Main challenges and lessons learned from 2020 round of censuses

United Nations Statistics Division

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Department of Economic and Social Affairs

Statistics Division
Demographic and Social Statistics Branch
Demographic Statistics Section

SUSTAINABLE DEVELOPMENT GOALS

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❑ How to address lessons learned in the revised P&R

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![2020 World Population and Housing Census Programme]

- ❖ UNSD has been implementing the World Population and Housing Census Programme for over six decades

- ❖ Main roles of UNSD (as Secretariat of the World Programme):
  - ▪ Producing international standards and recommendations
  - ▪ Developing methodological guidelines
  - ▪ Continuous monitoring of country practices in census-taking
    - • Monitoring impact of Covid-19 pandemic on implementation of 2020 round of censuses
  - ▪ Conducting capacity-building activities
  - ▪ Annual reporting on the global programme to the Statistical Commission

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Methodological framework for PHC

Principles and Recommendations for Population and Housing Censuses, Revision 3 (2015)

Handbook on Management of Population and Housing Censuses, Revision 2 (2016)

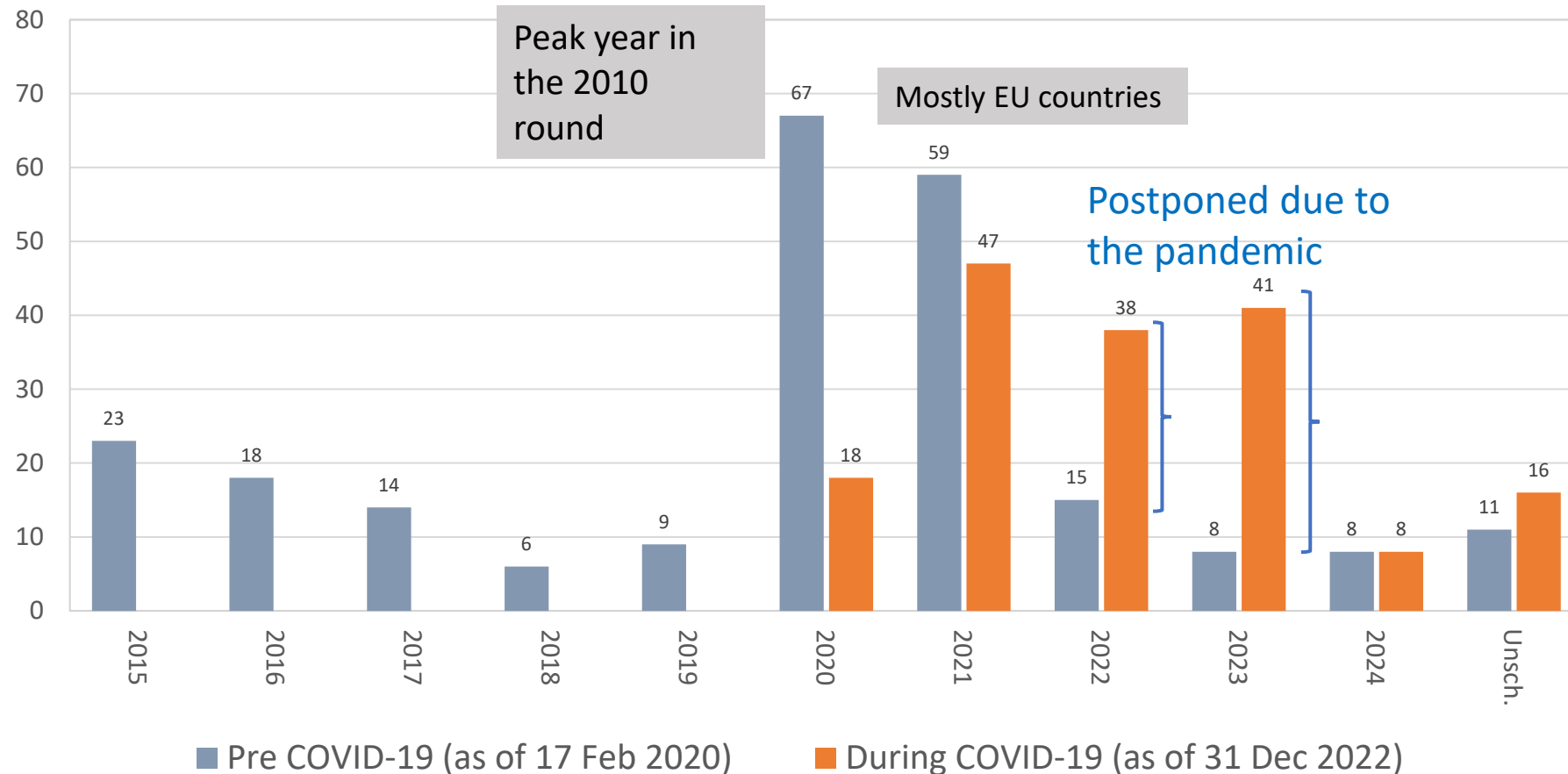| Technical Report on Post Enumeration Surveys (2010) | Handbook on GIS in support of Census Activities (2009) (needs to be updated) | Handbook on Measuring Economic Activity (2010) Revised under E-learning course | Handbook on Measuring International Migration through censuses (2017) NEW | Guidelines on the Use of Electronic Data Collection Technologies in Population and Housing Censuses (2019) NEW | Handbook on Editing for Population and Housing Censuses, Revision 2 (2019) REVISED | Technical Report on Measuring SDG Indicators through Population and Housing Censuses and Civil Registration Data (2021) NEW | Handbook on Registers-based Population and Housing Censuses (2022) NEW |

How the COVID-19 pandemic conditions affected census schedule?

2020 round census schedule (2015-2024)

Peak year in the 2010 round

Mostly EU countries

Postponed due to the pandemic

Delays in census-taking around year 2020 and 2021 **PERIODICITY ?**

Legend: ■ Pre COVID-19 (as of 17 Feb 2020) ■ During COVID-19 (as of 31 Dec 2022)

Values by year — Pre COVID-19: 2015: 23, 2016: 18, 2017: 14, 2018: 6, 2019: 9, 2020: 67, 2021: 59, 2022: 15, 2023: 8, 2024: 8, Unsch.: 11

During COVID-19: 2020: 18, 2021: 47, 2022: 38, 2023: 41, 2024: 8, Unsch.: 16

Modifications in census procedures to reduce the impact of the pandemic

- Extending the duration of enumeration (more than six months) to improve coverage –**SIMULTANEITY ?**

- Reducing direct contact with respondents – **COVERAGE/NON-RESPONSE** ?

- Managing multi-mode data collection –**COVERAGE?**

➢ Change of the place of usual residence during the pandemic and the effect of the pandemic conditions on census measures –**COMPARABILITY?**

Source: UNSD three EGMs on the impact of the Covid-19 pandemic on the implementation of population and housing censuses and quality concerns

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Rising costs and increasing coverage error

❑ Rising cost is the biggest challenge
- Increasing number of field staff as a result of population increase
- Modernisation of census processes

❑ Coverage of the enumerated population is primary concern
- Reluctant to participate in enumeration
- Response burden
- Unsecure areas
- Hard to contact (ex. gated communities or homeless)

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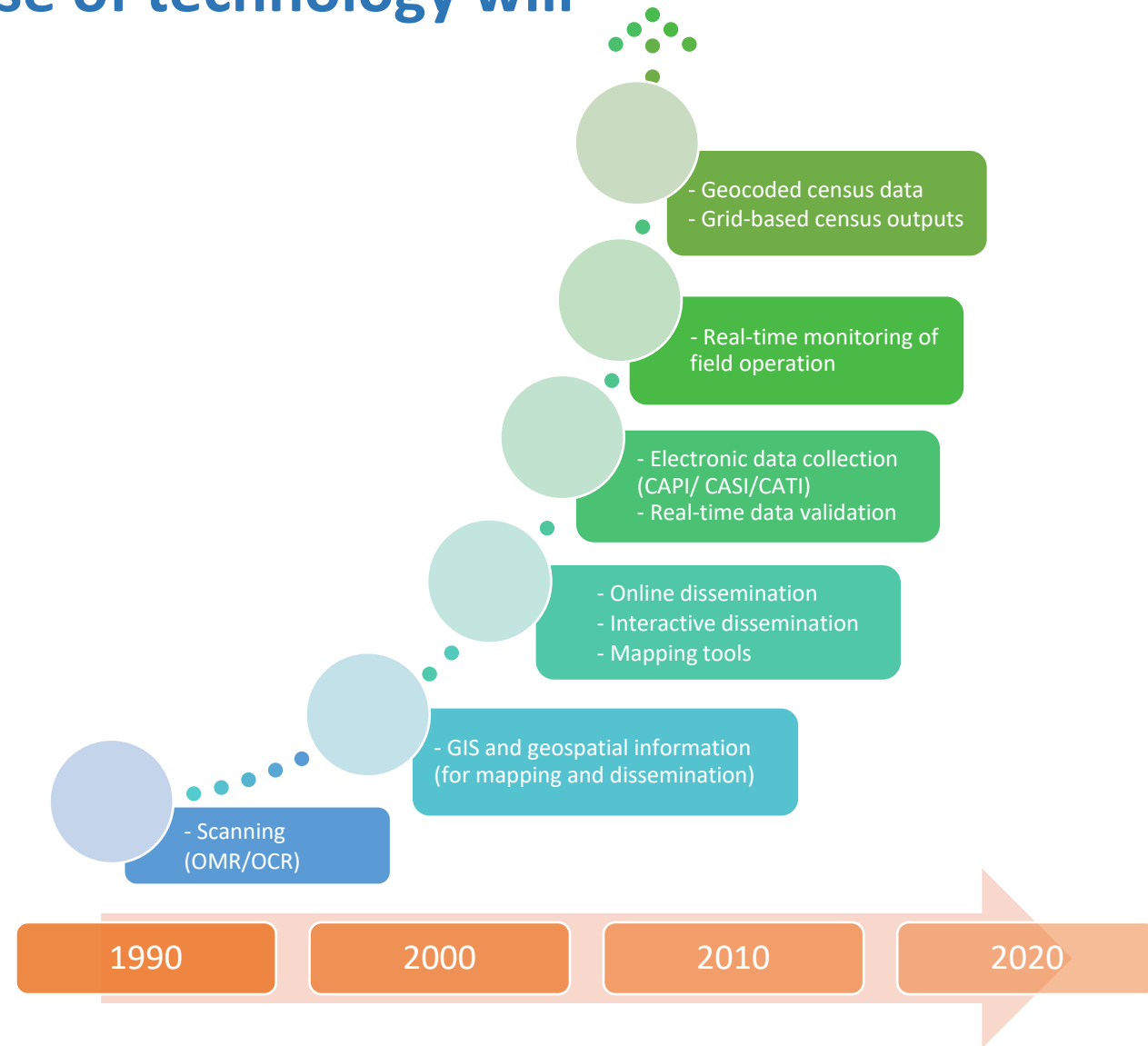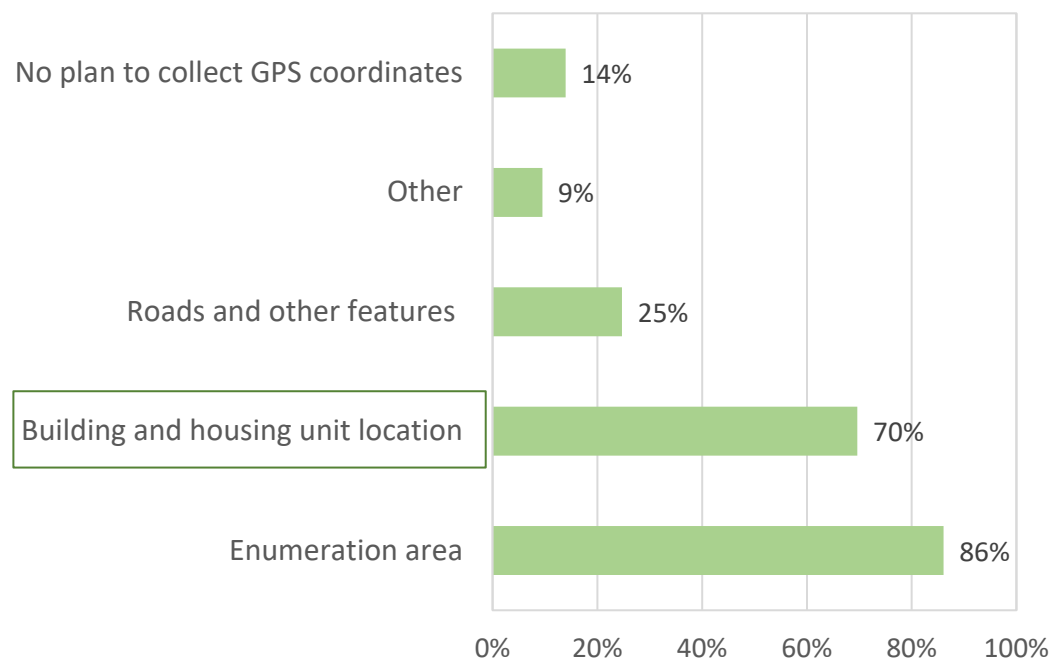Demographic Statistics Section

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Increasing dependence on the use of technology will continue

❖ Mapping
❖ Data collection
❖ Management and monitoring of field operations
❖ Dissemination

Impact of technology on quality of census results:

- Improved accuracy of data
- Improved timeliness of census results
- Enhanced dissemination and accessibility of data
  – Online dissemination
  – Interactive databases
  – Mapping tools

- Geocoded census data
- Grid-based census outputs

- Real-time monitoring of field operation

- Electronic data collection (CAPI/ CASI/CATI)
- Real-time data validation

- Online dissemination
- Interactive dissemination
- Mapping tools

- GIS and geospatial information (for mapping and dissemination)
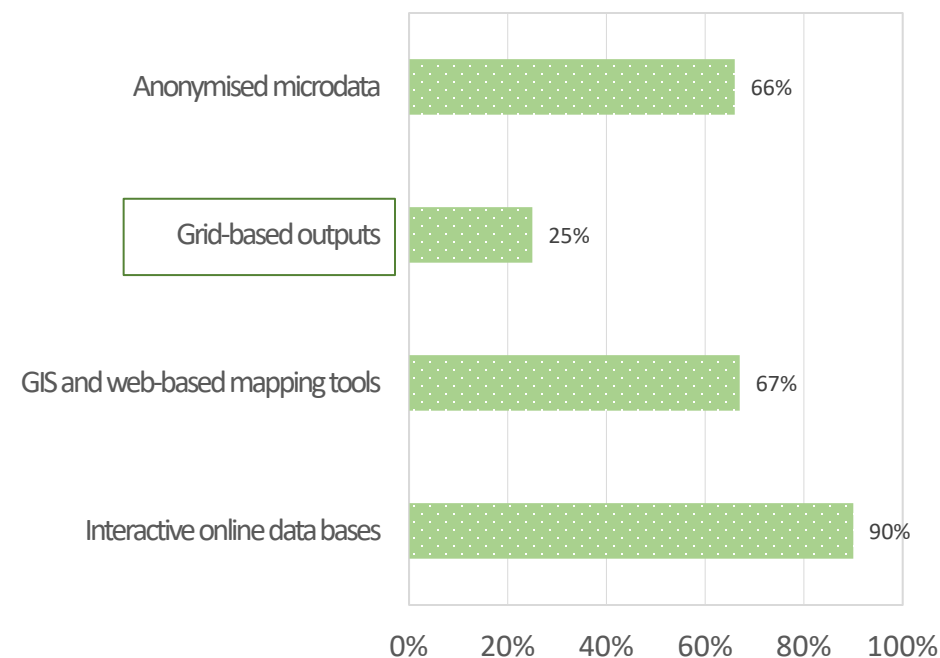
- Scanning (OMR/OCR)

1990   2000   2010   2020

Integration of geospatial information with census data

Proportion of countries that collected or planned to collect geographic coordinates (%)

- No plan to collect GPS coordinates: 14%
- Other: 9%
- Roads and other features: 25%
- Building and housing unit location: 70%
- Enumeration area: 86%

Proportion of countries that developed or planned to develop specific dissemination tools (%)

- Anonymised microdata: 66%
- Grid-based outputs: 25%
- GIS and web-based mapping tools: 67%
- Interactive online data bases: 90%

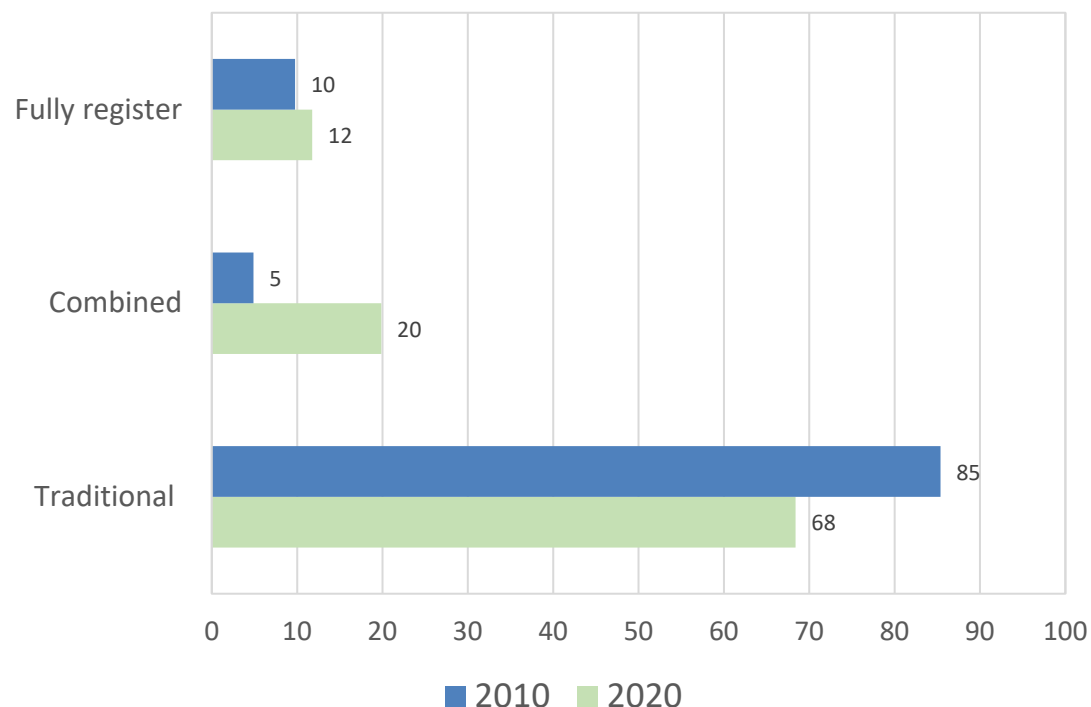Source: UNSD survey conducted in 2019 (138 responses)

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Moving to register-based approaches?

Proportion of countries by census methodology (%)
(2010 and 2020 census rounds)

Fully register — 10 (2010), 12 (2020)
Combined — 5 (2010), 20 (2020)
Traditional — 85 (2010), 68 (2020)

■ 2010 ■ 2020

- A growing number of countries plan to change census methodology from the traditional to other approaches involving the use of administrative data sources, mainly because of:
  – high costs
  – increasing non-response
  – request for more timely information

- Significant progress observed in terms of:
  – coverage of birth and death registers
  – providing legal identity for all

Sources: UNSD surveys conducted in 2013 (126 responses) and 2022 (137 responses)

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Lessons learned to be addressed in the 2030 revision of P&R

➢ **Provision of guidance on how to gradually move to register-based approaches**
  - Assessing the quality of existing administrative registers
  - Developing a roadmap for the transition process
  - Using administrative data to support the traditional census (eg. census frame, imputation, quality assessment)
  - Integrating population register with civil registration and legal identity

➢ **Integration of geospatial information with census data, including for enhancing data analysis**:
  - Calculation of some SDG indicators with a spatial aspect (e.g. 9.1.1, 11.2.1, 11.3.1, 11.7.1, etc.)
  - Adoption of new definition of urbanization and degree of urbanization
  - Production of grid-base (1km) census outputs

Lessons learned to be addressed in the 2030 revision of P&R

➤ Development of **emergency and contingency plans**, and risk management
  – guidance on emergency preparedness in the light of experience gained during the worldwide Covid-19 pandemic

➤ Adoption of **online questionnaire** where relevant
  – online self-response option to improve response rate

➤ **Revisiting existing definitions** of population and census methodologies
  - what extent existing definitions are feasible for censuses conducted with the use of administrative data sources
  - whether population **estimation methods** can be introduced for censuses which are not able to cover specific geographic areas, as a result of natural disaster or security reason or any other reason

➤ Discussion on **potential use of mobile positioning data** or any other data sources that could be used to support population and housing censuses, such as for:
  – Producing population estimates for areas that are not covered in the field enumeration
  – Validation of the quality of census data