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Statistical Committee  
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Item 5 of the provisional agenda

## **Future of population and housing censuses and lessons learned from past and current experiences**

### **Summary**

The present document provides a summary of how population and housing censuses were implemented in Arab countries during the 2020 census round (2015–2024), with the aim of presenting lessons learned and providing a clear vision for the 2030 round and beyond. It also strives to identify opportunities and challenges related to leveraging technology and mixed methodologies to produce high-quality data that can be used for development planning purposes.

The present document includes an analysis of a questionnaire that highlights the most prominent challenges and lessons learned from the experiences of Arab countries in the 2020 round, in addition to a review of these countries' trends in conducting censuses during the upcoming 2030 round. It also highlights the role of the Economic and Social Commission for Western Asia (ESCWA) in coordinating regional work to develop methodologies and build statistical capacity, and stresses the importance of continuing its work in the next census round.

The Statistical Committee is invited to take note of the present document and discuss the recommendations contained therein.

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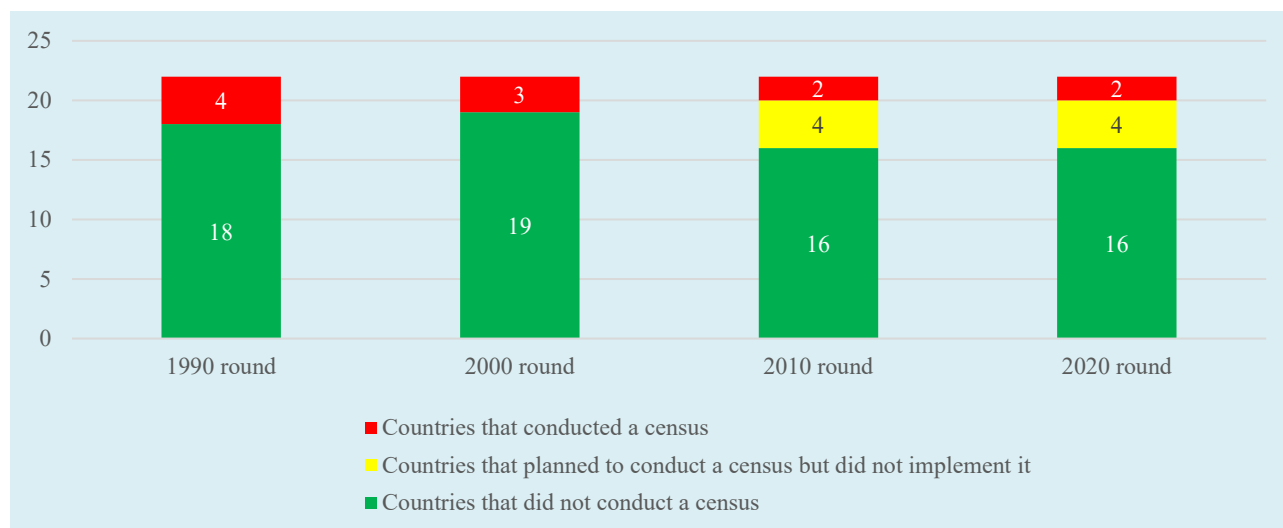
## Introduction

1. The population and housing census is one of the largest and most expensive statistical operations conducted by countries, as it requires the collection of demographic, social and economic data on the size of the population and its various characteristics, disaggregated by gender, age, education, migration status, labour force, type of disability, and place of residence at the level of small geographical areas and population clusters. This process is based on the principles and recommendations of the United Nations, including Economic and Social Council resolution 2015/10 of 5 August 2015 on the 2020 World Population and Housing Census Programme. This resolution emphasizes the need for member States to conduct at least one population and housing census between 2015 and 2024, with the aim of ensuring the availability of timely and reliable demographic data for use in policymaking.

2. Census data are of great importance as a basis for sampling in the demographic and social fields. They also play a fundamental role in preparing estimates and projections of population size, and fertility, migration and death rates, and in assessing the social, economic and health conditions of a specific age group by gender and place of residence. In addition, census data are used in various fields such as elections, municipal budgets, scientific research, and related development and investment fields. Lastly, census data play a prominent role in monitoring the Sustainable Development Goals (SDGs), providing key information for over 100 SDG indicators.

3. Technological and methodological developments in the third millennium have had a positive impact on census operations at the global and Arab levels, helping countries conduct less expensive and higher-quality censuses and make census data available shortly after they were conducted. Despite developments in the use of technology and geospatial tools in censuses and the use of administrative register data, census operations in six Arab countries were affected by the outbreak of the COVID-19 pandemic and the consequent security, political and financial circumstances (figure 1). The number of countries that conducted censuses decreased in the 2010 round, compared with previous rounds, and this was more evident in the 2020 round. It is worth noting that most Arab countries had conducted a census in previous rounds, with the exception of Lebanon (annex I).

**Figure 1. Development of population and housing censuses in Arab countries**



Source: Compiled by ESCWA.

4. The present document provides scenarios on the future of population and housing censuses for the 2030 round and beyond, based on lessons learned from the 2020 round. It aims to identify opportunities for leveraging technology and mixed methodologies, and the challenges that they pose to produce high-quality population and housing data that countries can use for development planning purposes.

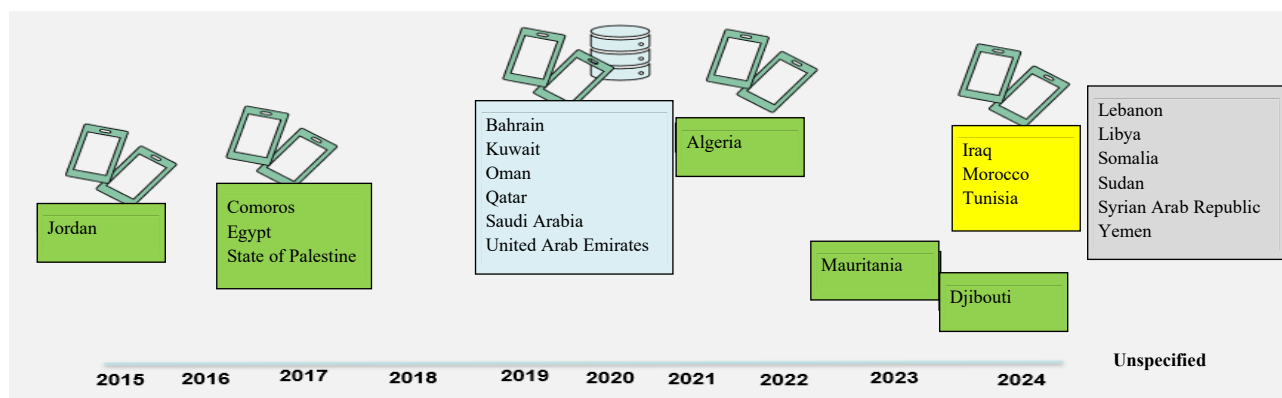
## I. 2020 census round in the Arab region: challenges and solutions

5. The present chapter is based on the results of a questionnaire prepared by the United Nations Statistics Division. In July 2024, the Economic and Social Commission for Western Asia (ESCWA) sent this questionnaire to all statistical agencies in Arab countries, and received responses from 20 countries. The following is a summary of the main questionnaire results, based on countries' responses (annex III).

### A. 2020 round

6. In the 2020 round, Algeria, the Comoros, Djibouti, Egypt, Jordan, Mauritania, the State of Palestine, and Sharjah, Ajman and Ras Al Khaimah in the United Arab Emirates successfully conducted censuses using modern technology before and after the outbreak of the COVID-19 pandemic. Despite the pandemic, Gulf Cooperation Council (GCC) countries conducted censuses using administrative register data, either entirely, such as Bahrain, Kuwait, Oman and Abu Dhabi; or partially, such as Qatar and Saudi Arabia, which conducted their censuses using mixed methodologies that included administrative registers, self-enumeration and field enumeration. Other countries, such as Iraq, Morocco, Tunisia and the United Arab Emirates, are still conducting intensive census activity before the end of 2024. The implementation of censuses in other countries, such as Lebanon, Libya, Somalia, the Sudan, the Syrian Arab Republic and Yemen, remains subject to appropriate security, political and financial conditions. In the same context, the results indicated that Somalia and the Syrian Arab Republic are preparing to conduct a population census in 2026, while Libya plans to conduct one in 2025 (figure 2). Despite these lengthy preparations, figure 2 shows that about half of the countries that conducted or planned to conduct a census in the 2020 round also conducted one in 2017 and 2024 (i.e. at the beginning and end of the round), while the largest number of countries conducted censuses between 2020 and 2022.

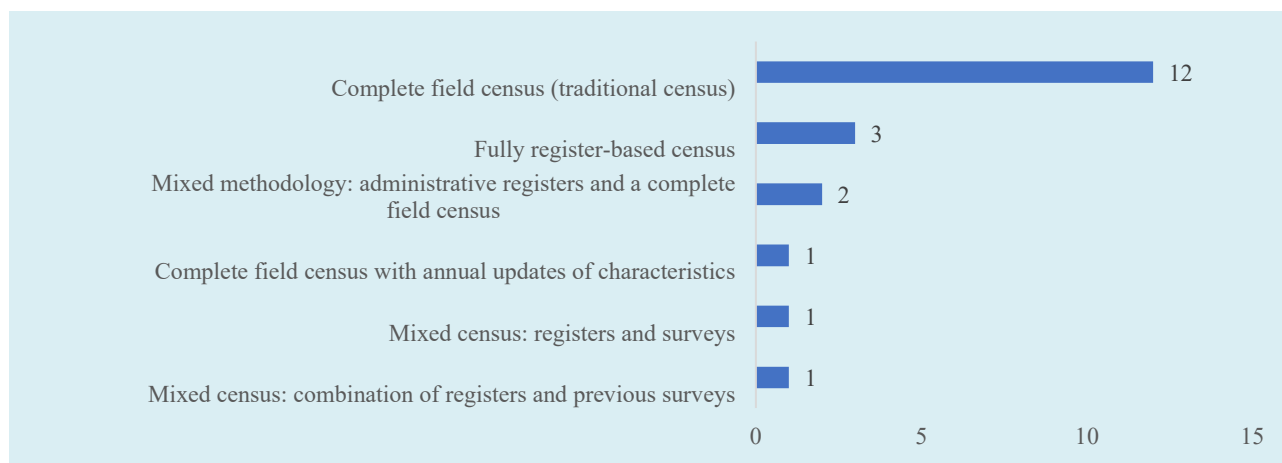
**Figure 2. 2020 population and housing census round in the Arab region**



Source: Compiled by ESCWA.

#### 1. Census methodologies

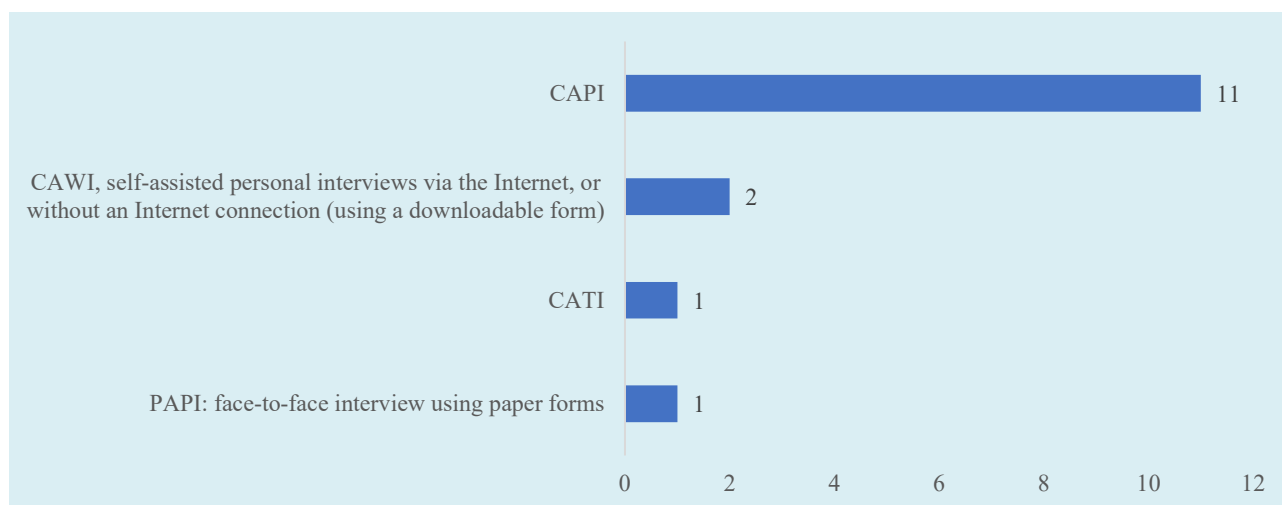
7. Based on the responses of 20 countries to the questionnaire, the results indicate that the traditional census is the main methodology used for conducting population and housing censuses, which is based on a complete field census where every household is surveyed. Of the countries that responded to this question, 12 countries (60 per cent) used or intend to use this traditional approach. In contrast, three countries used a fully register-based census to produce statistics, and two countries used a mixed methodology based on administrative registers and a complete field census. Three other countries indicated that they used or intended to use one of the following approaches: a complete field census with annual updates of characteristics, a mixed census based on existing registers and surveys, or a combination of registers and surveys (figure 3). Countries that used administrative register data for census purposes reported that they had used the following registers: population registers, address registers, building registers, electricity meter registers, and water meter registers.

**Figure 3. Key census methodologies for the 2020 round**

Source: ESCWA calculations based on a United Nations Statistics Division survey on the 2020 round of population and housing censuses.

### 2. Methods of conducting a census to collect field data

8. The questionnaire included a question on census methods that countries are using or intend to use to collect field data in the 2020 round. Figure 4 shows the responses to this question. Eleven countries chose the computer-assisted personal interview (CAPI) method, while Qatar and Saudi Arabia applied computer-assisted self-interviewing (CAWI) or telephone interviews using electronic questionnaires (CATI). Algeria used both electronic and paper questionnaires to collect census data.

**Figure 4. Census methods for field data collection in the 2020 round**

Source: ESCWA calculations based on a United Nations Statistics Division survey on the 2020 round of population and housing censuses.

### 3. Concept of a population census

9. There are two internationally recommended concepts for a population census: the theoretical count (the number of residents) and the actual count (the current population). The theoretical count is based on the usual place of residence, while the actual count is based on the place where a person is at the time of the census. In practice, both concepts can be applied in a single census. For example, when conducting a population census, it is still possible to produce figures for the usual residence population by collecting information on individuals'

usual place of residence. The survey results showed that 80 per cent of the responding countries relied on the usual place of residence concept, compared with only two countries that applied the actual count concept. Qatar chose to rely on both concepts.

#### 4. *Collecting geographical coordinates*

10. Geospatial technology is a key pillar of every census or survey, and provides a framework for collecting, tabulating and publishing data for the purposes of relevant statistical surveys. Over the past few years, Arab countries have developed and managed highly detailed and advanced national geospatial databases that contain addresses, locations of housing units, the legal, statistical and administrative boundaries of a country, and a digital representation of all roads in a country with their associated names. A major development in technology use in census operations is the integration of geographic information systems (GIS) in all stages of the census process. Moreover, the use of electronic data collection technologies capable of capturing Global Positioning System (GPS) coordinates has provided the opportunity to link census data to the locations of enumeration units and produce geo-referenced census data. The collection of GPS coordinates enables the development of an efficient geo-referenced statistical information infrastructure for better interpretation of census data by aggregating the same data into different geographic hierarchies, such as administrative units, regions, functional areas, and networks.

11. In this regard, the questionnaire included a question on whether geographic coordinates were collected or used to determine a country's practices in collecting information about a particular GPS location. Countries were asked to indicate the units for which GPS coordinates were collected at the level of enumeration areas, buildings, housing units and other geographic features, including roads, water bodies and facilities.

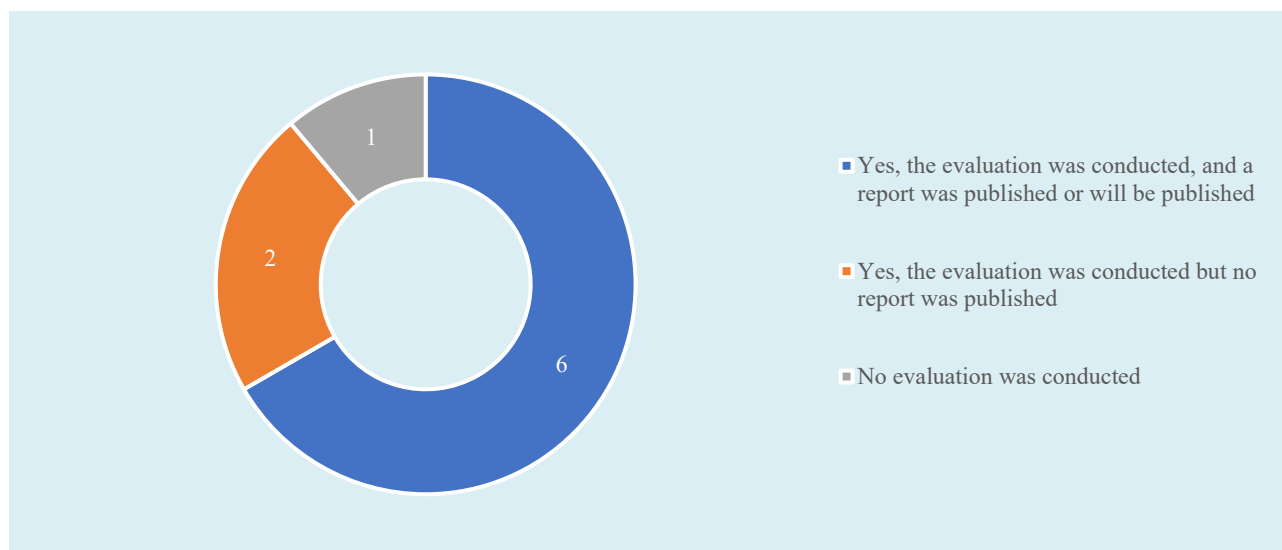
12. The survey results indicate that 10 of 11 countries that responded have collected GPS coordinates for the 2020 round. It can be concluded that 91 per cent of these countries collect GPS data for buildings and housing units. Of the eleven countries that responded to the survey, Algeria was the only country that did not intend to collect this information.

#### 5. *Evaluation method to measure the quality of census data*

13. Population censuses are not without flaws, and some errors may occur during data collection, processing and reporting. Therefore, a census evaluation should be conducted to ensure users' confidence in the census data and to help explain any discrepancies, as the quality of census data affects policymaking, resource allocation and research. There are several methods for measuring and assessing the quality of census data, such as the post-enumeration survey (PES) and demographic analysis. PES involves re-interviewing a sample of households after the census to compare their responses with the official census results. This method helps identify under- or over-counting, and assess the accuracy of demographic characteristics (inclusiveness and coverage). Demographic analysis compares census data with other demographic information, such as birth and death registers and migration data.

14. Most responding countries have conducted or are planning to conduct an evaluation of their censuses. The results of the questionnaire show that the two main methods for evaluating census data are comparison with existing household survey results and demographic analysis. Thirteen countries (69 per cent) reported that they would use comparison with existing household survey results to evaluate the census. Seven countries indicated that they would apply demographic analysis, while five countries reported that they had or would use the post-census survey method.

15. In response to the question on whether an evaluation of census data had been conducted and a report published, six countries responded "Yes, the evaluation was conducted, and a report was published or will be published", while two countries responded "Yes, the evaluation was conducted but no report was published". One country responded "No evaluation was conducted" (figure 5).

**Figure 5. Conducting census data evaluation and publishing reports**

Source: ESCWA calculations based on a United Nations Statistics Division survey on the 2020 round of population and housing censuses.

#### 6. Data publishing products

16. The questionnaire also contained a question about publishing products, including electronic publications and interactive electronic maps. Data dissemination and availability are important elements of census quality, so the questionnaire included a question about the likelihood of making a sample of processed census microdata available for public use. The results show that 70 per cent of the 10 responding countries either publish census data or plan to publish it through interactive databases on the Internet. In addition, 50 per cent of responding countries provide GIS and mapping tools on the Internet.

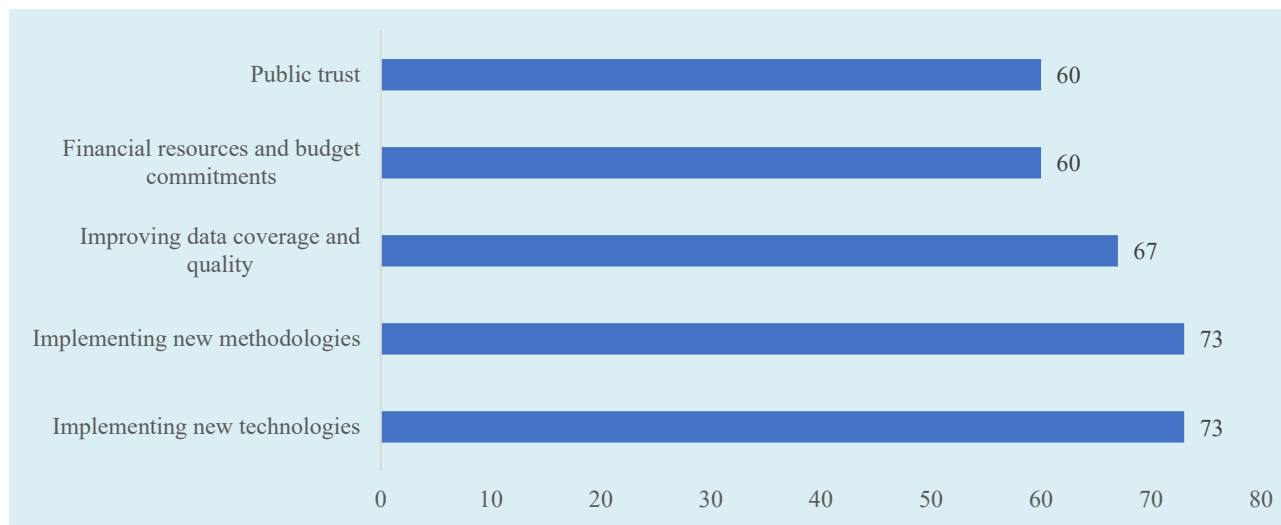
17. The number of countries that made a sample of census data available for public use decreased in the 2020 round, compared with the 2010 round. Morocco, the State of Palestine and Saudi Arabia reported that they would publish samples of microdata, while three countries (Djibouti, Mauritania and Tunisia) indicated that they had not decided on the type of microdata they would publish.

#### 7. Challenges in planning and conducting censuses

18. Conflicts pose significant challenges to statistical data collection, completely hindering the implementation of censuses in some countries, such as Libya, the Syrian Arab Republic and Yemen; or disrupting statistical systems in others, such as the Sudan. In addition to security risks and limited access, data collectors are in danger and statistical infrastructure is destroyed. Technical challenges include the transition from traditional to digital censuses, which requires re-engineering the infrastructure, providing modern resources, and training personnel. Register-based censuses require a legal framework, collaboration with register owners, and ensuring data quality. The COVID-19 pandemic had a significant impact on the census process, prompting countries to adopt self-enumeration using the Internet or postpone planned traditional censuses. Funding for censuses is also a major challenge in many cases.

19. The questionnaire asked countries to provide information on the challenges they faced in planning and conducting the 2020 round. They were also asked to rate the degree of challenge for each of the pre-defined challenge areas. Country responses showed that the top three issues identified as “major” or “moderately challenging” in the 2020 round were: implementing new technologies (73 per cent), implementing new methodologies (73 per cent), and improving data coverage and quality (67 per cent). Other challenges that emerged in the responses were financial resources and budget commitments, and public trust (figure 6).

**Figure 6. Main challenges faced by countries in planning and conducting the 2020 round**

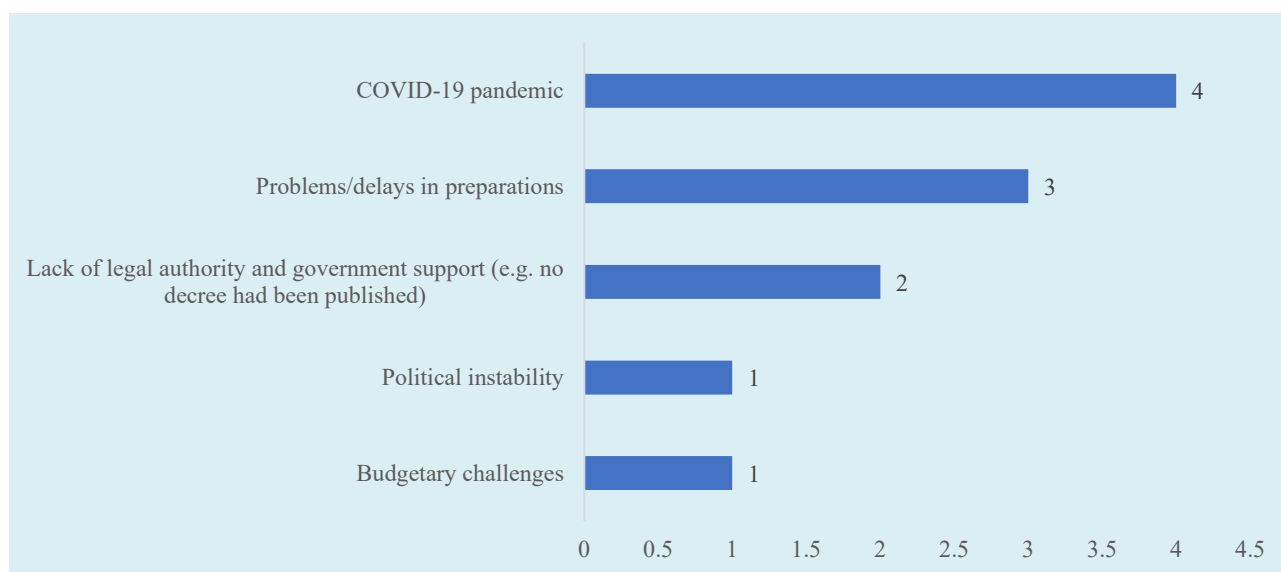


Source: ESCWA calculations based on a United Nations Statistics Division survey on the 2020 round of population and housing censuses.

### 8. Postponing scheduled census dates

20. The questionnaire also enquired whether countries had postponed their census dates at least once during the 2020 round, and asked them to specify the reason for the postponement. Of the 15 countries that responded, 10 (67 per cent of responding countries) indicated that they had actually postponed the previously scheduled census date. The COVID-19 pandemic was the most frequently cited reason for postponement, and was a concern in Algeria, Kuwait, Qatar and Saudi Arabia. Three countries (Egypt, Mauritania and the United Arab Emirates) indicated that they had faced problems/delays in preparations that had had a negative impact on the successful implementation of their censuses. Iraq and Tunisia postponed their censuses owing to a lack of legal authority and government support, while Jordan postponed its census due to political instability. The United Arab Emirates also faced budgetary challenges.

**Figure 7. Reasons for changing census dates**



Source: ESCWA calculations based on a United Nations Statistics Division survey on the 2020 round of population and housing censuses.



## **B. Arab countries' successes in the 2020 round**

21. In response to a question on successes achieved in the 2020 round, about 71 per cent of the 14 responding countries reported that their success was “improving information technology”, while 67 per cent chose “improving census methodologies”. The remaining responses were divided between improving quality, improving data dissemination processes, planning for the census, and securing the necessary resources for it.

### *Future prospects for the 2030 round (2025–2034)*

22. Arab countries faced major challenges in conducting censuses during the 2020 round, and many of these challenges still exist, especially in countries experiencing political and economic instability. Accordingly, 11 Arab countries (Algeria, Bahrain, Egypt, Kuwait, Oman, Mauritania, Morocco, Qatar, Saudi Arabia, Tunisia and the United Arab Emirates) faced delays in the 2020 rounds. In contrast, other countries are preparing for the next census round. In this context, technological developments and a shift towards alternative scientific methodologies provide an opportunity to complete censuses in the 2030 round. Cooperation between countries on the one hand, and between countries and international and regional organizations on the other, contributes to accelerating work and achieving high-quality censuses that meet international standards.

23. The following eight Arab countries have set an expected reference date for their census in the 2030 round: Bahrain (2030), Egypt (2025), Jordan (2025), Mauritania (2033), Oman (2030), the State of Palestine (2027), Qatar (2025), and Saudi Arabia (2030). Djibouti, Iraq, Morocco and Tunisia have not set an expected reference date for their census.

24. With regard to the methodologies that countries will follow in conducting censuses, seven countries (Iraq, Libya, Mauritania, State of Palestine, the Sudan, Somalia and Yemen) reported that they intended to adopt the complete field census (traditional census) method in the 2030 round. Four countries (Egypt, Jordan, Saudi Arabia and the Syrian Arab Republic) plan to use both the mixed census (register and complete field census) and the registry-based census methods. Four countries (Bahrain, Oman, Qatar and Tunisia) will collect population data using only the complete register-based census method.

25. In response to the question on the innovative areas to be used in the 2030 round, responding countries said that they aimed to innovate and strengthen existing structures in various areas, including methodology and concept development, use of registers, Internet data collection, GPS adoption, and data dissemination.

## **II. Future of censuses in the 2030 round in Arab countries: progress and ways forward**

26. Lessons and experiences can be learned, and scientific methodologies can be developed to conduct future censuses, based on the responses of Arab countries to the questionnaire of the United Nations Statistics Division, and in view of regional and international experiences and practices adopted in the 2020 round. Future scenarios and proposed scenarios for conducting censuses are based on the following.

### **A. Developing census methodologies**

27. In view of technological developments in the fields of collecting, processing, analysing and publishing statistical data, and in the light of challenges related to providing the necessary budgets to conduct censuses or the circumstances that prevent them from being conducted, some Arab countries have developed their methodologies in a manner compatible with prevailing conditions therein. These methodologies vary between relying entirely on administrative register data, or mixed methodologies that are based on multiple data sources (such as administrative registers, self-enumeration using the Internet, field work, and telephone), or using traditional enumeration supported by technology (such as tablets and geospatial technology).

28. Countries that cannot rely entirely on administrative registers are expected to adopt a mixed methodology, making sure to use technology wherever possible, especially in the recruitment of census teams and training of enumerators. They will also rely on field methodologies and questionnaire studies (whether standardized or short/detailed), which guarantee cost savings and quality assurance. In the event that administrative registers cannot be used, these countries will resort to the traditional methodology.

29. In cases where a comprehensive population census cannot be conducted, statistical agencies may use alternative methodologies that do not rise to the level of a full field census, such as the quick count, mini-censuses, or satellite images and their integration with statistical survey data within statistical modelling systems to cover part of a country or an entire country when data collection operations cannot be completed.

**Table 1. Census scenarios for the 2030 round: challenges and possible solutions for each scenario**

1. Administrative registers (in full)	
Challenges	Possible solutions
<ul style="list-style-type: none"> <li>Providing a legal and legislative framework and government support.</li> </ul>	<ul style="list-style-type: none"> <li>Issuing binding government decrees and legislation.</li> </ul>
<ul style="list-style-type: none"> <li>Using different concepts and definitions in separate registries.</li> </ul>	<ul style="list-style-type: none"> <li>Unifying concepts and definitions according to international recommendations.</li> </ul>
<ul style="list-style-type: none"> <li>Providing a unified identification number to facilitate correct linking of data.</li> </ul>	<ul style="list-style-type: none"> <li>Issuing a unified identification number if it is not available.</li> </ul>
<ul style="list-style-type: none"> <li>Accessing register data through register owners.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinating and working with register owners.</li> </ul>
<ul style="list-style-type: none"> <li>Having knowledge of administrative registers and methods of controlling data quality and completeness.</li> </ul>	<ul style="list-style-type: none"> <li>Building capacity in the field of register data quality and completeness.</li> </ul>
2. Mixed census methodology	
Challenges	Possible solutions
<ul style="list-style-type: none"> <li>Availability of high-quality administrative registers for census purposes.</li> </ul>	<ul style="list-style-type: none"> <li>Studying the completeness of register data, and working to improve their quality.</li> </ul>
<ul style="list-style-type: none"> <li>Public responsiveness to self-enumeration.</li> </ul>	<ul style="list-style-type: none"> <li>Implementing public awareness campaigns on how to participate in self-enumeration.</li> </ul>
<ul style="list-style-type: none"> <li>Varying data accuracy between different sources.</li> </ul>	<ul style="list-style-type: none"> <li>Establishing a standard mechanism for data unification.</li> </ul>
<ul style="list-style-type: none"> <li>Availability of statistical technical capacity.</li> </ul>	<ul style="list-style-type: none"> <li>Developing a statistical capacity-building programme.</li> </ul>
<ul style="list-style-type: none"> <li>Resistance to change and difficulty in coordinating administrative registers with traditional surveys.</li> </ul>	<ul style="list-style-type: none"> <li>Enhancing understanding of the benefits of the mixed methodology, achieving institutional support, and developing an integrated plan that effectively combines the two approaches.</li> </ul>
3. Traditional censuses using technology	
Challenges	Possible solutions
<ul style="list-style-type: none"> <li>Availability of technological infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Improving the technological infrastructure in remote areas.</li> </ul>
<ul style="list-style-type: none"> <li>Availability of technical staff members trained in the use of technology.</li> </ul>	<ul style="list-style-type: none"> <li>Qualifying census workers and providing them with special training on technology use.</li> </ul>
<ul style="list-style-type: none"> <li>Audience interaction and participation.</li> </ul>	<ul style="list-style-type: none"> <li>Launching media campaigns to explain the importance of the census, the content of the form,</li> </ul>

	and the number and type of indicators to be collected.
<ul style="list-style-type: none"> <li>• High cost of required hardware and software.</li> </ul>	<ul style="list-style-type: none"> <li>• Providing alternative solutions that are less expensive and exchanging technological tools, extending the time required to conduct the census, and providing unified applications at the regional level.</li> </ul>
<ul style="list-style-type: none"> <li>• Information security.</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthening security and encryption systems to protect data.</li> </ul>
<b>4. Alternative methodologies for countries where censuses are difficult to conduct</b>	
<b>A. Quick count</b>	
<b>Challenges</b>	<b>Possible solutions</b>
<ul style="list-style-type: none"> <li>• Accuracy and volume of data collected.</li> </ul>	<ul style="list-style-type: none"> <li>• Developing a special programme for quality assurance and inspection.</li> </ul>
<ul style="list-style-type: none"> <li>• Difficulty in reaching the entire population.</li> </ul>	<ul style="list-style-type: none"> <li>• Adopting additional means, such as cooperation with local and international organizations, technology and modelling, and remote surveys.</li> </ul>
<b>B. Mini-census</b>	
<b>Challenges</b>	<b>Possible solutions</b>
<ul style="list-style-type: none"> <li>• Proportional representation, sample size and sampling frame.</li> </ul>	<ul style="list-style-type: none"> <li>• Carefully designing the sample and making the necessary selections for this purpose.</li> </ul>
<ul style="list-style-type: none"> <li>• Dissemination of results at the national and subnational levels.</li> </ul>	<ul style="list-style-type: none"> <li>• Combining the results of the mini-census with other data (such as administrative registers and surveys) to enhance the ability to generalize and improve result accuracy.</li> </ul>
<b>C. Satellite imagery and statistical modelling</b>	
<b>Challenges</b>	<b>Possible solutions</b>
<ul style="list-style-type: none"> <li>• Extent to which image accuracy affects the estimation processes of population characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>• Using image enhancement techniques or combining multi-source data to increase accuracy.</li> </ul>
<ul style="list-style-type: none"> <li>• Lack of updated and accurate field data for linking and modelling processes.</li> </ul>	<ul style="list-style-type: none"> <li>• Simplifying models or combining them with field data to verify results.</li> </ul>
<ul style="list-style-type: none"> <li>• High cost of satellite images.</li> </ul>	<ul style="list-style-type: none"> <li>• Partnering with international organizations or using open-source data, and developing low-cost solutions that meet needs.</li> </ul>

*Source:* Compiled by ESCWA.

## **B. Enhancing technology use**

30. Arab statistical agencies have kept pace with the use of technology in censuses, and the continued development of technical infrastructure remains crucial to support digital censuses. Collecting data from multiple sources requires the availability of modern devices, the development of software and applications to receive huge amounts of data that must be transferred, processed and stored, and training human resources to use and manage these data. Moreover, the use and sharing of technologies to produce reliable and timely data and statistics requires building the capacity of national statistical offices in using geospatial systems and administrative registers data.

### **C. Building statistical capacity and exchanging experiences and good practices**

31. The results of the questionnaire and recommendations from regional and national workshops in the 2020 round highlighted the importance of continuing the process of building statistical capacity through the following:

- Organizing expert meetings, workshops and training courses to build the capacity of national working teams.
- Receiving specialists from countries while and after conducting censuses to review experiences.
- Sending specialists from countries that implemented censuses to assist other countries within the framework of a bilateral or regional cooperation programme to benefit from Arab expertise inside and outside the region.

32. The 2020 round was characterized by inter-regional cooperation between countries in exchanging experiences and good practices through regional meetings and scientific visits to learn about experiences. Egypt, Jordan, Oman and Saudi Arabia received delegations from Arab statistical offices. This cooperation also included lending tablets (Jordan and the State of Palestine) or donating them (Djibouti and Egypt). There is no doubt that the continuation and coordination of these practices will be a key factor in the success of the 2030 round.

### **D. Ensuring quality and transparency**

33. International standards should be applied to ensure data quality, and they should be included in all stages of the census and its operations. Transparency should also be enhanced at all stages, including planning, implementation and publication.

### **E. Crisis response**

34. Strategies must be developed to address potential crises and deal with security and political challenges, and alternative census methodologies must be developed and used in countries facing crises.

### **F. ESCWA role in supporting censuses and coordinating regional and international cooperation**

35. ESCWA played a pivotal role in the 2020 round of population and housing censuses, implementing a series of statistical activities to serve census purposes at the regional and national levels (annex II). These activities included building statistical capacity, providing technical support, and producing knowledge materials on methodologies such as self-enumeration using the Internet, strategies for using and disseminating census data, and utilizing geospatial technology in all stages of the census. In addition, ESCWA translated the third revision of the [Principles and Recommendations for Population and Housing Censuses](#) into Arabic and made it available on its website, and continued its role as the secretariat of the Regional Taskforce on Population and Housing Censuses. ESCWA effectively coordinated census operations with several international and regional organizations, such as the United Nations Statistics Division, the United Nations Population Fund, the Statistical Centre for the Cooperation Council for the Arab States of the Gulf, the League of Arab States, and the Arab Institute for Training and Research in Statistics.

36. In the context of enhancing regional cooperation and exchange of expertise, ESCWA organized a series of workshops and meetings at the regional, subregional and national levels, with the aim of implementing censuses in Arab countries in a manner consistent with international recommendations and standards and the national priorities of each country, and promoting the use of advanced methodologies such as censuses based on administrative registers and multi-source methodologies. ESCWA has focused on the use of modern technology. In addition, ESCWA coordinated study visits between countries and sought to provide tablets to

some countries for use in census data collection operations, which contributed to enhancing the accuracy and efficiency thereof.

37. To further enhance knowledge and exchange of expertise, ESCWA launched a knowledge base in Arabic and English on the [website](#) of the Arab Population and Housing Censuses, which includes knowledge materials and guides on censuses, a list of national, regional and international census experts, and information on census activities in the Arab region during the 2020 round.

### **G. ESCWA continues to support census work in Arab countries in the 2030 round**

38. ESCWA continues to play its role in supporting census operations and coordinating regional work in preparation for the 2030 round, building on the successes achieved in the previous two rounds. Its role will focus on transferring successful experiences, enhancing regional and international cooperation, and benefiting from the current efforts of the United Nations Statistics Division in reviewing and revising the principles and recommendations of population and housing censuses. ESCWA is continuing its role in building statistical capacity and producing knowledge materials and guides that contribute to conducting censuses in a manner consistent with international recommendations and standards, and the priorities of each country.

39. Based on Arab experiences and the challenges faced by countries in the 2020 round, ESCWA will plan its support and programmes in a manner that helps bridge knowledge gaps in capacity-building, develop knowledge materials, ensure quality assurance, use technology in all census stages, and benefit from administrative register data in census data collection whenever possible. ESCWA will continue to work with member States as the secretariat of the Taskforce on Population and Housing Censuses established to support the 2020 round.

## **III. Conclusion and recommendations**

40. Arab countries have made significant progress in the use of modern technology in conducting population censuses, which has improved data quality and increased the efficiency of information collection, analysis and dissemination processes. However, financial and technical challenges still pose significant obstacles to conducting a comprehensive and accurate population census in some countries. Mixed methodologies that combine traditional censuses, the use of administrative registers, and self-enumeration using the Internet have become an essential solution to ensure the comprehensiveness and accuracy of results. ESCWA has played its role in supporting Arab countries by providing technical support and strengthening national capacity, which has helped improve the effectiveness of censuses. As the 2030 round approaches, there is a need to sustain efforts and ensure the application of international quality standards to achieve accurate results that support sustainable development processes.

41. In this context, it is important for Arab countries to continue to undertake the following efforts:

- Enhancing the sustainability of technical efforts: continue investing in modern technology and expanding its use at all stages of the census to ensure accurate and effective data collection.
- Developing innovative financial and technical solutions: adopt innovative financial and technical strategies to overcome existing challenges, including mixed methodologies that combine traditional censuses, administrative registers, and self-enumeration using the Internet.
- Building national capacity: focus on capacity-building programmes and training national cadres to ensure their full readiness to implement censuses using the latest methodologies and technologies.
- Benefiting from regional work during the 2020 round: benefit from the experiences gained from regional work during the 2020 round, and continue to work to achieve the best results in the 2030 round.

- Disseminating and using data: work to disseminate census data, including a sample of processed partial data, and make them available for use at all levels.

42. The ESCWA secretariat continues to play its role in promoting regional and international cooperation, facilitating the exchange of knowledge and expertise to ensure that census methodologies are consistent with international standards, and supporting the application of international quality standards by providing guidance and technical assistance to member States at all stages of the census, including planning and implementation, so as to ensure the provision of accurate and reliable data that support sustainable development and policymaking processes. ESCWA continues to promote work with international organizations to ensure the success achieved in the 2020 round, and to continue bridging gaps and achieving outstanding results in the 2030 round.

43. The Statistical Committee is invited to take note of the contents of the present document and comment on the way forward to ensure the success of the 2030 round of population and housing censuses.

## Annex I

## Censuses in Arab countries

Country	1980 round (1975-1984)	1990 round (1985-1994)	2000 round (1995-2004)	2010 round (2005-2014)	2020 round (2015-2024)
Algeria		1987	1998	2008	2022
Bahrain	1981	1991	2001	2010	2020
Comoros		1991	2003		2017
Djibouti				2009	2024
Egypt	1976	1986	1996	2006	2017
Iraq	1977	1987	1997		2024
Jordan	1979	1994	2004		2015
Kuwait	1975	1985	1995	2011	2021
Lebanon (1932)					
Libya	1984		1995	2006	
Mauritania	1977	1988	2000	2013	2023-2024
Morocco	1982	1994	2004	2014	2024
Oman		1993	2003	2010	2020
State of Palestine			1997	2007	2017
Qatar		1986	1997/2004	2010	2015/2020
Saudi Arabia	1974	1992	2004	2010	2022
Somalia	1975	1987			
Sudan	1983	1993		2008	
Syrian Arab Republic	1980	1994	2004		
Tunisia	1984	1994	2004	2014	2024
United Arab Emirates	1980	1985	1995	2005	
Yemen	1975	1986/1994	2004		

Source: Compiled by ESCWA.

## Annex II

## Activities implemented by ESCWA in the period 2015–2024

Date/period	Activity
<b>1. Advisory services</b>	
2015–2024	Providing technical support to Djibouti, Iraq, Jordan, Libya, Morocco, the State of Palestine, Qatar, Saudi Arabia, Somalia, the Sudan, Tunisia, the United Arab Emirates and Yemen.
<b>2. Regional workshops/virtual seminars</b>	
November 2015	Population and housing censuses in the Arab countries: census round 2020
January 2017	Taskforce on population and housing census for Arab countries in 2020 census round
January 2018	Regional workshop on the use of technology in population and housing censuses in Arab countries
July 2018	Workshop on planning for population and housing censuses by using technology in selected Arab countries
September 2019	Expert group meeting on evaluation of population census data in the Arab countries
October 2019	Regional workshop on the use of census data for development planning and scientific research in Arab countries
November 2020	Regional workshop on measuring SDG indicators from population and housing censuses and civil registration data in Arab countries
December 2020	Consultative workshop on the planning for undertaking the population and housing census using technology in Morocco
March 2021	Regional workshop on the experience of undertaking a population and housing census based on administrative registers in Oman
September 2021	Regional workshop on the 2020 round of population and housing census: monitoring progress and the way forward
November 2021	Administrative registers, classification of data sources, and the legal framework
February–April 2022	Series of three virtual seminars on the experience of Qatar in moving from traditional to mixed methodologies in conducting censuses
June 2022	Assessing the quality of civil registration data and their uses
December 2022	Regional workshop on the 2020 world programme for population and housing censuses for Arabic-speaking countries
September 2023	Population projection and microdata files
June 2024	2020 population and housing census round: experiences of selected Arab countries
16–18 September 2024	Regional workshop on population estimation using geospatial systems
<b>3. National workshops/virtual seminars</b>	
21 December 2020–12 August 2021	Seven webinars on population and housing censuses in Iraq
4 February–2 August 2021	Six webinars on censuses in the Sudan
August 2021	Webinars on population and housing census in Saudi Arabia
September 2021	Consultative meeting on ways to link Palestinian population registry data with 2017 census data



Date/period	Activity
<b>4. Study visits</b>	
July 2022	Study visit by a team from Egypt, Jordan and the State of Palestine to Oman to learn about the experience of the Omani Statistics Department in the field of automated linking of census and civil registry data
March 2024	Study visit of a team from Djibouti to Egypt to learn about the Egyptian Statistics Authority's experience in conducting the electronic census
April 2024	Study visit of a team from Egypt to Saudi Arabia to learn about the Saudi statistical experience in the census field
18–19 September 2024	Study visit of a team from Somalia to Egypt to learn about the Egyptian statistical experience in the census field
<b>5. Reports and studies</b>	
January 2016	Use of administrative registers in population and housing censuses
January 2017	Undertaking population and housing census register-based and combined methodologies
March 2021	Measuring SDG indicators through population and housing censuses and civil registration and vital statistics data
May 2021	Evaluation of age-sex reporting in recent censuses in some ESCWA countries
May 2021	A short guide on small area estimation in household surveys: illustration of poverty mapping in Palestine with expenditure survey and census data
July 2021	Self-enumeration/response in population and housing census using the Internet with reference to Arab countries: opportunities, challenges and good practices
August 2021	Communicating population and housing census data: developing a user centric communication strategy
August 2021	Dissemination and use of data from population and housing census: emerging methods and lessons learned
June 2022	Assessment of GIS for the population and housing census in Iraq
October 2022	Assessment of GIS for the population and housing census and agricultural census in the Sudan
<b>6. Collaboration and coordination between ESCWA and specialized agencies and international and regional organizations</b>	
Ongoing	Coordinating regional action to strengthen capacity-building processes of all kinds and cooperation between countries.
Ongoing	Continuation of international and regional organizations providing cooperation and support to Arab countries, including ESCWA, the United Nations Population Fund, the Arab Institute for Training and Research in Statistics, the Statistical Centre for the Cooperation Council for the Arab States of the Gulf, and the League of Arab States.
<b>7. Knowledge platform on censuses</b>	
Ongoing	An update of the <a href="#">Arab Population and Housing Census initiative</a> , which includes all workshop materials, methodological studies and a list of census experts, is available on the <a href="#">ESCWA website</a> .

Source: Compiled by ESCWA.

## Annex II

## Questionnaire results

## A. Census methodologies

Countries	Section to be filled	Census methodology	Method that was or will be used to collect field data	Census concept
Algeria	A	Traditional census	CAPI and paper forms	Theoretical
Bahrain	C	Fully register-based census	Administrative registers	Theoretical
Djibouti	A	Traditional census	CAPI	Theoretical
Egypt	A	Traditional census	CAPI	Theoretical
Iraq	A	Traditional census	CAPI	Theoretical
Jordan	A	Traditional census	CAPI	Theoretical
Kuwait	C	Fully register-based census		Theoretical
Libya	D	Traditional census		
Mauritania	A	Traditional census	CAPI	Theoretical
Morocco	A	Traditional census	CAPI	Theoretical
Oman	C	Fully register-based census		Actual
State of Palestine	A	Traditional census	CAPI	Actual
Qatar	B	Mixed census: registers and complete field census	CAPI CAWI CATI	Actual and theoretical
Saudi Arabia	B	Field census: registers and complete field census	CAPI CAWI	Theoretical
Somalia	D	Traditional census		
Sudan	D	Traditional census		
Syrian Arab Republic	D	Mixed census: registers and sample surveys		
Tunisia	A	Traditional census	CAPI	Theoretical
United Arab Emirates	C	Mixed census: linking registers and previously conducted sample surveys		Theoretical
Yemen	D	Traditional census		

Source: Compiled by ESCWA.

**B. Evaluation methods that countries have used or will use to measure the accuracy of the population census**

Country	Which of the following contemporary data publishing products do you plan to provide to data users?	Please identify other processed microdata products
Algeria	(1) Interactive online database. (2) Web-based mapping tools for GIS.	
Egypt	(1) Interactive online database. (2) Web-based mapping tools for GIS.	
Iraq	(1) Interactive online database. (2) Web-based mapping tools for GIS.	
Jordan	(1) Interactive online database. (2) Web-based mapping tools for GIS. (3) Network-based products.	
State of Palestine	(2) Web-based mapping tools for GIS. (4) Anonymized microdata. (5) Other publishing products.	Publishing 59 summary and detailed reports on census results, including population, housing, establishments and buildings reports in two versions (paper and electronic); publishing nine analytical studies on the website of the Palestinian Central Bureau of Statistics that address various issues such as labour force, migration, and disability; and providing census data that provide local and international public user services.
Qatar	(1) Interactive online database. (2) Web-based mapping tools for GIS. (3) Network-based products.	
Mauritania	(2) Web-based mapping tools for GIS. (3) Network-based products. (4) Anonymized microdata.	
Morocco	(1) Interactive online database. (4) Anonymized microdata.	
Saudi Arabia	(1) Interactive online database. (2) Web-based mapping tools for GIS. (3) Network-based products. (4) Anonymized microdata. (5) Other publishing products.	Topic-based press releases. Topic-based detailed report.
Tunisia	(4) Anonymized microdata.	

*Source:* Compiled by ESCWA.

### C. Challenges faced by countries in planning and/or conducting their censuses

Country	1. Legal powers/government support Not a challenge = 1 Moderate challenge = 2 Major challenge = 3	2. Financial resources	3- Commitment to the budget	4. Timeliness	5- Improving coverage and data quality	6. Concerns about privacy and confidentiality	7. Managing public confidence/perceptions of the census	8- Determining residential addresses	9- Appointing and training field staff	10- Implementing new technologies	11- Implementing new methodologies	12- Improving data dissemination
Algeria	Not a challenge	Moderate challenge	Moderate challenge	Moderate challenge	Moderate challenge	Not a challenge	Moderate challenge	Not a challenge	Not a challenge	Moderate challenge	Not a challenge	Moderate challenge
Bahrain	Not a challenge	Not a challenge	Moderate challenge	Major challenge	Moderate challenge	Not a challenge	Not a challenge	Moderate challenge	Not a challenge	Major challenge	Major challenge	Moderate challenge
Djibouti	Major challenge	Major challenge	Major challenge	Not a challenge	Not a challenge	Moderate challenge	Not a challenge	Not a challenge	Not a challenge	Moderate challenge	Not a challenge	-
Egypt	Not a challenge	Moderate challenge	Not a challenge	Major challenge	Moderate challenge	Not a challenge	Moderate challenge	Not a challenge	Major challenge	Major challenge	Moderate challenge	Not a challenge
Iraq	Major challenge	Major challenge	Major challenge	Major challenge	Moderate challenge	Major challenge	Major challenge	Moderate challenge	Moderate challenge	Moderate challenge	Not a challenge	Moderate challenge
Jordan	Not a challenge	Moderate challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Moderate challenge	Moderate challenge	Moderate challenge	Moderate challenge	Moderate challenge	Not a challenge
Kuwait	Moderate challenge	Moderate challenge	Major challenge	Major challenge	Not a challenge	Major challenge	Moderate challenge	Not a challenge	Not a challenge	Moderate challenge	No response	-
Mauritania	-	-	-	Major challenge	Moderate challenge	-	Moderate challenge	-	Moderate challenge	Major challenge	-	-
Morocco	Not a challenge	Not a challenge	Moderate challenge	Not a challenge	Moderate challenge	Not a challenge	Major challenge	Not applicable	Moderate challenge	Major challenge	Moderate challenge	Moderate challenge
Oman	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not applicable	Major challenge	Not applicable	Not a challenge	Major challenge	Not a challenge
State of Palestine	Not a challenge	Major challenge	Major challenge	Not a challenge	Major challenge	Major challenge	Major challenge	Not a challenge	Major challenge	Major challenge	Major challenge	Major challenge
Qatar	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Moderate challenge	Not a challenge
Saudi Arabia	Not applicable	-	-	Moderate challenge	Moderate challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge	Not a challenge
Tunisia	Moderate challenge	Not a challenge	Not a challenge	Major challenge	No response	No response	Moderate challenge	Major challenge	Major challenge	Major challenge	Moderate challenge	Not a challenge
United Arab Emirates	Moderate challenge	Moderate challenge	Not a challenge	Moderate challenge	Moderate challenge	Not a challenge	Not a challenge	Moderate challenge	Not a challenge	Not a challenge	Major challenge	Not a challenge

Source: Compiled by ESCWA.

**D. Expected reference date for the 2030 round**

Country	Do you know the expected reference date for your country's census in the 2030 round?	What is the expected reference date for the 2030 round census?
Algeria	Yes, but it is provisional	
Bahrain	Yes, but it is provisional	2030
Djibouti	No	
Egypt	Yes	2027
Iraq	No	
Jordan	Yes	2025
Mauritania	Yes, but it is provisional	25 March 2033
Morocco	No	
Oman	Yes	1 January 2030
State of Palestine	Yes	1 December 2027
Qatar	Yes	31 December 2025
Saudi Arabia	Yes, but it is provisional	2030
Somalia		
Sudan		
Syrian Arab Republic		
Tunisia	No	
Yemen		

*Source:* Compiled by ESCWA.