 2010 rounds of censuses.

The result:

Clear visibility of the effects of 2008 Global Financial Crisis and negative effects on migrants

Figure 4: NEET rate (%) among youth aged 15 to 24 in selected European countries, by place of birth and census round



Upcoming Censuses and Future Plans

- Expected censuses
 - Plans for 2021 Population And Housing Census (2021 - TurkStat)
 - Agricultural Census (Short term - Ministry of Agriculture and Forestry)
- How to integrate SDGs into the plans?



Plans for 2021 Population And Housing Census



Starting the preparations for the 2021 PHC: **2014**

With the goal of producing more timely, less costly, more useful and annual population

Statistics, TurkStat aims:

- changing the census methodology from combined to register based
- using the LFS data by combining them with related registers
- producing census data on 1 km² grids

and there is necessity to establish data bases on disability, buildings and dwellings

Plans for 2021 Population And Housing Census



In recent years:

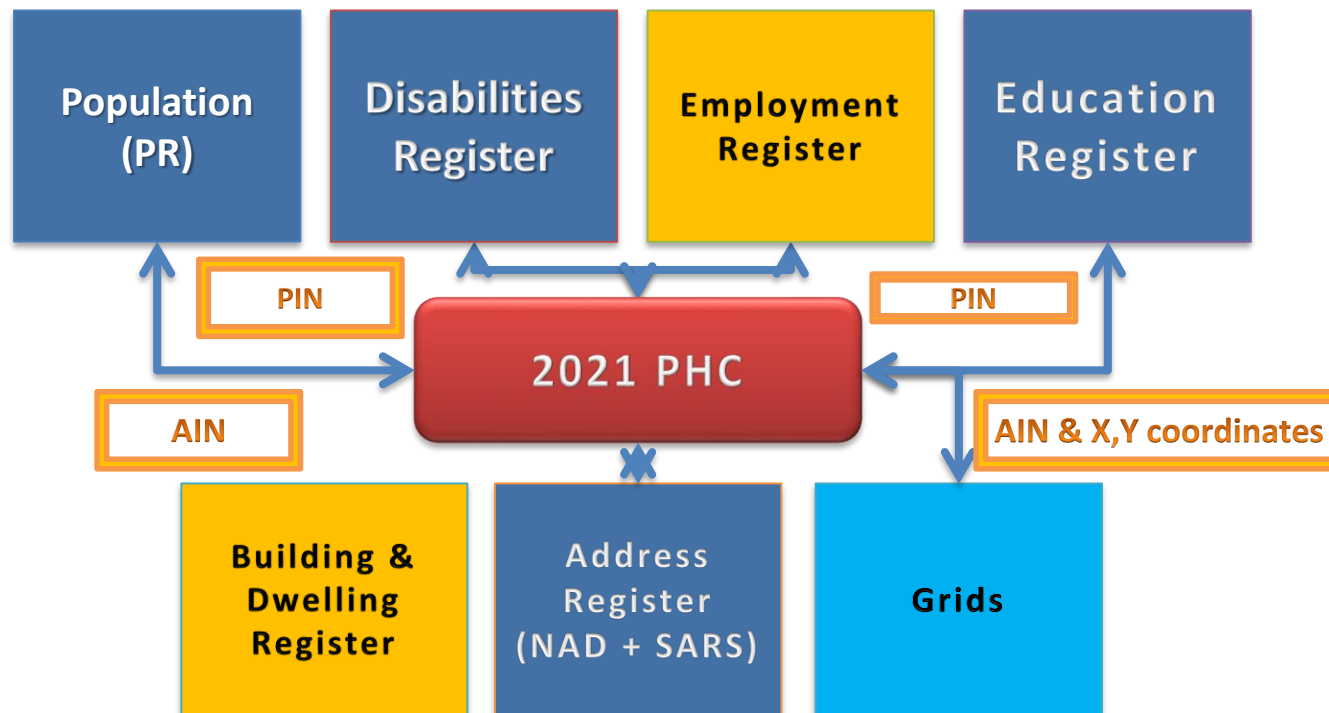
- 2021 PHC and related issues were added to 2017-2021 term Official Statistics Programme with new Census methodology (no more field application)
- Establishment of Steering Group for PHC 2021 and working groups in 2018
- First production of information on immigration and emigration, namely *annual migration flow statistics*, in 2018

Population Characteristics Database



Plans for 2021 Population And Housing Census

Plan for integrating various registers into one
“Population Characteristics Database”



Plans for Agricultural Census - Short Term

- Trusted and healthy databases and implementing an Agricultural Census are the first 3 actions mentioned in the 11th Development Programme (2019-2023) under Agriculture Section.
- 2017-2021 Official Statistics Programme: Agricultural Census is planned to be implemented in 2021/22.
- Various registers exist under the Ministry of Agriculture and Forestry
- Plan is to integrate these registry systems in the upcoming Agricultural Census



How to integrate SDGs into the census plans?

A country can take decisions by taking into account:

- The advantages and disadvantages of censuses & surveys
- Which indicators will be effectively covered with register based censuses?
- Which indicators should be further investigated besides the censuses?
 - Because they will increase the cost and response burden, etc.
 - Of those that will cannot be covered effectively in the censuses



Future Plans

Indicator Code	SDG indicators which can be produced from 2021 Population and Housing Census
1.1.1	Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)
1.2.2	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
1.4.1	Proportion of population living in households with access to basic services
9.1.1	Proportion of the rural population who live within 2 km of an all-season road
11.1.1	Proportion of urban population living in slums, informal settlements or inadequate housing
11.2.1	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
16.7.1	Proportions of positions in national and local institutions, including (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities and population groups
17.19.2	Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100 per cent birth registration and 80 per cent death registration

Since 2021 PHC will be applied based on registers in Turkey, some SDG indicators **can be produced by the integration of different registers during PHC**

Indicator Code	SDG indicators which can be produced from Agricultural Census
2.3.1	Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size
2.3.2	Average income of small-scale food producers, by sex and indigenous status
2.4.1	Proportion of agricultural area under productive and sustainable agriculture
2.5.2	Proportion of local breeds classified as being at risk of extinction
12.3.1	(a) Food loss index and (b) food waste index

These are the possible SDG indicators that can be produced regarding **Agricultural census**



Thank you
Teşekkürler
sdg@tuik.gov.tr