

DRAFT

POPULATION AND HOUSING CENSUS STEP-BY-STEP REFERENCE GUIDE *ENSURING A SUCCESSFUL NATIONAL POPULATION AND HOUSING CENSUS*

Background/ Introduction

This guide aims to improve partner engagement and contribution for the successful conduct of a national population and housing census by giving an overview of the key processes, and highlighting the potential role of UNFPA and partners to contribute to timely and effective execution of census processes. It is targeted mainly at census implementing countries, UNFPA staff and technical partners. All stakeholders – developing member countries, UNFPA, SPC and other stakeholders – should be regularly informed on progress on the census exercise, including challenges and opportunities for collective corporate guidance and response.

Conducting a census involves a series of carefully orchestrated steps, with the planning phase regarded as the core of the census cycle and most critical to the completion of a successful census. The focus in the early stages of planning will be on setting the strategic direction for the entire census program to ensure common understanding of the role of the census, and what is involved during the census process as well as how the census itself fits into the overall statistical framework of the country. Each phase of the census cycle is dependent on a preceding phase and the quality and timeliness of the output from each phase has a direct effect on the success of the next and subsequent phases.

Key phases of census planning and implementation include; review of the institutional structure for census administration, review of statistical legislation, coordination of stakeholders and donors, development of the census project document, creating advisory committees and planning groups, resource mobilization, human resource recruitment and management, assessment of the operational setup and required technological solution, resources and expertise available compared to what is needed. The assessment/review of the operational side of the census programme must continue throughout the period, ensuring that changes in the requirements/needs are properly identified and that remedial action plans are developed and implemented. Other key phases include questionnaire designing, training of enumerators, pilot testing, enumeration, post enumeration survey, data management, analysis, utilization and dissemination. Depending on the country situation and availability of resources, UNFPA, SPC and other technical partners may contribute to successful conduct of the census in a number of ways and at different phases.

The matrix below highlights the key stages of the census, and briefly describes what is involved at each stage and proposes, in a generic way, potential areas for UNFPA, SPC and technical partner support. A sample Gant chart for census operations is shown in the attached Annex.

Matrix of key census steps and potential role of UNFPA

Census phase	Census step and timing	Description and purpose	Role of UNFPA, SPC and Partners
Pre-census / Planning	Developing the Census Project Document <u>Time-Frame:</u> 2-years prior to the census	The census plan is contained in the Census Project Document whose approval signals Government Commitment to the undertaking. A census conduct is a long term engagement that requires careful planning and management as any activity delayed, missed or unplanned for could delay or otherwise jeopardize success of the census.	Support in the drafting of the detailed project document and ensuring that the Census Project Document is finalized and signed by the Government. Lead: UNFPA
	Review of the institutional structure and assessment of Legal Framework <u>Time-Frame:</u> 2-years prior to the census	The legal authority for the census determines the primary administrative responsibility, necessary funds, the general scope and timing of the census. The legal framework places an obligation on the public to cooperate, the enumerator to faithfully record responses, and the confidentiality of the information recorded. In countries that lack permanent legal census authority, it is important to act early to establish <i>ad hoc</i> legal authority or, preferably, legislation calling for a system of periodic censuses.	Partners may support the review of existing statistical laws to determine whether or not they are up to date for the next census conduct, including topics for enumeration, guarantees of confidentiality and requirements of individuals to provide information. Partners may also advise on the need for census legislation where this is necessary. Lead: UNFPA
	Risk Assessment / Contingency Plan <u>Time-Frame:</u> 2-years prior to the census	Because a census conduct is an infrequent event, of national magnitude, it needs adequate planning, including assessment of risks and contingency planning. Risks exist at each stage and phase of the census conduct and may jeopardize the success of the census. Even though the risk may not happen, it should be explicitly assessed in advance and a contingency plan prepared for addressing the risk. Since, risks are dynamic and censuses take a long time to prepare, it might be appropriate to have the risk assessment about two years prior to the census.	Partners may advocate for a risk assessment and/or support its conduct. Lead: UNFPA
	Statistical Capacity Assessment	The statistical capacity assessment provides a quantitative measure of the capacity of a National Statistical Office (NSO) to conduct a successful census. The primary objective is to measure the overall capacity of an NSO including equipment	Partners may support the NSO to undertake the statistical capacity assessment, and the identified equipment and human resource gaps. Using findings of the capacity assessment, UNFPA may

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	<u>Time-Frame:</u> 2 years prior to the census	and staffing to manage and implement all aspects of the census. The assessment will identify areas for capacity strengthening across the various components of the census operation.	also support the NSO to lobby with Government and Donors for additional funding to fill capacity gaps. Lead: UNFPA, SPC
	Convening Government Stakeholders <u>Time-Frame:</u> 2 to 1 year(s) prior to the census	The NSO is generally tasked with the whole census operation as well as the coordination of activities with other stakeholders. Stakeholders of census are either users of census data or those who are involved in the conduct of the census and those individuals/ institutions/ organisations that can affect the success of the census or are affected by the census. Some key services required for the successful implementation of a census may be provided by other Government agencies, e.g. cartography, advertising, IT systems etc. Early convening of stakeholders is required to accommodate their needs, ensure ownership and to seek their cooperation.	Partners may want to ensure that the NSO includes key stakeholders when planning for the census conduct. UNFPA may offer to support convening of relevant departments of the government to ensure their cooperation with the census plan. Lead: UNFPA
	Census Budgeting <u>Time-Frame:</u> Continuous and revised on a regular basis, starting 2 years prior to the Census	Budgeting starts with a detailed year by year plan of major activities and tasks, including costs throughout the exercise. The costing exercise and census schedule should be prepared well in advance and presented to the government and donors for resource allocation. Once the budget has been approved, gaps can be filled by donors, who might condition their funding to support specific budget items.	Partners may support the NSO to develop and implement a resource mobilization strategy to fund any budget shortfall including engagement with private sector, SPC, UN partners and other development partners. UNFPA could offer to coordinate donor efforts including pooling the funds and ensuring regular donor coordination meetings to review the census plan, status, concerns and assistance needs. Lead: UNFPA
	Establishing of Advisory Committees <u>Time-Frame:</u> 18 months prior to	Advisory groups may include an International Technical Advisory Board/ expert group to advise on methodology, processing, technologies, operations and cartography. Usually, a National Census Steering Committee, comprising heads of agencies and ministries is established to lead oversight of the census exercise. An Interagency Census Technical Committee	Partners may lobby for membership of strategic committees and may also offer to support the functionality of the census committees including logistics and travel as may be necessary. Lead: UNFPA

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	the census and upon request	provides guidance on technical issues related to the census. User advisory group, Media and Communications Committee and other several specific advisory committees are also established to engage in planning, publicity and quality control.	
	Review of contracting regulations <u>Time-Frame:</u> 18 months prior to the census	NSOs may choose to outsource parts of or the entire census exercise. Requirements for contracting domestic or international companies should be reviewed to ensure compliance with policies and regulations.	Lead: NSO, Ministry of Finance, Donor, UNFPA
	Data User/Producer Consultation <u>Time-Frame:</u> 1 year prior to the census	Data users need to be part of the planning process to ensure ownership and increase data utilization. Census offices should consult data users to identify their needs in terms of type and format of census products and services.	Partners may support census data user and producer consultations to facilitate utilization of census data especially by academia, NGOs, private sector as well as sector ministries. Lead: UNFPA
	Setting up Census Headquarters <u>Time-Frame:</u> 1 year prior to the census	This is the location where all census materials will be delivered, equipment will be installed and distribution will take place to the field. It is also the location where the census data monitoring will occur during field operations. With these activities, planning for procurement of goods and services must be anticipated and requires considerable time.	Lobby the NSO to prioritise selection and equipping of the census headquarters. UNFPA may also support procurement of certain equipment in line with requests from the NSO. Lead: UNFPA
	Procurement <u>Time-Frame:</u> 1 year prior to the census	A procurement plan includes details of all products (vehicles, equipment -including IT equipment such as hardware and software infrastructure-, materials and supplies), installation of equipment and services. There are various modalities for procurement of census commodities and services. The policies, guidelines often differ depending on who is responsible for the procurement i.e. the NSO, UNFPA or other. It is important to ensure that the necessary guidelines are followed to avoid nullification of	Lead: UNFPA

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		<p>processes and having to start all over as this may affect the census process.</p> <p>Depending on the level of complexity of the census programme, incorporation of key skills may be needed, in the form of a census IT expert/ consultant, to define the specifications that will give shape to the solicitation documents.</p>	
	<p>Human resource recruitment and management</p> <p><u>Time-Frame:</u> 18 months to 1 year prior to the census</p>	<p>The human resource requirements for the census depend on geographic area of size of population to be covered, topics covered, technologies applied, support from international organizations, number of activities, data collection and processing options, complexity of analysis and dissemination. HR responsibilities include: recruitment and hiring and remuneration, leave and administrative tasks.</p> <p>Payroll is a time consuming process which normally requires the participation of different entities (NSO, national banks, private banks, etc.) and the development of a payment and verification system. Staff recruitment is time consuming and may require the development of an application. There may be need to consider different options for recruiting HR</p>	Lead: NSO, Ministry of Finance, Donor, UNFPA
	<p>Selection of Technologies and Data Processing System</p> <p><u>Time-Frame:</u> 18 months to 1 year prior to the census</p>	<p>New technologies and innovations have opened opportunities as well as new challenges for NSOs. Many countries have adopted, or are considering adoption of modern technologies such as internet, handheld devices or tablet computers, and refined scanning technologies for data collection and processing including for population censuses. The emergence of tablets and smartphones that incorporate GPS technology allows for the simultaneous collection of geographic data with complex attributes and the creation or adjustment of geographic objects in the field. Whilst these technologies have improved the planning and implementation of field operations and the overall quality of the census conduct, including speed and accuracy, they have also come with challenges such as high start-up costs,</p>	Lead: NSO, UNFPA, SPC

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		uncertainty about security of data confidentiality etc. The adaptability of new technologies for census varies from country to country depending on existence of support infrastructure, financial resources and relevant human resource capacity.	
	Questionnaire Design <u>Time-Frame:</u> 18 months to 1 year prior to the census	Questionnaire design is a critical stage of the census process as this determines the substance of what information is collected during the census and hence the utility of the census. The questionnaire design process is guided by the UN Statistics Division Principles and recommendations for population and housing censuses. Countries however, have a prerogative to include certain items to get information relevant to their context. The questionnaire could be presented at a user and producer consultation to ensure ownership and buy-in.	If the national statistics offices lack expertise in subject matters, Partner may convene a series of Expert Group Meeting as necessary to assist with questionnaire design Lead: UNFPA
	Communication Campaign <u>Time-Frame:</u> 1 year prior to the census	The census requires that the entire population in a country is aware of the census day in order to provide their personal information to an enumerator. This requires a communications campaign to be developed. It can be done internally by the government or by a communications/marketing company that will apply more specialized communication techniques.	Partner may advise/ support selected strategic elements of the communication campaign. Lead: NSO
	Cartography <u>Time-Frame:</u> 18 months prior to the census	Cartography serves three purposes: planning and supervising operations, census data collection, and presentation and analysis of results. Maps are used to identify enumeration areas (EAs) in the field by census/survey enumerators for data collection and to facilitate visual spatial displays of census findings. There is need to undertake an assessment to determine if updating of cartographic information is required, which method to be used, need for software (Q-GIS, ARC GIS or others), satellite imagery and cartographic equipment (GPS), plotters, etc. Maps are also used for the construction of the census frames which are subsequently used to select samples for surveys.	Lead: SPC

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	Enumeration Area Delineation <u>Time-Frame:</u> 18 months to 1 year prior to the census	Enumeration area (EA) delineation is an important process not only for managing field operations effectively, e.g. preventing omission and duplication, allocating equal workload to enumerators geographical analysis of census outputs but also for providing sampling frames to various national household sample surveys. EA boundaries should follow physical features that are easily recognized by enumerators, improving accuracy and efficiency.	Lead: SPC
	Pre-Test and Pilot Census <u>Time-Frame:</u> 12 months prior to the census	The pilot census is the 'dry run' for the actual census on a smaller scale, to evaluate all aspects of the census operation including the concepts and definitions, the adequacy of the questionnaires, the training of field enumerators and supervisory staff, field organization, census methodology, sampling design and estimation procedure, data processing and data tabulation. The results should be used when drawing up the final plans for the census and to provide a basis for the final calculations of resource requirements for the census. Before planning a pilot census, the conduct of a series of pre-test surveys is highly desirable to test the formulation of concepts and definitions, census questionnaires, instruction manuals, etc., and the evaluation of alternative methodologies and data collection techniques.	Lead: NSO, SPC, UNFPA
	Development of Training Material <u>Time-Frame:</u> 1 year prior to the census	The census training material and enumerator manuals should be prepared well in advance of training and made available at the beginning of the staff-training course. It is advisable to delay the finalization of the manuals until the pre-test takes place and after the census questionnaires and various administrative procedures are finalized. But, it is highly preferable to have draft manuals at an early stage. Printing of training material to take place after all processes for developing the material have been completed.	Lead: NSO, SPC, UNFPA, thematic specialists

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	Hiring/Training of Enumerators/Field Staff <u>Time-Frame:</u> Census year	Recruitment plan should be in place one year in advance however enumerators are to be hire some months in advance in order to effectively coordinate training. The success of the census in providing useful results depends largely upon the proper selection and training of field staff. At the base of the hierarchy is the field enumerator whose work is monitored by local supervisors; however, it should be recognized that these enumerators are the key to the success of the census. Provincial supervisors are work under the national and provincial census coordinators to provide quality control and technical guidance of field work. If enumerators are not paid, they will leave and find another job. There tends to be a high turnover of enumerators.	Since temporary workforce is difficult to manage, contingency plans are needed. Many census agencies may fail to prepare them in advance. Lead: NSO
	Distribution of Census Material <u>Time-Frame:</u> Census Year	Distribution of census material to the field from headquarters to all regions/departments/districts. Some countries prefer to distribute census material with the army support however others prefer to outsource logistics to logistics companies.	Partner may advise the census agency on modalities for to enhancing efficiencies in overall distribution process. Lead: NSO, Ministry of Finance, UNFPA
Enumeration	Enumeration <u>Time-Frame:</u> Census Year	Census enumeration is a key census phase. The success of the census depends on it being done quickly, efficiently and with proven methods. Especially in the case of a de facto census, the entire enumeration should ideally be completed in one day, at least in urban areas, and in just a few days in rural areas.	Lead: NSO, SPC, UNFPA
Post enumeration	Post Enumeration Survey <u>Time-Frame:</u> Census Year	The Post Enumeration Survey serves as a methodology to quantify the degree of errors. PES need to be included in the project document and planned for prior to the census. Errors in censuses can arise from many sources such as flawed data a collection and processing procedures, faulty questionnaires, instructions, training materials, and procedures. Errors are inevitable in a large data collection exercise such as a census. It is almost impossible to do a good PES without good census cartography that identifies all Enumeration Areas in unambiguous geographical domains/ units.	Partner could advocate for the importance of planning early for and conducting a high quality post enumeration survey. Lead: UNFPA, SPC

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Data processing	Data Processing <u>Time-Frame:</u> Census Year	Data processing exercise is a large operation that takes place in a processing center. Depending on the methodology to be used, the census may require installation of IT equipment (computers, servers, scanners, printers, etc), office furniture, air conditioning, shelves, etc. in the data processing center. It has been the general experience that in a well-formulated census, around two-thirds of the total expenditure goes to planning and conducting the field work while one-third is spent on data processing and data dissemination. Data processing is the responsibility of specialized staff in the NSO.	Partner may advise the NSO/ census agency or offer technical expertise to conduct routine controls such as checking for duplicate records, and unexpected mistakes to ensure high quality census data. Lead: SPC, UNFPA
	Data Analysis <u>Time-Frame:</u> After census	Analysis of results should be carried out by national and local governments, academia, researchers and others to maximize the utilization of census result. The analysis should consider the needs and realities of the country.	If the national statistics office lacks analytical expertise, Partner may convene a series of Expert Group Meeting (EMG) or support national and international experts to build NSO capacity in data analysis. Lead: UNFPA, SPC, Data Users
Dissemination and utilisation	Release of Preliminary Results <u>Time-Frame:</u> Shortly after the census, within 6-months of the census enumeration	Preliminary results may be released based on summaries tallied manually or by computer soon after field enumeration, and before data processing of individual questionnaires. Preliminary results usually cover information by major division on population by sex and number of households.	Partner may ask the government to share the preliminary results as soon as they become available, or in some cases support logistics for the high level launch of the provisional census results. Lead: NSO, SPC, UNFPA
	Dissemination of Final Results Time-Frame: 1 year after census	Final detailed results are to be distributed to the users at the earliest time. Sequential release by subject is recommended. In addition to the traditional tables and reports, more diverse media are needed, including unpublished tables, dissemination on online and upon request to facilitate users' convenience. The dissemination should be an ongoing process, focusing on different elements of the results, rather than a once off event.	Partner may support the statistics office to prepare and implement a comprehensive dissemination plan including interest groups and the media. Lead: UNFPA, SPC

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	Access to Sample / Micro Census Data <u>Time-Frame:</u> 1 to 2 years after census	<p>Data users want to access micro-data for advanced analytical use. Microdata are necessary for user-defined tabulations and for various statistical modeling. Microdata are to be strictly confidential and used exclusively for statistical purpose, whilst respecting the principle of data anonymity.</p> <p>The microdata should be accompanied with relevant metadata documentation in accordance with international best practice</p>	Lead: SPC
	Small Area Estimation <u>Time-Frame:</u> 1 to 2 years after census	<p>Censuses provide data from the highest to the lowest geographical levels of aggregation, which makes the data amenable to the development of estimates of variables of interest for small/local areas in two major ways: directly from the production of tables from the micro-level data for the required characteristics, and indirectly from applying estimation techniques by combining other sources, such as sample surveys and administrative statistics to the population and housing census results. Data for small areas enable the user to obtain statistical information about any number of local areas of interest, in addition to showing variations among small areas in individual parts of the country.</p>	<p>Partner may wish to support capacity building in the small area estimation techniques using internal expertise and/or external consultants</p> <p>Lead: UNFPA, World Bank, Other</p>
	Capacity development of sector ministries on utilizing census data <u>Time-Frame:</u> 1 to 2 years after census	<p>With appropriate capacity building, ministries can link their administrative data and census data to improve quality and coverage of service delivery. Using census data, adjustments can be made to estimates from administrative sources to give national level estimates.</p>	<p>Partner may support such capacity building including sourcing of internal and external experts</p> <p>Lead: UNFPA, SPC</p>