Session 4

Census Planning and Management

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Census planning

Planning can be regarded as the core of the census phases and the processes that is most critical to the completion of a successful census. *(HM 2.2)*

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Generic Statistical Business Process Model(*)

Quality Management

| Specify Needs | Design | Build | Collect | Process | Analyze | Dissemi nate | Evaluate |

Metadata Management

(*) Prepared by the High Level Group for the Modernization of Statistical Production and Services

Generic Statistical Business Process-Censuses

Quality Management/Metadata Management

Planning	Questionnaire	Mapping	Testing

Pre-enumeration operations

Enumeration	Data processing	Analyzing	Dissemination	Evaluation

Post-enumeration operations

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Links between census phases

Note: The evaluation of the current census is an input for the next one.
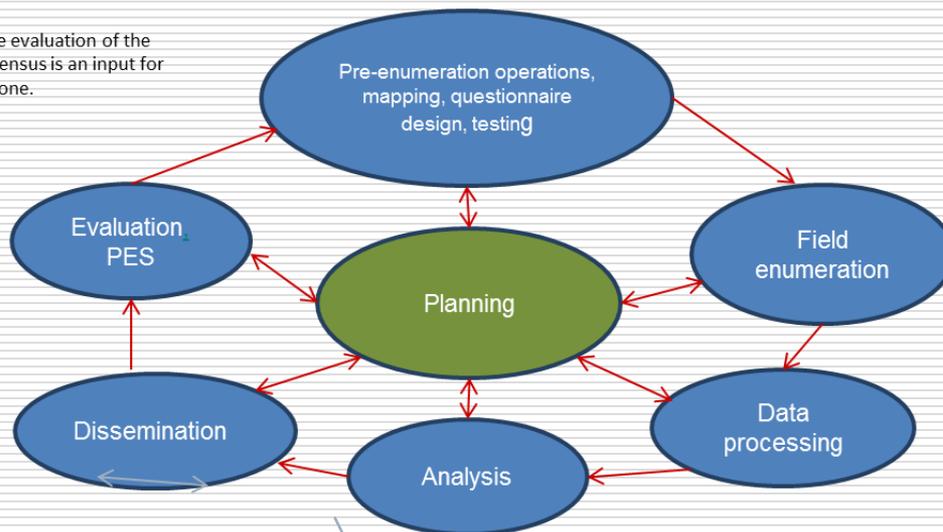
- ❑ Due to the size and complexity of the census, it is usually organized into a set of dependent, related projects/phases

- ❑ Each phase of the census cycle is dependent on a preceding phase, with the quality of the output from each phase having a direct effect on the success of the next phase

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Aim of census planning

❑ Identify all census phases and dependencies between the different phases - for effective management of overall census operation

❑ Ensure each phase is properly resourced and organized

✓ *Due to the long duration of the census cycle, planning should not remain static but be dynamic and flexible to take into account changes that occur*

✓ *Plans must be regularly monitored, evaluated and updated reflecting changes in resource, timing of activities, quality control concerns and other un-anticipated events*

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Key considerations for developing census plans

❑ **Role of the census**

❑ **Role of the government**

❑ **Identification of stakeholders and communication**

❑ **Strategic objectives for census**

❑ **Project management principles**

❑ **Plans for census phases**

❑ **Designing census processes**

❑ **Monitoring**

❑ **Census calendar (scheduling)**

❑ **Administrative organization and human resources management**

❑ **Financial management (budgeting)**

❑ **Use of technology**

❑ **Contracting out**

❑ **Documentation**

Role of the census

❑ For planning purposes, the census should be considered as part of the National Statistical Programme

❑ Key strength of a census is to provide **data for small geographic areas and for small population groups allowing data disaggregation by census topics**

❑ when data are not required at this level of detail, other statistical sources/ methodologies more cost-effective than censuses should be adopted

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Role of the government

❑ Legal framework

- The authority of the census agency to undertake census activities

- The roles of other organizations (especially other government ministries and national mapping agencies) in census taking

- Obligations and rights of individuals to provide information, and that of enumerators and supervisors

- Provisions about confidentiality of information supplied by individuals

- The basis of enumeration, scope, method and timing of the census

❑ Funding of census operation

❑ Logistical support

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Identification of stakeholders and communication

❑ Stakeholders within the census programme

o Each phase is a key stakeholder of the one preceding it

o Identifying internal stakeholders including other national organizations is useful for identifying dependencies, developing effective communication with these stakeholders

❑ Other stakeholders within the statistical agency

o Regional offices supporting field operations, internal stakeholders using census results (eg. survey sample frames), units of NSO working on methodology, IT, public relations

❑ External stakeholders

o Current and potential users of census data (Ministries, Research Institutions, Local Governments, etc.)

❑ Stakeholders outside the country

o Donors and international agencies who see census as central for evidence-based decision making – funding, equipment, technical assistance

❑ Users, the public/community – having interest at time of census/initial data release

o Publicity campaigns on benefits of census, participation, addressing concerns on privacy and confidentiality

Strategic objectives for census

❑ Census plans are usually guided by a set of strategic objectives, which set standards and benchmarks

❑ Strategic objectives are usually derived under the headings of:

- o Census content - ensuring that the topics are appropriate for users;

- o Impact on the public and on census staff – operations and results are acceptable to the public and comply with legal and ethical standards. The public and census staff should be informed for their rights and responsibilities-confidentiality;

- o Production of census results - quality standards, timetable for census results;

- o Cost-effectiveness- carrying out census as inexpensively as possible without compromising other strategic objectives;

- o Cost-benefit - increasing value or benefit generated from census;

❑ Objectives interact with one another, so priorities need to be set as there could be trade-offs, e.g., what topics to collect and costs

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Project management principles

❑ Once the strategic objectives of a census have been established, more detailed planning can begin

❑ Given the size and complexity of the census, it can be divided into a series of related projects that are dependent on one another

❑ Principles of project management provide a simple hierarchical framework (consisting of phases, activities and tasks) for achieving an appropriate design of the census project

   o an iterative process and takes a number of iterations before achieving an appropriate design

❑ As the levels in the framework are filled with detail, people can be assigned responsibility, and reporting and review arrangements established

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Plans for census phases

- ❑ **Topic selection:** plans for user consultation, strategies for communication with users
- ❑ **Questionnaire design and testing**: plans for the use of long/short form, designing questionnaire format based on the technology used for collection, plans for testing, etc
- ❑ **Mapping :** Plans for producing/updating maps, strategies for partnering with mapping agency; plans for use of digital maps for field enumeration and dissemination, etc.
- ❑ **Quality assurance:** Plans for quality assurance procedures and quality teams
- ❑ **Publicity and communication strategies with public-** such as strategies for special population groups, strategies for improve response rate
- ❑ **Procurement and outsourcing-**steps, procedures , evaluation of output/service quality
- ❑ **Field enumeration:** Plans for data collection mode(s), population difficult to enumerate; strategies for improving coverage; plans for monitoring; plans for logistics of census materials, etc.
- ❑ **Data processing:** plans for method of data capture, coding, editing/imputations, validation of census data, etc.
- ❑ **Analysis:** what methods will be used to measure data quality
- ❑ **Dissemination:** plans for dissemination online tools/products, dissemination of disaggregated census results, monitoring SDG and national priorities
- ❑ **Evaluation:** plans for method(s) of evaluation of the quality of census data

Hierarchical framework for design of census project

❑ **Project:** Population and housing census

❑ **Phases:** identifying and scheduling the various phases of the census cycle; phases are typically sequential; however, they occasionally can overlap

❑ **Activities:** once phases have been identified, the next step is to break down each phase into component activities; activities constitute a higher level of work covering the series of tasks defined for each phase

❑ **Tasks:** activities can further be broken down to tasks - the smallest identifiable amount of work leading to a deliverable under each activity; time, cost and resources can be assigned at the task level

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Issues that need to be taken into account in project planning

❑ **Milestones –** represents specific points along census project time at which <u>key outcomes are expected</u> and which measure a project's progress

   o   Focusing on major progress points that must be reached to achieve success- such as determining method of enumeration, finalizing the questionnaire, finishing the enumeration, dissemination of final results, etc.

❑ **Risk management** – must be integral part of the project management.

   o   Refers to the identification, analysis, mitigation and reassessment of risks throughout the census phases

      ✓   Potential risks should be identified in the planning phase for developing actions on time

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Risk management

❑ Success or failure of the census may depend on the implementation of the plans associated with potential risks

❑ Implementing risk management in censuses:

o Fosters early identification of strategies to reduce or eliminate the potential impact of known risks;

o Provides a structure for monitoring and documenting changes in risk assessment and for managing the response to those changes;

o Identifies areas where further study or analysis could potentially lower future risk;

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Monitoring project plan

❑ It is important that project plans are monitored and that appropriate feedback is delivered periodically to all levels of management

❑ The most important components to track are:

  o the calendar time for completing a task;

  o resource usage per task;

  o cost per task;

  o milestones met

❑ As there are always interdependency among individual tasks, monitoring instruments are needed (eg. the GANTT chart which graphically displays activities, linkages between activities, date of starting/completing, milestones, delays, etc.)

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Census calendar (scheduling)

❑ Development of a census calendar is a crucial step in the planning phase of a census, which serves as a guide to measure the progress of each stage of the census operation

   o designed to show the census activities and the amount of time required for undertaking all processes regarding the planning, development and implementation of a census

   o shows the sequence, interdependency and timing of all the various steps in the census programme (eg. GANTT chart)

❑ **Time estimation of each activity is a critical process for good management of census operations - time estimation has to be undertaken in close cooperation with all stakeholders**
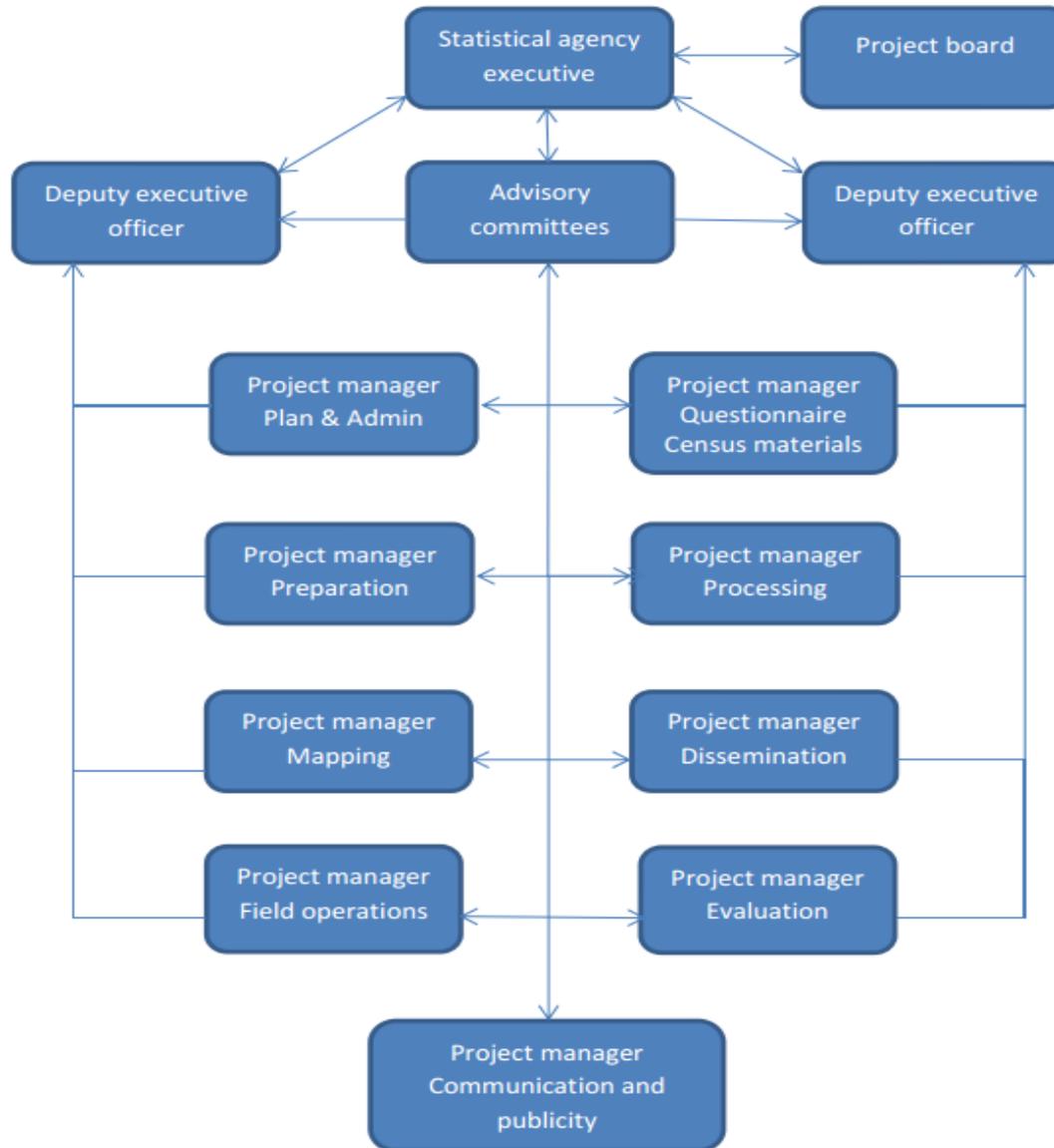
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Administrative organization and human resources management

❑ Establishing the administrative organization and staffing of a census operation is a big challenge due to

  o the size and complexity of the project,

  o geographic spread,

  o long project timeline,

  o coordination with a wide range of organizations, and

  o the number of workers involved

❑ The development phases (planning and preparations) and the operational phases might require different management approaches because the nature of the workforces and the tasks performed are quite different

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Figure II.3 Top level management structure at the national level - example

ations Statistics Division

ensuses:

Structure of the workforce

❑ The staffing and structure of the workforce to support the enumeration phase should be decided based on the following factors :
   o Size of the population; Geographic area covered by the census
   o Existing administrative structure, at centre and in regions
   o Support from other government agencies
   o Activities contracted out
   o Data collection and processing methods used

❑ For a hierarchical workforce structure, there is a number of key issues that need to be addressed including:
   o Roles and responsibilities of each level (regional managers, supervisors, enumerators, IT officers, etc)
   o Time available;
   o Staffing ratio between the different levels.

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Human resources management

❑ Management of human resources for census operations is of particular importance in the planning phase of the census

 o Growing interest for using new technologies is a very important factor for careful planning of human resources – requiring special considerations to <u>certain specialized skills such as mapping/GIS, data capture and processing, dissemination outputs/tools using new technologies</u>

❑ Plans for human resources management require a two-pronged strategy:

 o Strategies for office work

 o Strategies for field work (plans for staff who employed temporarily)

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Human resources management

❑ Strategies for human resource for the office work should be developed by taking into account:

  o maximizing the capacity of the existing staff;

  o needs for recruitment of new staff;

  o needs for new skills on permanent or temporary basis;

  o tools for developing capacity (in-house training, study visits, consultation services during planning and implementation stages for certain activities)

❑ For the category of temporary field staff, careful consideration is needed in terms of:

  o the qualifications needed for census work

  o languages skills of enumerators and supervisors for area in which they will be working

  o the need for special training programme in some areas for gaining specific skills, such as use of tablet computers, or cultural and gender sensitivity.

  o early arrangements for developing training programme is necessary to use appropriate training facilities and produce training manuals

Financial management (budgeting)

❑ Census budget must be planned well in advance and cover all known activities, with sufficient resources allocated to each phase

❑ The budgeting process begins with drafting a list of activities and tasks to account for the financial cost of all census activities

❑ Monitoring the census budget is critical – regularly (quarterly or even monthly) monitor expenditures against funding for each project

❑ Estimates of expenditures for all years of the census cycle should be prepared in advance and reviewed yearly – usually peaks during enumeration

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Use of technology

- ❑ Growing interest for using new technologies (<u>timeliness and quality of data, efficient operation control, better capacity for monitoring,</u> etc) is a very important factor for census planning

- ❑ As the new technologies adopted may relate to only one part of the census operations, planners have to take account how it will impact or affect other operations

- ❑ The use of electronic data collection technologies requires <u>early decision for redesigning and testing census phases/activities</u>

- ❑ Adoption of <u>multi-mode data collection requires careful consideration of</u> issues including duplication, data comparability issues, timelines for each mode, and response integration

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Contracting out

❏ Many national statistical offices may need to contract out some of the tasks during a census operation <u>in the interest of efficiency and lack of in-house expertise</u>

❏ Outsourcing decisions should be made within the context of a larger organizational plan that identifies choices between both hiring and training staff or using external service providers to augment or replace resources for specific projects

❏ Contracting out activities does not relieve census managers of their responsibility - so <u>managers have to work closely with contractors and monitor them regularly</u>

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Contracting out

❑ The following should be considered while contracting out any activity:

o Core census activities (eg. content of questionnaire, field enumeration) should not be contracted out

o Evaluation of the risk of contracting out should be carried out

o Clear understanding of the requirements and development of detailed technical specifications

o Competitive bidding should be invited for contracted activities and demonstrations of capacity and good project management skills should be verified before outsourcing

o Confidentiality and security of census data collected should not be compromised

o Quality assurance guidelines for product/service should be laid out

o Monitoring of outsourced activity for timeliness and quality of the delivery

✓ **Careful control is needed to ensure that the selected external provider delivers a cost-effective solution that meets the census agency's needs**

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Documentation

- ❑ Census organizations need to pay special attention to continuity of knowledge and skills from one census to the next to document/keep institutional memory

- ❑ Comprehensive documentation of census activities while they are being carried out is essential to create a pool of knowledgeable and experienced persons by the time the next census comes

- ❑ Evaluation and recording should not be left until the end of the census process and early census planning needs to take this into account

- ❑ Administrative report - a report where all census experiences are recorded – can help retain census historical memory and serve as a resource for transferring knowledge

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Reference materials for this presentation

❑ Handbook on the Management of Population and Housing Censuses, Revision 2

❑ Principles and Recommendations for Population and Housing Censuses, Revision 3

❑ Guidelines on the Use of Electronic Data Collection Technologies in Censuses

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