

Advocacy and Resource Mobilization for the 2010 Round of Censuses

New York
24-25 February 2005



United Nations
Statistics Division

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NOTES:

The views and opinions expressed in this report are those of the participants who attended the *Advocacy and Resource Mobilization International Meeting toward the Successful Implementation of the 2010 Round of Population and Housing Censuses in Developing Countries* and do not necessarily reflect those of the United Nations Population Fund (UNFPA) or the United Nations Statistics Division (UNSD). The papers included in this report have been published as submitted.

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of UNFPA or UNSD concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The term “country” as used in the text of this report refers, as appropriate, to territories or areas. The designations of “developed” and “developing” countries are intended for convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process.

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FOREWORD

For the first three decades of its existence, UNFPA, the United Nations Population Fund has played a leadership role, together with other UN partners including the United Nations Statistics Division (UNSD), in supporting capacity building in the area of data collection and census-taking in developing countries. Many countries, across all continents, would have been unable to conduct censuses without this assistance. This ranges from support for all census costs in some countries (in the case of UNFPA), to technical aspects of capacity building, including cartography, data collection and processing, data analysis and dissemination. In many countries, these censuses have provided the only source of information on the population and its characteristics.

Countries and other development partners are committed to achieving the Millennium Development Goals (MDGs), which were agreed upon by world leaders through the 2000 Millennium Declaration. However, measuring progress towards the MDGs depends to a large extent on availability of census information and data. A primary source of information about the number and characteristics of a given population, a Population and Housing Census (PHC) is a necessity for achieving the MDGs and for any development planning. In addition, the unique strengths of PHCs arise from the completeness of coverage and the details they provide about the population in local areas and sub-groups. A census also provides a sampling frame, as well as a baseline for population and related functional projections that are crucial for sectoral development planning and for the comparability of basic development indicators within and among countries.

During the thirty-fifth Session of the United Nations Statistical Commission (March 2004), the importance of the 2010 Round of Censuses (2005-2014) was underscored. All Member States noted that although censuses are very expensive exercises, they are indispensable, and therefore, should be undertaken.

This Report is the outcome of the International Meeting on the 2010 Round of Census which was organized in February 2005 through a joint collaboration between UNFPA and UNSD. The meeting focused on: i) a review of the problem areas experienced in the 2000 Round of Censuses, including the serious under-utilization and poor dissemination of census results at the national and sub-national levels; ii) a description of the 2010 World Programme on Population and Housing Censuses; iii) a discussion of proposed strategies for the successful implementation of the 2010 Round of Censuses; and, iv) the development of an advocacy and resource mobilization plan for the 2010 Round, which identifies the resources needed to ensure successful implementation and emphasizes the value of censuses in measuring progress towards the MDGs. The Report also includes the presentations and contributions which were made by participants through statements, notes and papers. I would like to take this opportunity to thank all the participants for their valuable presentations and contributions.

We are delighted at the opportunity of this joint effort and look forward to an enhanced collaboration in this very important area. We would like to convey sincere thanks to all the participants at the meeting for their invaluable contributions. We also thank UNFPA and UNSD technical and professional staff for their tremendous efforts in organizing and coordinating the work of the meeting. Special thanks go to Francois Farah and Kourtoum Nacro, from the Population and Development Branch of UNFPA Headquarters, and Srdjan Mrkic and Yacob Zewoldi from the United Nations Statistics Division for their hard work during all the steps involved in organizing the meeting and producing the report. Special thanks also go to Soulimane Baro, Mady Biaye of UNFPA Country Technical Services Teams (CSTs); Richard Dackam-Ngatchou, formerly of CST; Rama Nott Rao and Robert Bush, UNFPA Consultants; and Sharyn Sohlberg, Secretary, for their contributions in producing this report.

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TABLE OF CONTENTS

Foreword.....	iii
I Report of the Meeting	1
List of Acronyms	2
Executive Summary	3
Chapter 1: Introduction	4
Objectives of the Meeting	4
Background of the Meeting	4
Organization of the Meeting	5
Meeting Participants	6
Chapter 2: Opening Session	7
Chapter 3: Summary of the Discussions	9
General	9
Salient Issues that emerged during the discussions	9
Importance of Population and Housing Censuses.....	9
Support to Countries.....	9
Constraints to Resource Mobilization.....	10
Strategies for Resource Mobilization	10
Advocacy for Resource Mobilization	11
Promotion of Utilization	11
New Technologies.....	11
Regional Cooperation.....	12
Capacity Development	12
Census Management Aspects	13
Other Aspects	13
Chapter 4: Proposed Action Plan	14
Annex 1: Concept Paper, and Agenda and Time Schedule of the Meeting	15
Annex 2: List of Participants	19
Annex 3: List of Contributed Statements, Notes and Papers	28
II Statements	31
III Notes	55
IV Papers	81



Report of the Meeting

LIST OF ACRONYMS

ACAP	African Census Analysis Project	MERCOSUR	Mercado Común del Sur (Common Market of the South)
ADRASS	Association pour le Développement de la Recherche Appliquée en Sciences Sociales	NGO	non-governmental organization
CARICOM	Caribbean Community	OMR	Optical Mark Recognition
CCA/UNDAF	Common Country Assessment/United Nations Development Assistance Framework	PARIS21	Partnership in Statistics for Development in the 21st Century
CELADE	Latin American and Caribbean Demographic Centre	PDS	Population and Development Strategies
CST	Country Technical Services Team	PHC	Population and Housing Census
DESA	Department of Economic and Social Affairs	SADC	Southern Africa Development Community
DFID	Department for International Development (UK)	SPC	Secretariat of the Pacific Community
ECLAC	Economic Commission for Latin America and the Caribbean	STATCAP	Trust Fund for Statistical Capacity Building
ECOSOC	Economic and Social Council of the United Nations	UN	United Nations
EU	European Union	UNDP	United Nations Development Programme
FAO	Food and Agriculture Organization of the United Nations	UNFPA	United Nations Population Fund
GIS	geographic information system	UN-HABITAT	United Nations Human Settlements Programme
GPS	Global Positioning System	UNICEF	United Nations Children's Fund
HIPC	Heavily Indebted Poor Countries	UNIFEM	United Nations Development Fund for Women
ICPD	International Conference on Population and Development	UNSC	United Nations Statistical Commission
ICR	Intelligent Character Recognition	UNSD	United Nations Statistics Division
IPC	International Programs Center	USAID	United States Agency for International Development
IUSSP	International Union for the Scientific Study of Population	WPPHC	World Programme on Population and Housing Censuses
LSMS	Living Standard Measurement Survey		
MDG	Millennium Development Goals		
MEASURE	Monitoring and Evaluation to Assess and Use Results		

EXECUTIVE SUMMARY

The United Nations Population Fund (UNFPA) in collaboration with the United Nations Statistics Division (UNSD), organized an international meeting on “Advocacy and Resource Mobilization towards the Successful Implementation of the 2010 Round (2005–2014) of Population and Housing Censuses in Developing Countries” in New York on 24 and 25 February 2005.

The meeting was attended by 64 participants from various United Nations agencies and affiliates, national statistics/census offices, bilateral donors, non-governmental organizations, and academic and technical organizations. The meeting also included representatives from developing country governmental policy-making and funding organizations.

The meeting focused on: 1) a review of the problem areas experienced in the 2000 Round of Censuses, including the serious under-utilization and poor dissemination of census results at the national and sub-national levels; 2) a description of the 2010 World Programme on Population and Housing Censuses; 3) a discussion of proposed strategies for the successful implementation of the 2010 Round of Censuses; and 4) the development of an advocacy and resource mobilization plan for the 2010 Round, which identifies the resources needed to ensure successful implementation of the 2010 Round and emphasizes the value of censuses in measuring progress towards the achievement of the Millennium Development Goals (MDGs).

During the discussions, the participants reached consensus on the importance of Population and Housing Censuses; continued donor support for selected developing countries; effective advocacy and resource mobilization among donors and within developing countries; increased emphasis on the effective dissemination and utilization of census data; careful consideration and testing of new technologies before their widespread application; the sharing of knowledge and experience among developing countries; regional cooperation on census plans, strategies, and definitions; and continued emphasis on capacity development for census management as well as other census related skills. Follow-up mechanisms to facilitate the implementation of these actions also were discussed.

UNFPA, in collaboration with UNSD, will prepare a comprehensive Advocacy Note. The Note will be used to help mobilize resources for the 2010 Round. The Note will support the achievement of the following objectives:

- Identify and sensitize key national stakeholders, and obtain their early involvement in the census process;
- Ensure that national statistical/census offices play a pro-active role in data dissemination and make the strengthening of data users’ service centres an integral part of the national statistical framework;
- Highlight the use of census data, in combination with administrative and survey data, to provide indicators and information for development programmes including the MDGs;
- Document and share the lessons learned from the use of new technology;
- Strengthen coordination and the exchange of experience at the regional level, with emphasis on the sharing of census expertise, as well as the promotion of South/South cooperation for conducting censuses;
- Encourage donor participation by ensuring that censuses will be executed on time and cost-effectively; are processed quickly; and produce reliable results that are disseminated and used widely; and
- Strengthen national capacity for census advocacy and resource mobilization.

Chapter 1

Introduction

Objectives of the Meeting

UNFPA, the United Nations Population Fund in collaboration with the United Nations Statistics Division (UNSD) of the Department of Economics and Social Affairs (DESA), organized an international meeting on “Advocacy and Resource Mobilization towards the Successful Implementation of the 2010 Round (2005–2014) of Population and Housing Censuses in Developing Countries” in New York on 24 and 25 February 2005.

The objectives of the meeting were to:

- Identify and propose remedial strategies for the common problems encountered in the census process, including those created by technical deficiencies, coverage issues and lack of capacity;
- Ascertain the reasons for the serious under-utilization and poor dissemination of census results at the national and sub-national levels and identify appropriate strategies to resolve this problem;
- Determine the resources required for the 2010 Round of Population and Housing Censuses (2010 Round) and identify appropriate strategies to address resource constraints in a more comprehensive and timely manner; and
- Highlight the value of censuses in measuring progress towards the achievement of the Millennium Development Goals (MDGs).

The expected outputs of the meeting were to:

- Reach consensus on the assessment of past problems in census-taking;
- Propose strategies for the successful implementation of the 2010 Round;

- Agree on actions to be undertaken by specific institutions, including mechanisms to ensure adequate follow-up; and
- Develop an advocacy and resource mobilization plan of action for the successful implementation of the 2010 Round.

Background of the Meeting

Throughout this paper, the term census refers to population and housing censuses (PHCs), unless otherwise specified. The current meeting is one of a series in support of the 2010 Round.

UNFPA organized three meetings focused on cost-saving strategies in census-taking, and census data dissemination and use. These included: the “UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs,” in Pretoria, South Africa from 26–29 November 2001; a workshop on “In-House Capacity Building on Population Censuses: New Directions and Cost Saving Strategies,” in Princeton, New Jersey, from 21–23 October 2002; and the “UNFPA/PARIS21 International Expert Group Seminar on Population Census Data Dissemination, Use and Advocacy,” in Pretoria, South Africa, from 10–12 November 2003.

The United Nations Statistical Commission (UNSC) at its 35th session in March 2004 specified a range of activities to be undertaken by UNSD in support of the 2010 Round. These included the establishment of an Expert Group to: establish census priorities, develop a “user friendly” website to facilitate the exchange of census data and experiences, and propose comprehensive recommendations and standards for the 2010 Round.

In response, UNSD organized the “United Nations Symposium on Population and Housing Censuses,” in New York, 13–14 September 2004. It proposed a range of activities to be included in the 2010 World

Programme on Population and Housing Censuses (WPPHC); identified specific issues and areas warranting emphasis based on the experiences and lessons derived from the 2000 Round; set priorities for the Expert Group in preparing for the meeting to “Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses;” and provided inputs for drafting a resolution defining the 2010 WPPHC for consideration by UNSC.

UNSD also organized the “United Nations Expert Group Meeting to Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses,” in New York, 15–17 September 2004. It produced a set of recommendations and conclusions on the technical and scientific aspects of such emerging issues and topics as alternative census designs, core national data sets, and updating and revising the *Principles and Recommendations for Population and Housing Censuses*. The meeting also established terms of reference for the Expert Group.

To broaden support for the 2010 Round, representatives from the Symposium and the Expert Group requested UNSC to submit a resolution supporting the 2010 WPPHC to the United Nations Economic and Social Council (ECOSOC). The resolution also urged all Member States *inter alia*, to hold a Population and Housing Census at least once during the period from 2005 through 2014.

UNSC, at its 36th session in March 2005, considered the resolution in support of the 2010 WPPHC.

The current meeting is a follow-up to the recommendations of UNSC, the UNSD-organized meetings and the UNFPA-organized workshops mentioned above.

Organization of the Meeting

As explained in the Concept Paper, Agenda and Time Schedule of the Meeting (Annex 1), the meeting was structured along the following main topics:

- An assessment of the 2000 Round of Censuses, in contrast with the 1990 Round;
- The 2010 WPPHC;
- Strategies for the successful implementation of the 2010 Round of Censuses;
- Appropriate mechanisms for implementing the strategies; and

- An Advocacy and Resource Mobilization Plan of Action for the successful implementation of the 2010 Round of PHCs.

A Background Note presented by Mr. Nott Rama Rao, a Consultant to UNFPA, formed the basis for discussion. The Note discussed the rationale for the meeting, the implementation status of censuses and census issues, the importance of PHCs, particularly for monitoring MDGs, and the need for advocacy and resource mobilization, and planning for the 2010 Round.

Mr. Srdjan Mrkic of UNSD made a presentation on the 2010 WPPHC. The presentation covered the current programme of work for the 2010 Round, major operational and methodological challenges and the expected outcomes. The main outcome expected in the 2010 Round is that all countries and areas of the world will conduct a PHC at least once in the period from 2005–2014. In the 2000 Round, 202 out of 230 countries/areas, covering 91 percent of the world’s population, conducted a census. The corresponding percentages in Africa and Latin America were 57 and 80.

These presentations were followed by presentations of country or regional experiences by participants and open discussions. The background papers contributed by participants provided additional information and enriched the discussion. The list of contributed papers/statements/presentation materials is given in Annex 3. These documents can be found in Sections II through IV of this publication.

The discussions were structured to lead to development of the meeting’s final recommendations or Action Plan. The individual sessions were chaired in turn by: H.E. Mr. Augustin Frédéric Kodock, Minister of State of Planning and Development, Republic of Cameroon; H.E. Mr. Mamadou Sidibe, Minister of Planning and Sustainable Development, Republic of Senegal; Mr. Werner Haug of the Swiss Federal Statistical Office, Switzerland; Mr. Peter O. Way of the International Programs Center (IPC), U.S. Census Bureau, USA; Mr. Ali bin Mahboob bin Hassan Al Raisi, Director General, Census Administration, Sultanate of Oman; and Mr. Paul Cheung, Director, UNSD. Mr. François Farah, Chief, Population and Development Branch, UNFPA, facilitated the work of the Chair and at times acted as co-Chair.

The Rapporteur for the meeting was Mr. Nott Rama Rao, Consultant to UNFPA. Country Technical Services Team (CST) Advisors, Mr. Richard Dackam-Ngatchou, Mr. Mady Biaye and Mr. Soulimane Baro, contributed to the daily and final reports.

Meeting Participants

The meeting was attended by 64 participants, including: policymakers from developing countries and bilateral donors; officials from National Statistics/Census Offices; representatives from non-governmental organizations (NGOs) and the academic community; census experts; and representatives from throughout the United Nations system (UNSD, the UN Population Division, the UN Regional Commissions, other UN Agencies; as well as UNFPA headquarters' and CST staff members, and UNFPA Country Representatives).

The List of Participants is given in Annex 2.

Chapter 2

Opening Session

Mr. François Farah, Chief, Population and Development Branch, Technical Support Division, UNFPA, New York, welcomed participants and introduced Mr. Kunio Waki, Deputy Executive Director (Programme), UNFPA, and Mr. Paul Cheung, Director, UN Statistics Division.

Mr. Farah noted that census data are crucial to policymakers and planners in guiding governments on the journey towards development and the achievement of MDGs. He explained that UNSC had proposed several activities in support of the successful implementation of the 2010 Round and that UNFPA and UNSD welcomed the commencement of this important programme. He indicated that it was time to review and ascertain the status of census preparations and plans in all countries and that this meeting was an important part of the process in its effort to analyse and recommend solutions to the challenges of census advocacy and resource mobilization.

Speaking on behalf of Ms. Thoraya Ahmed Obaid, Executive Director of UNFPA, Mr. Waki communicated both her regrets and the high priority she gives to data collection, especially through censuses.

Mr. Waki pointed out that UNFPA, in collaboration with its partners, among which UNSD occupies a privileged place, has for its first three decades played a leadership role in supporting population data collection, especially census-taking. Many countries, across all continents, would not have been able to conduct censuses without the assistance provided by the Fund. This assistance has ranged from support for the full cost of the census in some countries, to capacity development in cartography, data collection, processing, analysis, dissemination and other census-related skills in others.

Mr. Waki recognized that often censuses are the only source of information on the population and its characteristics, without which, evidence-based development planning is impossible. The 1990 and 2000 Rounds

were not fully successful because of funding constraints and/or the lack of appreciation for the strategic importance of censuses. During this period, some countries did not undertake a census, while in others, important census-related activities, such as data analysis and dissemination, were delayed or left undone. Mr. Waki said conducting a census and not analysing and using it for policymaking and planning at national and sub-national levels is a waste of resources.

Mr. Waki therefore stressed the need for focused efforts to ensure the successful implementation of the 2010 Round. He urged that UNFPA put this objective high on its agenda, and called for both developed and developing countries to do the same. To avoid encountering past shortages of funds and qualified manpower, he appealed to developing countries to adequately fund censuses and urged them to ensure that census preparations are continuous and comprehensive.

In the spirit of the eighth MDG, “Develop a global partnership for development,” Mr. Waki expressed the hope that developed countries and the international community would increase support for censuses. He indicated that UNFPA looks forward to the recommendations of the meeting.

Mr. Paul Cheung reiterated that census-taking is the most important statistical exercise in a country and is unparalleled in terms of providing benchmarks and detailed information.

He indicated that UNSD remains committed to helping to develop and implement census standards and promoting the importance of census-taking, while recognizing new challenges. For example, register-based censuses or rolling surveys are being considered and evaluated as alternatives to the traditional census-taking. Other challenges include mobilizing financial resources, providing a forum for the exchange of information, expertise and technical assistance, and revising and updating international standards for PHCs. The

work on the census standards started in September 2004 and is progressing. At its 36th session in March 2005, UNSC will consider a draft resolution¹ submitted by Member States on the 2010 WPPHC.

Mr. Cheung emphasized that none of this work would lead to success without the active participation of national statistical and census authorities, and international support for census advocacy and resource mobilization. This meeting represents an opportunity to build such a cooperative framework. Mr. Cheung hoped that the discussions would result in an unambiguous commitment for conducting at least one census in every

country or area of the world in the period from 2005 to 2014 and in developing a framework for resource mobilization and advocacy for census-taking.

Mr. Cheung concluded by saying that our assignment, as responsible leaders in national statistical systems, is to provide accurate, reliable, relevant and timely numerical descriptions of social and economic phenomena. This task calls for developing methods to capture the numbers that best describe the present and estimate the future. In that spirit, Mr. Cheung said, UNSD would work with its partners to ensure a successful 2010 Round.

¹ Please note that at its 36th Session, 1–4 March 2005, in New York, the Commission approved the draft resolution (document E/CN.3/2005/L.3) and recommended it for adoption by the Economic and Social Council. For more information, see report of the 36th Session of the Commission (Economic and Social Council, Official Records 2005, Supplement No. 4 (E/2005/24E/CN.3/2005/27, chap. I, sect. A).

Summary of the Discussions

General

The meeting focused on four main areas: the persistent problems experienced in past censuses; the serious under-utilization and poor dissemination of census results at the national and sub-national levels; the availability of resources to ensure the successful implementation of the 2010 Round; and the value of censuses in measuring progress towards the MDGs.

Also discussed were strategies for advocacy and resource mobilization among donors and developing countries, effective and complete dissemination and utilization of census data and capacity development. Follow-up mechanisms to facilitate the implementation of these actions were discussed, resulting in a concrete Action Plan.

Salient Issues that Emerged during the Discussions:

Importance of Population and Housing Censuses

- In the foreseeable future, censuses will continue to be the main source of socio-demographic data, particularly for small areas.
- A census is crucial for evaluating progress towards the MDGs at the national, sub-national and small area levels, representing a powerful tool for estimating MDG indicators at district and lower levels. A census can also help in the design and management of programmes for achieving the MDGs. Poverty mapping using census data can be very useful in directing resources and programmes to poor areas and people.
- If population census data can be linked with agriculture census data, MDG indicators for specific groups of farm households can be provided. For example, child mortality and poverty indicators could be made available for rice farmers versus livestock holdings and small-scale versus large holdings.

- Censuses are used for mapping non-income poverty. They can help measure the equity of the poverty programmes, evaluate their implementation and identify challenges.
- Censuses are vital for the work of the United Nations system as a whole. They provide inputs for the official United Nations population estimates and projections, which are used throughout the United Nations system where population information is required. Data from censuses are also used to monitor, review and assess the implementation of the ICPD Programme of Action at the national, regional and international levels.

Support to Countries

- In supporting censuses, priority should be given to countries that have never conducted a census (e.g., Bhutan) or those that could not undertake a census in the 2000 Round.
- Increased priority for technical or financial support should be given to countries experiencing difficult conditions, such as post-conflict countries and countries which did not complete the entire census process, particularly data analysis and dissemination.
- In the past, most of the Heavily Indebted Poor Countries (HIPC) in Sub-Sahara Africa have had difficulty mobilizing internal resources for censuses. Their priority is in implementing Poverty Reduction Strategies. The representatives from Senegal and Cameroon stated that their countries still need full support for the 2010 Round.
- Financial support for censuses should be provided to the poorest countries, including those of the Baltic region and the Commonwealth of Independent States (CIS), on a priority basis. Technical support will likely be required by most of these countries.

- A number of countries discussed their strategies for reducing census costs and reducing their reliance on external funding. The Government of Ethiopia indicated that new technologies, especially geographic information systems (GISs), will be used to improve their 2007 Census.
- World Bank support for the 2010 Round will be set within the framework of the Marrakech Action Plan for Statistics, which emphasizes the role of timely and reliable statistics for results-based management. The main financial instruments that can be used to provide resources for pre- and post-census activities and census operations are: the Development Grant Facility; the Trust Fund for Statistical Capacity Building (TFSCB); STATCAP, the Bank's lending programme for developing statistical systems; and standard Bank instruments, such as loans and credits.

Constraints to Resource Mobilization

Despite recognition of the usefulness of a census, several developing countries did not participate in the 2000 Round or defaulted on ten-year periodicity of their census. Even more common were instances where the census was not fully funded: compromising its quality, leaving the analysis and dissemination undone or delayed and diminishing the value of the census to users. Barriers to mobilizing internal and local resources include:

- Low national commitment in light of the high cost of census-taking, especially in the HIPC;
- Linkages between censuses, the MDGs and development programmes (national, sub-national and sectoral) are not clearly understood; and
- Lack of resources to complete the census process in time due to a crisis or conflict situation.

During the 2000 Round, there was also a decline in donor commitments to funding censuses in developing countries. This was due to:

- Low national commitment;
- Data needs of key international stakeholders are often not provided for in the planned census products;
- Isolation of the census within the larger statistical system of the country;

- A lack of initiative and leadership on the part of the national officials concerned;
- Complex procedures required for external funding that discourage country applications for assistance, limit the number of donors approached, require scarce country technical resources and delay applications until too late in the census process ; and
- Past difficulties in gaining access to census results (or other information collected by the census/statistical office).

Strategies for Resource Mobilization

- Local and regional bodies and private sector organizations should be viewed as potential sources of funding, in addition to national governments. Mobilizing such resources should be possible where there is a clear and strong demand for census data among these groups. Serving the needs of these users of census data is critical.
- A system should be developed to ensure effective resource monitoring and allocation. National governments should approach donors for funding with: 1) census project documents; 2) evidence of the country commitment; 3) a comprehensive list of expected products; 4) a description of the process with an indication of the interval between enumeration and availability of expected census products; 5) a discussion of the cost-reduction strategies to be used; 6) a quality assurance plan; and 7) a capacity-building strategy and an analysis of its impact on long-term statistical sustainability.
- Most census funding is allocated for census preparation (primarily mapping), the enumeration and data processing. This causes problems, as census funding is concentrated in a few years. To avoid such "sudden surges" in annual budgets, countries can consider stretching census activities and resource requirements over a longer period.
- It is necessary to link census support with the various multi-lateral initiatives for the development of statistical systems. The 2010 Censuses will be funded and successful only if they are planned and implemented, as far as possible, as fully coordinated and integrated activities.

Advocacy for Resource Mobilization

- The development of a separate comprehensive manual on the utilization of census data was proposed. Such a manual could serve a wide variety of users including national government organizations, the private sector, academic institutions, the media and local administrative authorities. UNSD has partially covered this topic in its Handbook on Census Management for Population and Housing Censuses and in other publications on census methodology. UNSD will consider complementing the existing collection with a publication that would target census data utilization. The meeting participants indicated that this would provide a useful tool for census advocacy.
- A list of products expected from the census proved to be an effective advocacy tool in several countries, including Benin (2002), Burkina Faso (1998), Côte d'Ivoire (1998) and Senegal (2002).
- Highlighting the successes of previous censuses can help create confidence among donors.
- A solid legal basis for censuses is vital for ensuring the full support of political authorities on all levels (Parliament and government at the national and sub-national levels) in mobilizing internal resources.
- A more systematic approach to census advocacy can be effective in mobilizing resources. In many countries in Africa, including Benin (2002), Côte d'Ivoire (1998) and Madagascar (2004), advocacy documents for resource mobilization were prepared at the beginning of the census process. In other countries, such as the Central African Republic (2004) and Senegal (2002), an advocacy document was not prepared until after the census enumeration. While the latter strategy may generate resources for processing, analysis and dissemination, a comprehensive approach is more effective.

Promotion of Utilization

- Whether carried out by an independent organization or as part of the national statistical system, a census should be viewed as a continuous process. During the intercensal period, analytical and methodological studies, including studies on improvement of census processes, can be carried out. A permanent data users' service centre is needed to help identify and serve user needs. A permanent census organization will lead to increased utilization of census products and improve planning for the next census.

It would also help retain skilled personnel and competent census staff and strengthen institutional capacity.

- The census data should be used, in combination with administrative data available in line ministries and/or data from intercensal surveys, to provide indicators for and improve the management of government programmes.
- A pro-active dissemination strategy is essential. Collaboration with universities and research institutions should be undertaken to strengthen national data analysis capacity.
- Apart from dissemination efforts, analysing and interpreting census data for target groups through workshops is essential for better utilization. National census/statistical offices and line ministries should work together to provide such training.
- An explicit and comprehensive strategy for the analysis, dissemination and utilization of census data should be part of the overall census plan, as this will affect the design of the questionnaire and have resource implications. Identifying and consulting with key users from the very beginning of census planning is vital.
- Information about data (metadata) is crucial to improving the utilization of census data.
- The African Census Analysis Project (ACAP) has developed a platform for making African census data available and accessible to scholars, international agencies and researchers. This will greatly help development planners and policymakers.

New Technologies

- The use of new technologies, like Intelligent Character Recognition (ICR), Optical Mark Recognition (OMR) and Geographic Information Systems (GISs), including aerial photography, Global Positioning System (GPS) and satellite imagery, has not been uniformly successful in all countries. In some countries, they have caused delays, increased costs and compromised quality. The new technologies should be introduced only if the proper infrastructure is in place and needed technical expertise is available in the country. An important lesson learned from the 2000 Round is that new technologies do not always improve quality.

- It is extremely important that census data are readily available through user-friendly electronic media. This will help increase the number of users at the national, regional and local levels, and facilitate easy access to the data by local planners.
- The adoption of GIS to assist in the delineation of enumeration areas and the automation of map production can lead to considerable cost saving. Countries should be encouraged to create an integrated database containing population and other data linked by geography.
- Delays in data availability diminish the value of that data to users. With new technologies and proper planning, the time lag between enumeration and release of results can be reduced to around 18 months. Census costs also can be reduced. The introduction of ICR technology for data capture in the 2001 Census of India resulted in an estimated saving of USD \$140 million. The use of OMR technology in data processing in the 1998 Census of Pakistan reduced the time lag in releasing census results. In Thailand, by using ICR, results of the last census were released and disseminated within 18 months of the enumeration, a substantial improvement over previous censuses.
- In determining the most suitable mix of technology for its census, each country should consider its resources and circumstances. UNFPA is considering conducting a study examining appropriate census models for different country groups based on key parameters such as country size, budget, access to technology, human capital and labour costs.

Regional Cooperation

- The Caribbean Community (CARICOM) region has a rich history of conducting censuses on a regionally coordinated basis. In the past, joint activities included preliminary census preparations, the training of census personnel, producing quick and reliable results, and census evaluation and analysis. The key challenges for the 2010 Round in this region are to improve the planning and management of the total process, strengthen regional capacity to conduct quality censuses and take advantage of the new technologies in the census process.
- The Common Market of the South, El Mercado Común del Sur (MERCOSUR) region has established a record of successful regional cooperation in census-taking. Lessons learned from this experience should be shared with other regions.
- The core census questions have been standardized in the Southern Africa Development Community (SADC) and MERCOSUR regions. This is a significant advance in South-South cooperation, which furthers the 2010 WPPHC goal of achieving internationally agreed standards and methods.
- The Secretariat of the Pacific Community (SPC) prefers a regional approach in census-taking to achieve cost-effectiveness, maximum impact and sustainability. The number and size of the Community members makes creating a comprehensive census capability in each country impractical, and much of the technical skill is developed at the regional level.

Capacity Development

- Despite more than two decades of externally funded training programmes, many countries still lack sufficient capacity in census-taking and advocacy, often due to large-scale turnover or retirement of trained staff. Programmes where trained and experienced senior staff would conduct in-house training for junior staff could help institutionalize capacity development. Countries should capitalize on past experience by making better use of senior staff and rigorously documenting previous experience and lessons learned.
- In spite of the improved integration of analysis and dissemination programmes into censuses in the last decade, there are still countries that do not fully analyse and disseminate census products for want of adequate funds and/or a lack of skilled staff. Some national statistical/census offices have simply never developed the needed advocacy or analysis skills.
- In some countries, censuses are regarded as stand-alone activities. Because they consume substantial resources, they can disrupt the rest of the national statistical system. A census should be integrated with the broader statistical system and contribute to its development and sustainability in the areas of methodology, statistical concepts and definitions, staff experience and expertise, and technology.
- Capacity development, through on-the-job training and South-South cooperation, is cost-effective.
- USAID, through the International Programs Center (IPC) of the U.S. Census Bureau, will continue to

provide technical assistance to countries on request. The assistance mainly consists of training workshops, free provision of software for data processing and analysis, and follow-up, on-the-job training to the national staff.

Census Management Aspects

- A census has to be cost-effective. Pre-census mapping, enumeration fieldwork and data processing constitute the bulk of census costs. New technologies may help reduce these costs, but care should be taken to ensure that the quality of census data is not compromised.
- In Nigeria, a cost saving and expenditure monitoring system has been developed for the 2005 Census. Its purpose is to ensure cost-effectiveness at all stages of the census and monitor adherence to the census work plan and budget.
- A realistic budget for all census operations should be developed and approved at the outset of the census process. This would help ensure that all aspects of the census are completed as scheduled. Under-budgeting inevitably leads to funding shortages and delays while the needed additional funds are found.
- The early commencement of census preparations, with strong user involvement, is vital to its success. The experiences of countries such as Benin, Cape Verde and the Sultanate of Oman indicate that early and comprehensive census planning lowers census

costs, increases the quality and usefulness of the census, and significantly reduces the time lag between enumeration and the availability of final census products.

Other Aspects

- In developing countries, alternative approaches to traditional censuses may not be as feasible at the present time. Most developing countries do not have viable alternatives, such as administrative registers.
- In considering the content and scope of the 2010 Round, it was generally agreed that collection of data on international migration, especially out-migration, might pose a challenge.
- Some countries included census questions designed to measure maternal mortality in the 2000 Round. The results of this approach should be evaluated and, if it is found to be reliable, applied in future censuses.
- In some countries, a PHC has been combined with other censuses (e.g., agriculture census or economic census) to lower overall cost. In such instances, care should be taken to ensure that quality of the PHC does not suffer due to divided attention from or the increased workload on enumerators.
- It was suggested that UNFPA convene a meeting of donors to discuss the Action Plan and to put forward a Census Advocacy Note for the 2010 Round.

Proposed Action Plan

Over the course of the meeting, a number of follow-up activities were suggested, in support of the 2010 WPPHC. The most prominent suggestions included the development of a comprehensive Census Advocacy Note, the development of a census data use manual and a series of regional follow-up meetings.

Census Advocacy and Resource Mobilization Note

Drawing on past census experience, UNFPA in collaboration with UNSD, will prepare a comprehensive Census Advocacy Note. The Note will broadly cover key strategies for census advocacy. It will include the following topics relevant to the promotion of interest in and support for censuses:

- **Uses of Census Data**—The Note will include a comprehensive list of the potential uses of census data, including its use in combination with available administrative and survey data, to provide indicators of programme performance and monitor the achievement of the MDGs.
- **Stakeholder Communications**—The Note will provide model materials informing key national stakeholders, such as the government, legislative bodies, local authorities and the private sector, of the importance of the census for planning, monitoring, and managing development policies and programmes at the national and sub-national levels.
- **Supporting User Needs**—The Note will sensitize national statistical/census offices to the importance of supporting user needs and will provide them with strategies and materials to enhance their effectiveness in data dissemination. The importance of strengthening data users' service centres as part of the national statistical framework will be highlighted.

- **New Technologies**—The Note will document the lessons learned from the use of new technologies during the 2000 Round.
- **International Cooperation**—The Note will outline strategies for improving the sharing of experiences and facilitating transfer of knowledge and expertise. The Note will also propose South/South cooperation for conducting censuses on a regionally coordinated basis. The lessons learned from regional cooperation in the Caribbean, South America and Southern Africa will be documented for application in financially stressed regions. This would help save time in making budget proposals and will reduce costs.
- **Good Management Is Critical**—The Note will emphasize the need for countries to plan, manage and execute censuses to ensure cost-effective, reliable, efficiently compiled, better disseminated and widely used data. The Note also will emphasize that the quality of the census and the quality of user support are, in the final analysis, the most important determinants of country and donor funding.

Census Data Utilization Manual

Although this activity was suggested, the specific details of the manual need to be elaborated in future discussions.

Regional Follow-Up Meetings

As above, regional follow-up meetings were suggested, but the precise content and schedule of these meetings will have to be elaborated in future discussions.

Annex 1

A. Concept Paper

Background and justification

For the first three decades of its existence, UNFPA, working in multiple partnerships, has played a leadership role in supporting capacity building in the area of data collection and census-taking in developing countries. Many countries, across all continents, would have been unable to conduct censuses without the assistance provided by the Fund. This ranges from support for entire census costs in some countries, to technical aspects of capacity building, including in cartography, data collection, processing, data analysis and dissemination, in others. In many countries, these censuses have provided the only source of information on the population and its characteristics, without which, evidence-based development planning would not have been possible.

A Population and Housing Census (PHC) is the primary source of information about the number and characteristics of a given population. Its strengths and distinctiveness arise from the completeness of coverage and the details it provides about the population in local areas and sub-groups—a need, which no other data source meets. A census also provides a sampling frame, as well as a baseline for population and related functional projections that are crucial for sectoral planning. Further, insofar as international definitions and classifications are used, censuses also provide for the comparability of basic development indicators among countries.

Although it is recommended that PHCs be carried out every ten (10) years as part of a country's strategy for having sequenced information, funding constraints, and/or lack of appreciation of the strategic importance of censuses, have seriously affected the implementation of the 2000 census round, especially in developing countries. Some countries did not

undertake a census during that round, and in others, important census-related activities, such as data analysis and dissemination, were undertaken with much delay or were not undertaken at all.

During the thirty-fifth Session of the United Nations Statistical Commission, held in March 2004, the upcoming 2010 Round of Censuses (2005–2014) was, undoubtedly, an important highlight. All Member States, in their statements, noted that, although censuses were very expensive exercises, they were indispensable, and therefore, should be undertaken. Several Member States noted UNFPA's support to census activities.

The importance of PHCs was also stressed during the United Nations Census Meetings: Symposium, 13–14 September 2004; and Expert Group Meeting, 15–17 September 2004, organized by the UN Statistics Division (UNSD). Among other issues, concerns were raised about the scarcity of resources and level of awareness by governments, which need to be addressed strategically, to avoid repeating the low implementation of census-related activities during the 2000 Round, which include enumeration, data analysis, data dissemination and use. As noted above, in many countries, census activities were limited to the head count (enumeration) with limited analysis, dissemination and use of the data. All of these issues need to be dealt with, with due attention.

Objectives

As a follow-up to the recommendations of the UN Statistical Commission, the above-mentioned United Nations Census Meetings and the conclusions of the most recent UNFPA organized workshops,² UNFPA in collaboration with UNSD, proposes to organize an

² i. "In-House Capacity Building Workshop on Population Censuses: New Directions and Cost Saving Strategies, Princeton, New Jersey, 21–23 October 2002," which was attended by UNFPA HQ staff, CST Advisers and a few external experts including from the US Bureau of the Census, Statistics Canada and South Africa; and ii. Two other workshops were both held in Pretoria, South Africa ("UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26–29 November 2001" and "UNFPA/PARIS21 International Expert Group Seminar on Population Census Data Dissemination, Use and Advocacy, 10–12 November 2003").

international advocacy and resource mobilization meeting with the objectives of identifying appropriate approaches to:

- (i) Determining the persistent problems pertaining to the different stages of the census, e.g., design, operations, analysis, technical deficiencies, and lack of capacity and the range of incompleteness of censuses across a regional and global spectrum and identifying appropriate capacity-building strategies;
- (ii) Ascertaining the reasons for the serious underutilization and poor dissemination of census results at the national and sub-national levels and identifying appropriate strategies to reverse this trend;
- (iii) Ascertaining the availability (or lack) of resources and budgets, both internally and externally, and identifying appropriate strategies to address the resource constraints in a more sustainable manner, both with donor and census users' countries, for the next 2010 Round of Censuses; and
- (iv) Redefining and asserting the value of PHCs in measuring progress towards the achievement of the MDGs.

Expected outputs of the meeting

- Consensus on the status of census-taking in this first year of the 2010 Round of Population and Housing Censuses.
- Strategies for the successful implementation of the 2010 Round of Censuses.
- Actions to be undertaken by specific institutions.
- Consensus on appropriate mechanisms to ensure an adequate follow-up on the implementation of the actions agreed upon by the meeting.
- An Advocacy and Resource Mobilization Plan of Action for the Successful Implementation of the 2010 Round of Population and Housing Censuses.

Annex 1

B. Agenda and Time Schedule of the Meeting

The meeting will last two days, starting at 10:00 and finishing at 18:00, with a lunch break of two hours (13:00 to 15:00) and a fifteen-minute coffee break during each session.

Day 1: Thursday, 24 February 2005—United Nations Headquarters, Conference Room 4

Registration of participants (09:00–10:00)

Morning Session (10:00–13:00)

Opening

Introductory remarks by Mr. François Farah, Chief,
Population and Development Branch

Mr. Kunio Waki, Deputy Executive Director
(Programme), UNFPA

Mr. Paul Cheung, Director, UN Statistics Division

This Session will discuss the implementation status of the 2000 Round of Censuses, in contrast with the 1990 Round.

PRESENTATIONS

Background Paper (UNFPA)

Others

DISCUSSION AND CONCLUSIONS

- (i) What are the persistent problems pertaining to the different stages of the census?
- (ii) What are the reasons for the serious under-utilization and poor dissemination of census results at the national and sub-national levels? What strategies are appropriate to reverse this trend?
- (iii) What resources are available (or are lacking) at all levels to ensure the successful implementation of the 2010 Round? In a sustainable manner, what can be expected from Donor countries and what can be expected of developing countries?
- (iv) What is the value of PHCs in measuring progress towards the achievement of the MDGs?

Lunch Break (13:00–15:00)

Afternoon Session (15:00–18:00)

This Session will continue the discussions started in the Morning Session to achieve the expected outputs set for the day and described below.

PRESENTATIONS

UNSD

Others

DISCUSSION AND CONCLUSIONS

- (i) What advocacy and resource mobilization strategies need to be used for both donor and developing countries?
- (ii) What strategies to ensure census data dissemination and utilization?
- (iii) What strategies for developing countries capacity building?

EXPECTED OUTPUTS OF DAY 1:

- Status of census-taking.
- Strategies for the successful implementation of the 2010 Round of Censuses.
- Actions to be undertaken by specific institutions.

Reception to be held in the Delegates' Private Dining Room #6, at United Nations Headquarters, from 18:30 to 20:30, in honour of the Participants.

Day 2: Friday, 25 February 2005—United Nations Headquarters, Conference Room 4

Morning Session (10:00–13:00)

This Session will focus on discussing the way forward.

DISCUSSION AND CONCLUSIONS

- (i) What follow-up mechanisms are needed to facilitate the implementation of the actions discussed on Day 1?
- (ii) Should there be a yearly advocacy and resource mobilization meeting around the sessions of the UN Statistical Commission to cut travel costs and to maximize attendance?

Lunch Break (13:00–15:00)

Afternoon Session (15:00–18:00)

This Session will review and finalize the drafts of the comprehensive report of the meeting. This Session will also be used for closing statements.

EXPECTED OUTPUTS OF DAY 2:

- Consensus on appropriate mechanisms to ensure an adequate follow-up on the implementation of the actions agreed upon by the meeting.
- An Advocacy and Resource Mobilization Plan of Action for the Successful Implementation of the 2010 Round of Population and Housing Censuses.

Annex 2

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Annex 3

List of Contributed Statements, Notes and Papers

Statements

1. Statement by Mr. Kunio Waki, Deputy Executive Director (Programme), UNFPA.
2. Speech by Dr. Paul Cheung, Director, Statistics Division, Department of Economic and Social Affairs.
3. Statement on behalf of UNIFEM (Karen Judd).
4. Déclaration de Augustin Frédéric Kodock.
5. Déclaration de Mamadou Sidibe.
6. Statement of the International Union for the Scientific Study of Population (IUSSP) (Mary M. Kritz).
7. Make People Do what they Do Best (Louis Lohlé-Tart).
8. Written Statement from the UK Delegates to the UNFPA Census Meeting 24–25 February 2005 (DFID).
9. Agricultural Censuses and the Millennium Development Goals (FAO Statistics Division, Rome; Haluk Kasnakoglu, Director, Statistics Division).
10. World Bank Support for the 2010 Census Activities (Sulekha Patel).

Notes

11. Past Experience and Future Plans on Census in India (Raj Gautam Mitra).
12. The African Census Analysis Project (ACAP) (Martin W. Bangha).

13. Advocacy & Resource Mobilization towards the Successful Implementation of the 2010 Round of Censuses—The Case of CIS & SEE (Balkan) Countries. (Note jointly prepared by ECE Statistical Division and UNFPA-DASE).
14. Brief Note on the Conduct of Censuses in Ethiopia (Amare Isaias).
15. Note to UNFPA Regarding Technical Assistance Requirements of Pacific Island Countries with 2010 Round of Censuses, in Light of 2000 Experience (Gerald Haberkorn).
16. Censuses in South and West Asia, A Note for Discussion (Wasim Zaman).
17. Population and Housing Census (PHC—1997) Executive Summary (Abdallah Najjar).

Papers

18. Background Paper for the Advocacy and Resource Mobilization International Meeting towards the Successful Implementation of the 2010 Round of Population and Housing Censuses in Developing Countries, 24–25 February 2005, New York (Nott Rama Rao).
19. 2010 World Programme on Population and Housing Censuses (Demographic and Social Statistics Branch, United Nations Statistics Division, DESA).
20. Past Experience, Current and Future Activities of the Population Division of the Department of Economic and Social Affairs in Connection with Population and Housing Censuses (Stephen Kisambira).

21. Past Experiences and Future Plans for the Population and Housing Census in Nigeria (Samu'ila Danko Makama).
22. Population and Housing Census in Developing Countries: Past, Present and Future Swedish Support (Lennart Nordström).
23. Colombia-Innovación Conceptual y Tecnológica en el Censo 2005 (Ernesto Rojas Morales).
24. Experiences gained from the 2000 Round of Population and Housing Census and Plans for the 2010 Round of Censuses—the CARICOM Region (Sylvan Roberts).
25. Les principales Caractéristiques du Recensement Général de la Population et de l'Habitat 2004 au Maroc (Abdelilah Zerrou).
26. 1998 Population and Housing Census of Pakistan, Census Procedures (Najam Hasan).
27. The Experience of Switzerland, Conditions for the Successful Implementation of Censuses: Aspects from the Donor Perspective (Werner Haug).
28. Strategies for Resource Mobilization for Population and Housing Censuses—Case studies in Some African Countries (Richard Dackam-Ngatchou and Soulimane Baro).
29. The 2010 Round of Population and Housing Censuses — Implications for the Millennium Development Goals: New Research Findings Make Good Demographic Information More Important than Before (Bo Malmberg).
30. Issues for Consideration in Developing Advocacy Strategies for Mobilizing Resources in support of the 2010 Round of Population and Housing Censuses in the Sub-Sahara Africa Region (Barnabas Yisa, Jean-Marc Hie and Benson Morah).
31. Population Censuses in the Arab Region: An Overview of the Past and Potentials for the Future (Abdallah Abdelaziz Zou'bi).
32. CST Bangkok's assistance to Population & Housing Censuses: Experience of the 2000 Round and Plans for the 2010 Round (Ghazy Mujahid).
33. UNFPA Sub-regional Past Experience and Future Plans in Connection with Population and Housing Censuses (PHCs) (Mady Biaye).
34. Census Activities (Carlos Ellis).
35. Role of Censuses in Monitoring the Millennium Development Goals in Sub-Saharan Africa (Gora Mboup).
36. The 2010 Census Round in the Pacific Islands (Geoffrey Hayes).
37. Proyecto de Censo Común del MERCOSUR: Una Experiencia de Integración Regional (Laura Cazzolli, Alicia Bercovich, Renee Saa Vidal).
38. Advocacy for Improved Utilization of Population and Housing Census Results (Griffith Feeney).
39. Census Data Demand and Use in Nigeria: Lessons in Census Advocacy for the 2010 Round of Population Censuses (Gabriel B. Fosu).
40. Background paper prepared for the UNFPA Advocacy and Resource Mobilization International Meeting towards the Successful Implementation of the 2010 Round of Population and Housing Censuses in Developing Countries, New York, 24–25 February 2005 (Peter Way).



Statements

The 2010 Round of Population and Housing Censuses in Developing Countries

KUNIO WAKI

Deputy Executive Director (Programme)
United Nations Population Fund (UNFPA)

Excellencies,
Distinguished Participants,
Ladies and Gentlemen,
Dear colleagues,

First and foremost, on behalf of Ms. Thoraya Ahmed Obaid, Executive Director of UNFPA, I would like to join the United Nations Statistics Division (UNSD) in welcoming each of you to this important meeting that UNFPA and UNSD, collaboratively, have organized. Madame Obaid gives high priority to data collection, especially through Population and Housing Censuses, and therefore regrets that she is unable to be with you because of another prior commitment.

Excellencies, Ladies and Gentlemen,

A Population and Housing Census (PHC) is an essential source of information about the number and characteristics of a given population:

- It provides a sampling frame and a baseline for population and related functional projections that are crucial for sectoral planning;
- It allows the comparability of basic development indicators among countries; and thus
- It is necessary for monitoring the Millennium Development Goals (MDGs), the achievement of which is central to development planning and to the work of all development partners.

The thirty-fifth Session of the United Nations Statistical Commission, held in March 2004, reiterated the importance of Population and Housing Censuses. While Member States and other partners have noted that censuses can be expensive exercises, they recognized that they are indispensable. In addition, the value of

population censuses was again stressed during the United Nations Census Meetings, organized last September by the UN Statistics Division (UNSD).

As you all know, UNFPA, in collaboration with its partners, among which UNSD occupies a privileged place, has for the first three decades of its existence, played a leadership role in supporting capacity-building in the area of data collection, especially census-taking. Many countries, across all continents, would have been unable to conduct censuses, without the assistance provided by the Fund. This ranges from support for all census costs in some countries, to technical aspects of capacity-building, including in cartography, data collection, processing, analysis and dissemination, in others. In many countries, these censuses have provided the only source of information on the population and its characteristics and without which, evidence-based development planning would not have been possible.

Excellencies, Ladies and Gentlemen,

Assessments of the 1990 and 2000 Rounds of Population and Housing Censuses indicate that these two Rounds were not fully successful because funding constraints, and/or lack of appreciation of the strategic importance of censuses have affected their full implementation. Some countries did not undertake a census during these Rounds, and in others, important census-related activities, such as data analysis and dissemination, were undertaken with much delay, or were not undertaken at all.

I would, therefore, like to stress the need for focussed efforts to address these constraints to ensure the successful implementation of the 2010 Round. I would also like to stress that UNFPA puts this objective high on its agenda and calls on both developed and developing countries to do the same. Developing countries must include taking a decennial census in their budgets and preparations for such activity must be continuous and

comprehensive, to avoid encountering past problems of shortage of funds and of qualified manpower to complete the whole census operation, which includes enumeration, data analysis, dissemination and use. In other words and to speak quite frankly, counting the population (enumeration) and not analysing and using the data for policy planning at both national and sub-national levels is a waste of resources. Unfortunately, that was the case of many countries during the 1990 and 2000 Rounds.

We look forward to an increased interest and support from the developed countries, as well as the international community for the 2010 Round, so that they place population and housing censuses as a top priority on their ODA (Official Development Assistance) policies and programmes. Altogether, we must now work in getting the job well done and in its totality. In the spirit of the eighth MDG (*“Develop a global partnership*

for development”), we must all contribute. We must make people count.

Excellencies, Ladies and Gentlemen,

The objectives set forth in the agenda of this meeting, as well as the expected outputs, are very important and UNFPA looks forward to their achievement. We look forward to drawing on the outcomes to guide us in planning our support to the 2010 Round of Population and Housing Censuses. And we look forward to continuing to work collaboratively with our partners to ensure their success.

I wish you every success in your deliberations during these two days.

Thank you.

Advocacy and Resources Mobilization

PAUL CHEUNG

Director, Statistics Division,
United Nations Department of Economic and Social Affairs (DESA)

Excellencies,
Distinguished Representatives,
Ladies and Gentlemen

I would like to express my gratitude to UNFPA for inviting the UN Statistics Division to collaborate in organizing this important meeting, and for this opportunity to address this distinguished audience.

Building on what Mr. Waki emphasized in his address, let me reiterate that the population and housing census is undoubtedly the most important statistical exercise in a country. It is a comprehensive undertaking to collect, process and disseminate detailed small-area statistics on population, families and housing. It is unparalleled in terms of providing benchmarks and details. It is also a matter of national priority to get these data.

Excellencies, Ladies and Gentlemen,

We are at the beginning of the 2010 Round of Population and Housing Censuses. As we will learn from the presentations that follow later today, the goals of the 2000 Round of Population and Housing Censuses—that each country or area conducts a census at least once in the period 1995–2004 and process and disseminate results—have not been completely achieved. We were almost there. Two hundred and two (202) countries and areas conducted a population and housing census—this is a wealth of knowledge to build upon. Based on our record, twenty-eight (28) countries or areas however did not conduct a census.

As we embarked on the 2010 global census programme, the United Nations Statistics Division remains committed to do our best to help develop and implement the standards and to promote the importance of censuses. In doing so, we face new challenges. Census methodology is undergoing substantive changes with the introduction of register-based censuses or rolling surveys as alternative approaches to the traditional census-taking. Thus, the basic characteristics of population and housing censuses that we know so well, call for methodological and scientific scrutiny and review.

New challenges do not stop with the methodology: they also include mobilizing financial resources; providing a forum for exchange of information, expertise and technical assistance; and revising and updating international standards for population and housing censuses. The work on the revision and updating of international standards for population and housing censuses at the global level started in September of last year, and is picking up speed. Furthermore, the United Nations Statistical Commission, at its 36th session next week, will consider a draft resolution submitted by Member States on the launching of the 2010 World Programme on Population and Housing Censuses.

Excellencies, Ladies and Gentlemen,

None of this work, however, would lead to success without the active participation of national statistical and census authorities and international commitments for advocacy and mobilization of resources for conducting censuses. This meeting, thus, represents a welcome opportunity to set up a course for building such a framework. It follows the spirit of the Marrakech Plan of Action and the record of supporting census-taking by UNFPA and other UN agencies.

I hope that the discussion at this meeting and its conclusions will result in an unambiguous commitment for conducting at least one census in every country or area of the world in the period 2005–2014, and in developing a framework for resource mobilization and advocacy for census-taking.

Let me conclude, by saying that our assignment as responsible leaders in national statistical systems is to provide accurate, reliable, relevant and timely numerical descriptions of social and economic phenomena. It is an important job. It calls for rolling up our sleeves and developing methods to capture the numbers that best describe the present and estimate the future. In that spirit, the UN Statistics Division will work with our partners to ensure a successful 2010 Round of Population and Housing Censuses.

I wish you success in your deliberations.

Gender Statistics and Statistical Methods

KAREN JUDD

United Nations Development Fund for Women (UNIFEM)

UNIFEM is not a data collecting or a statistics generating agency. Rather, it is, as the Women's Fund within the United Nations, an advocate for the improved collection of gender relevant data and for the use of the data collected. Censuses, in many cases, still fail to capture the diversity of women's and men's lives, especially with regard to women's economic roles, and men's roles in the household. The idea that men are breadwinners and women homemakers, and not part of the economically active population, affects the way questions are both designed and asked—as well as how women and men think of the work that they do. For this reason, as noted by the UN Statistics Division before the 2000 census round, the disaggregation of data by sex, while critical, is not enough. Rather, the improvement of statistics and statistical methods related to gender should be an important priority at all stages of work on the census—in planning, data collection, analysis and dissemination.

Cameroon

AUGUSTIN FRÉDÉRIC KODOCK

Ministre d'Etat en charge de la Planification de la Programmation du Développement et de l'Aménagement du Territoire Yaounde, Cameroon

Monsieur Le Directeur Exécutif,

Permettez-moi d'emblée de vous dire l'appréciation de la délégation camerounaise pour l'organisation fort opportune des présentes assises. Elles nous donnent l'occasion de mener une réflexion féconde sur les voies et moyens de mener à bien les recensements dans les pays en développement. Je voudrais à travers vous, Monsieur le Directeur, féliciter le Fonds des Nations Unies pour la Population pour le travail remarquable dans l'amélioration des capacités de gestion des politiques nationales de population.

Mesdames et Messieurs,

Le dernier recensement général de la population et de l'habitat au Cameroun date de 1987. Ce recensement, le 2^e dans le pays, a été entouré d'énormes lourdeurs qui ont retardé la production du rapport final ainsi que la diffusion des résultats, malgré l'intérêt porté par le Gouvernement auxdits résultats qui demeurent la base pour toute bonne planification.

Avec la crise économique qui a sévi dans de nombreux pays sub sahariens, le Cameroun n'a pas pu être au rendez-vous du recensement qui, selon les normes internationales, aurait dû avoir lieu dix ans après, loupant par là même la série 2000.

Avec la reprise de la croissance économique (environ 5 pour cent en 2003), le Cameroun entend renouer avec le développement à travers une planification à long terme.

Vous convenez avec nous qu'aucune action de grande portée, aucune bonne programmation du développement ne saurait se faire si l'on ignore les caractéristiques de la population qui en est la cible.

C'est ainsi que le 3^e recensement général de la population et de l'habitat (3^eRGPH) a été lancé au Cameroun. Au stade actuel, de nombreux travaux préparatoires ont déjà été menés :

- la réalisation de la cartographie censitaire avec l'appui du bureau pays de l'UNFPA;

- la délimitation des zones de dénombrement;
- la mise en place effective du Bureau Central des Recensements et d'Etudes de Population (BUCREP);
- l'élaboration des questionnaires ménage;
- l'élaboration des différents manuels pour la collecte des données;
- le recensement pilote réalisé du 17 janvier au 02 février 2003;
- l'analyse préliminaire des données communautaires; et
- l'évaluation de la préparation de l'opération avec l'appui de l'UNFPA.

Ces travaux préparatoires ayant débuté depuis plus de 2 ans, de nombreuses données sont obsolètes et l'évaluation qui a été menée a recommandé des mesures correctrices.

En effet, les retards relevés dans l'exploitation des résultats des travaux préparatoires méritent d'être pris en considération dans la mesure où au cours des deux dernières années, les fluctuations des migrations internes ont fortement modifié la concentration réelle de la population, obligeant naturellement à reprendre les décomptes dans toutes les zones témoins.

L'obligation imposée par cette contrainte opérationnelle entraîne des surcoûts qu'il convient de prendre en compte dès maintenant si l'on veut que le prochain recensement général se passe dans de bonnes conditions: l'on doit revisiter les formulaires pour en extraire certaines questions qui n'apportent rien dans la connaissance des populations dans les zones terminales du mouvement migratoire interne. Les zones terminales des mouvements migratoires internes et périphériques sont les capitales provinciales notamment Douala et Yaoundé.

Nous attachons une très grande importance à ce troisième Recensement Général de la Population et de l'Habitat (3è RGPH) sur lequel sera basé le nouveau plan de développement du Cameroun.

Par ailleurs, nous tenons ici à exprimer solennellement notre reconnaissance au Fonds des Nations Unies

pour la Population (UNFPA) pour l'appui constant en vue de la réalisation effective de ce projet.

Nous avons espoir que nos partenaires bilatéraux et multilatéraux appuieront nos efforts pour l'aboutissement heureux du 3è RGPH au Cameroun.

Je vous remercie.

Senegal

MAMADOU SIDIBE

Ministre du Plan et du Développement Durable de la République du Sénégal,
Dakar, Senegal

Je vous remercie Monsieur le Président,

Mesdames, Messieurs

Il me revient l'honneur et le privilège de prendre la parole, afin de marquer la participation du Gouvernement du Sénégal à cette importante réunion internationale sur le plaidoyer et la Mobilisation des Ressources, vers une mise en œuvre réussie de la série des Recensements de la Population et de l'Habitat des années 2010 dans les pays en développement.

Mon propos, qui reflétera les problèmes et perspectives des recensements au Sénégal, sera articulé autour de quatre axes principaux: l'exécution des recensements, la dissémination des résultats et l'utilisation des données, la mobilisation des ressources et enfin l'utilisation particulière des données du recensement pour le suivi des objectifs du Millénaire pour le développement.

Exécution des recensements

Le Sénégal a réalisé son troisième Recensement Général de la Population et de l'Habitat (RGPH3) 14 années après celui de 1988 et 26 années après le premier qui s'est tenu en 1976.

Si pour ce premier recensement les besoins d'appui technique étaient relativement importants, aujourd'hui, grâce aux opportunités de formation, la préparation et la réalisation des recensements sont entièrement assurées par les cadres nationaux.

Ce renforcement des capacités nationales, fait par le biais des formations de longue durée, de stages pratiques et d'ateliers régionaux, a permis de développer, en prélude aux dénombrements, des plans d'analyse et de tabulation intégrant les besoins des utilisateurs que

sont surtout les départements ministériels, les partenaires au développement et le secteur privé.

Cependant, la mobilité des cadres nationaux ainsi que les problèmes auxquels les institutions régionales de formation comme l'Institut de Formation et de Recherche Démographiques (IFORD) sont confrontées, entravent les opportunités de renouvellement du personnel technique des bureaux de recensement.

Il est vrai que des progrès importants sont réalisés dans le domaine du traitement et de l'analyse des données. Il est tout aussi vrai qu'un retard récurrent est souvent accusé dans la publication des données de recensement; ce n'est que près de deux ans après la collecte (décembre 2002–juillet 2004) que les résultats préliminaires du troisième Recensement Général de la Population et de l'Habitat du Sénégal ont été publiés.

Utilisation des données et dissémination des résultats

Ici, on retiendra que, pour le Sénégal, des progrès importants ont été faits dans le cadre de la diffusion des résultats du deuxième Recensement Général de la Population et de l'Habitat réalisé en 1988. Les produits qui furent publiés sont pour l'essentiel: le répertoire des villages du Sénégal, les rapports d'analyse régionaux et national et les projections de population par région, département et commune de 1989 à 2015. Ces produits ont été fortement sollicités par les différents acteurs que sont le Gouvernement, les ONGs, les Chercheurs, et les Partenaires au Développement, pour mieux planifier leurs interventions. Il importe toutefois de noter que l'utilisation effective des données repose, en grande partie, sur la capacité à diffuser les résultats du recensement sous la forme de produits informatifs accessibles aux utilisateurs.

Cependant, cela reste un défi important à relever notamment à travers: (i) une meilleure utilisation des Technologies de l'Information et de la Communication pour la dissémination des produits de recensement; (ii) la diffusion des résultats de recensement, sous forme d'informations conformes aux besoins des utilisateurs plutôt que de données souvent présentées de manière descriptive et dans un langage peu accessible; (iii) le renforcement des compétences en matière de plaidoyer pour la mobilisation des ressources, par le biais de la formation et du développement d'outils simples et pratiques à mettre à la disposition des cadres nationaux; (iv) l'intégration de nouvelles thématiques dans le cadre de l'analyse des données (vieillesse, enfance en situation difficile, pauvreté, etc.); et (v) la dissémination des résultats du recensement tant aux niveaux national que décentralisé, pour renforcer les capacités de suivi/évaluation et satisfaire l'obligation de rendre compte des progrès accomplis dans la mise en œuvre des plans cadres de développement.

Mobilisation des ressources

Pour la mobilisation des ressources, on reconnaîtra que si les premiers recensements ont bénéficié de l'appui des partenaires au développement en général et de l'UNFPA en particulier, la tendance est aujourd'hui à l'affaiblissement de l'engagement de ces derniers. Sous ce rapport, l'Etat du Sénégal a consenti des efforts importants dans le cadre du financement du troisième Recensement Général de la Population et de l'Habitat. Cette volonté politique s'étant traduite par une augmentation substantielle de la participation de l'Etat au financement du recensement. Ainsi, le taux de participation de l'Etat est passé de 22 pour cent en 1988 à 77 pour cent en 2002.

Mais, en dépit des difficultés rencontrées dans le domaine de la mobilisation des ressources, le pays s'était engagé dans le processus du troisième recensement sans avoir bouclé l'intégralité du budget. Ainsi, au terme de chaque étape importante (dénombrement, codification, etc.), les opérations ont été suspendues, dans l'attente de la mobilisation de ressources complémentaires auprès du gouvernement ou de l'UNFPA.

L'UNFPA a en effet activement soutenu le gouvernement sénégalais dans la mobilisation de ressources pour le recensement. C'est ainsi qu'un argumentaire a été élaboré avec l'appui du bureau de l'UNFPA et de l'Equipe Régionale d'Appui Technique. Et on peut dire qu'aujourd'hui, le Sénégal a un besoin de financement de 300,000,000 FCFA, soit près de 65,000 \$, pour l'analyse des données et la publication des rapports d'analyse.

Une table ronde des bailleurs devrait être prochainement organisée par le gouvernement, en collaboration avec l'UNFPA, pour la résorption de ce gap de financement.

Utilisation des données du recensement pour le suivi des Objectifs du Millénaire pour le Développement

Le recensement étant une opération indispensable pour les systèmes nationaux de collecte de données, il est urgent de faire des produits du recensement des outils d'aide à la prise de décision et de suivi des progrès accomplis vers l'atteinte des Objectifs du Millénaire pour le développement. Pour cela, il convient de réduire les délais de publication des résultats et de garantir une meilleure rentabilisation des produits.

Combinées aux résultats du recensement, les données cartographiques pourraient, par exemple, servir à la mise en place d'un système d'information géographique pour le suivi des progrès vers l'atteinte des OMD, tant au niveau national que dans les collectivités décentralisées.

Outre les données exhaustives qu'il peut fournir sur les OMD relativement à la mortalité, à l'éducation, aux inégalités de genre, entre autres, le recensement peut fournir une base de sondage contribuant à garantir la fiabilité des résultats des enquêtes; ce qui permet de disposer des données complémentaires pour le suivi des progrès vers l'atteinte des OMD.

Cependant, il s'avère important que le Sénégal observe la périodicité décennale de tenue des recensements. C'est l'observation quasi-stricte de cette période intercensitaire de dix ans qui permettra de disposer de repères importants qui feront que le Sénégal restera dans l'engagement réciproque pris, par la communauté internationale et les gouvernements des pays en développement, de relever les défis du Millénaire à l'horizon 2015.

Le Sénégal a réalisé son troisième Recensement Général de la Population et de l'Habitat (RGPH3) et tend vers son quatrième du genre.

Il était donc significatif, eu égard aux innombrables défis qui guettent l'organisation de la quatrième enquête exhaustive de la population, de faire état des expériences et enseignements tirés des premières opérations, de la dissémination des résultats, de l'utilisation globale des données, ainsi que de l'utilisation spécifique au suivi des progrès pour l'atteinte des objectifs du Millénaire pour le développement.

Le RGPH est une opération d'envergure nationale qui a dû requérir la participation de plusieurs structures pour sa conception et sa réalisation. Il importe donc que

celles-ci, qui sont par ailleurs «co-propriétaires» des données, appuient les phases d'exploitation et de valorisation des produits. Bien évidemment, cela requiert une mobilisation de fonds importants et appelle donc la définition d'une méthode de plaidoyer en vue de rassembler les fonds nécessaires.

Pour le Sénégal, le plaidoyer pourrait se faire selon une double approche (individuelle et institutionnelle).

Dans le cadre d'une démarche de type individuel, le plaidoyer pourrait viser, en particulier, les personnalités suivantes :

- Le Président de la République ainsi que le Chef du Gouvernement, pour leur indiquer l'utilité des RGPH et les différentes retombées en matière de planification du développement, de coopération internationale et de gestion du territoire. Il s'agira, par ce fait, de les amener à formuler des directives ou recommandations en faveur de la valorisation des RGPH;
- Les Ministres, les parlementaires, les élus locaux; et
- Les directeurs et autres agents chargés de la planification dans les services privés. Etc.

Pour ce qui concerne la démarche de type institutionnel, le plaidoyer pourrait être orienté vers des structures comme :

- Les services du Ministère de l'intérieur, de l'aménagement du Territoire, de l'Urbanisme, des Collectivités Locales;
- La Fondation « Droit à la Ville », Fondation du secteur Privé, les Fondations à but humanitaire;
- Les Cabinets des consultants qui font partie des utilisateurs réguliers des produits des RGPH;
- La Poste et les services de courrier; et
- Les institutions de formation et de recherche, etc.

International Union For The Scientific Study Of Population (IUSSP)

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Since its founding in 1928, the International Union for the Scientific Study of Population (IUSSP) has had a keen interest in national statistical systems since data needed to measure basic demographic processes (births, deaths, migration) and population growth and distribution are based on national statistics. Indeed, the IUSSP emerged out of efforts directed towards the improvement of international statistics on vital processes that started with John Graunt's scientific work in the second half of the seventeenth century.¹ Interest in births and deaths was stimulated in the 1800s as the need grew for data that could be used on an actuarial basis to assess risk for insurance systems and as social concerns spread about hygienic conditions in large urban areas. As a result, governments started to make advances in censusing and vital statistics in the 1800s that eventually led to more reliable data on demographic processes.

Work directed towards the development and improvement of national statistical systems was initially pushed by scholars and national governments but not coordinated at the international level. That changed in 1853, when the first intergovernmental statistical conference was held at Quetelet. The International Statistical Institute (ISI) was formed at that meeting and began to sponsor biennial non-governmental conferences at the international level in 1885.² While special sessions were held on demographic statistics at these international meetings, it was not until a 1927 conference organized by Margaret Sanger in Geneva, that scholars interested in the substantive aspects of population trends got together internationally to exchange information and research findings. The scholars, however, wanted to distance themselves from the birth control movement with which Margaret Sanger was associated and decided

against joining the international birth control organization, which she tried to organize at the meeting. Scholars in attendance did take advantage of the 1927 conference to discuss formation of the IUSSP and to plan for the constituent international assembly of the IUSSP, which was held in Paris the following year.³

During its early years, the IUSSP worked closely with the International Statistical Institute (ISI) and, because of the overlap in membership between these two organizations, often coordinated the timing of its international conference with ISI so that they would take place at the same time and place in order to reduce travel costs for members wishing to attend. Joint meetings of IUSSP and ISI were held in Washington, D.C. in 1951, India in 1953, Rome in 1953, Brazil in 1955, Stockholm in 1957 and Ottawa in 1963. Most of the founders of the IUSSP were well regarded international statisticians, including Corrado Gini (Italy), Kiyoo Sue Inui (Japan), H.B. Lindborg (Sweden), Soren Hansen (Sweden), Louis Dublin (USA), R. H. Coats (Canada), Paulo Souza (Brazil), Bernard Mallet (United Kingdom) and Adolphe Landry (France). In many developing countries today, particularly India, demography and statistics continue to be closely linked disciplines.

Collaboration between ISI and IUSSP began to diminish in the 1960s as measurement of fertility levels and rates started to be derived from sample survey data. Shifting directions in the measurement of population dynamics stemmed largely from growing international concern in the 1950s and 1960s over population growth levels in underdeveloped areas and the need for improved data that would document at some regularity, levels and trends in human reproduction. Institutions such as the United Nations Population Division, the

¹ Frank Lorimer, "The Role of the International Union for the Scientific Study of Population," Pp. 86–96 in *The Milbank Memorial Fund Quarterly*, Vol. XLIX (4), October 1971, Part 2.

² Ibid.

³ The IUSSP in History: An Exhibit on the Foundation and Early Developments of the international Union for the Scientific Study of Population, prepared for the XXth IUSSP General Conference, Florence, 5–12 June 1985.

Population Council, the Milbank Memorial Fund and the IUSSP led efforts in the 1950s and 1960s, to improve statistics on demographic processes and population growth in underdeveloped areas in order to document international population trends.

Although many statisticians and demographers argued that vital statistics and census systems within countries needed to be developed or improved because population-based data were required to compute birth and other vital rates for small areas and for sampling frames, resources within countries in Africa, Asia and Latin America proved to be insufficient to develop and maintain vital registration systems in the decades that followed. Census systems too, were poorly developed or non-existent in many countries that became independent in the 1960s and 1970s and improvement in those systems was constrained by limited resources. By the 1980s, most demographic research on fertility and mortality in developing countries focused on demographic dimensions that could be readily estimated based on sample survey data, namely total fertility rates, reproduction rates, infant mortality and maternal mortality. Although release of decennial census data regularly documented limitations of relying only on estimates of population growth based on surveys, the field continues to draw on specialized survey data to estimate demographic processes and population trends in the period between decennial censuses.

While survey programmes carried out under the World Fertility Survey (WFS) and Demographic and Health Surveys (DHSs) have enriched international and comparative understanding of fertility levels and trends, data to measure other demographic processes—internal and international migration, urbanization and adult mortality, in particular—continue to rely heavily on census or vital statistics data. In addition, census data are critical for population projections at local, national and international levels. As international interest in measuring the volume of international migration flows between countries grows, most understanding on that issue derives from census data. Census questions on place of residence one or five years ago, place of birth and nationality are valuable raw data for scholars of migration. Unfortunately, research on migration is hindered because many countries either do not include those questions in their censuses or do not make census data widely available in a usable format for researchers. Growing concerns in developed countries over privacy and confidentiality have also restricted data access in recent years and could lead to further limitations on use of census data for research purposes.

Since its founding, the IUSSP has emphasized the need to improve knowledge of demographic processes and trends and advanced the argument that in order to do so, it is essential to have solid census, vital statistics and survey data that would allow adequate measurement of these processes and trends. A ten-year IUSSP effort in the 1970s directed by Sidney Goldstein documented the status and limitations of available data on urbanization at the country-level and identified steps that needed to be taken to improve data and measurement of urbanization. The importance of census and housing statistics was emphasized throughout that report.

In the 2001 to 2002 period, the IUSSP renewed its work on urbanization by forming a Working Group on Urbanization chaired by Tony Champion. The group decided to focus its efforts on the definition and measurement of urbanization and the adequacy of existing data on urbanization. Based upon discussions at a 2002 IUSSP Seminar organized by the IUSSP Working Group on Urbanization at Bellagio, Italy, it was concluded that the traditional approach to studying urbanization trends which is based on the urban-rural dichotomy, had lost much of its relevance owing to the major changes that have affected settlement patterns in recent decades.⁴ The expert participants attending that meeting concluded that place continues to be very important in studying demographic processes and recommended that alternative ways of classifying human settlement and analyzing differences between places be identified. To advance that agenda, census data will remain critical. Subsequent meetings of participants in the Working Group were held at the United Nations Statistical Division, the Population Association of America (PAA) and other places to disseminate the findings widely. In mid-2005, the IUSSP Scientific Panel on Urbanization will extend upon the measurement advances made by the Working Group.

Today, the IUSSP has almost 2,000 members in 150 countries, including nearly all developing countries. Its members are employed by the producers as well as the users of census data. In 2005, the IUSSP will hold its XXVth International Population Conference from 18–23 July in Tours, France. The IUSSP plans to organize a 4-hour side meeting at the Conference that will focus on the 2010 Round of Censuses and bring together producers and users of census data to discuss how utilization of the 2010 Round of Population and Housing Censuses could be improved to meet the needs of demographers in the 21st century.

⁴ Tony Champion and Graeme Hugo, *New Forms of Urbanization: Beyond the Urban-Rural Dichotomy*, Aldershot, England: Ashgate Publishing Limited, 2004.

“Make People Do what they Do Best”

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The contribution prepared for this Meeting followed its detailed agenda and was consequently very specific (text appended). However, we felt it useful to supplement this original paper with a few cross-cutting remarks.

The concept of governance seems especially relevant to the whole discussion: notions like “optimization of resources,” for instance, are both crucial to the advocacy-and-mobilization issue, and typical of good governance. Outside the small world of statisticians and demographers, most people think that the cost-effectiveness ratio of population and housing censuses (PHCs) is rather poor—and justification of a census budget is often difficult, in view of the expected output. One powerful strategy for advocacy is the more efficient use of resources, i.e. “to do the same with less effort/cost/time/resources.” From our field experience, we have a few suggestions along these lines, briefly summarized by the title of this paper: “Make people do what they do best.”

For instance, a substantial portion of the census budget is devoted to “cartography.” Field personnel indeed need directions enabling them to locate unambiguously the places they have to enumerate. But they do not need true maps, only clear indications of landmarks. One can see in the field that most workers do not use maps with ease. It is easier to find “*the third path on left after a long bridge*” than to pinpoint it on a map! Relationships between relevant features in a landscape are a better guide in the field. The needs of field workers are better met with tools (descriptions, schemes) that are topologically correct rather than topographically exact. The clear need for updated census maps does not imply that the maps should be prepared in the census/statistics office. Nobody would suggest that demographers build their own cars when they need new ones; why should they build their own maps? The optimization principle of “making people do what they do best” suggests that the best place for getting good maps is NOT the census/statistics office. If new maps of the country are needed, it is better to channel funds for this purpose into the national

geographic institute, but not at the expense of the census/statistics office. The development of GIS should be a national priority but the responsibility of the census/statistics office is to provide population and other survey data to the system, not to build or own the system.

Similarly, most delays in a PHC process occur at the analysis stage: even with a rather large staff, the amount of research work requested is usually underestimated. Further, most of the requested analyses cover a broad range of professional fields: sociology, epidemiology, household economics and so on. Only a few analyses are typically statistical or demographic in nature. A census/statistics office may not be the best place for research in sociology, for instance, when there are specialized departments in universities or other institutions. It would be better to subcontract “monographs” on selected subjects to specialized institutions, rather than recruit junior officers to do the work in-house. Of course, the “monographs” option implies that the census/statistics office plays an editorial role, and strict rules would have to be set regarding compliance to terms of reference and deadlines.

One of the most difficult problems faced in implementing a census is the substantial fluctuation in the workforce. Most statisticians and demographers are “mobilized” only for the preparation and implementation of the census, even at the expense of routine work. This huge effort occurs once every ten years, in the best case. Peak staff levels can only be maintained for a few years, because of budget limitations and because they are not needed for the usual workload. Consequently, a permanent staff cannot be maintained and experience gained from one census is lost before the next one. This is a clear waste of resources. It is more efficient to maintain the number of permanent staff members as steadily as possible. Among the simplest ways of achieving this aim is to distribute tasks more evenly over time. For instance, choosing a census design that includes only those questions whose answers are requested from the whole population, and planning a ten-year programme

of specialized surveys for any other issues. Keeping in mind the subcontracting of “monographs,” i.e., the association of experts from outside the census/statistics office, this suggestion comes also back to the principle of “making people do what they do best.”

In reality, censuses are “self-advocating” when their outputs are rapidly available and easy to use. For instance, it seems reasonable to expect the census/statistics office to deliver baseline population estimates and projections (such as those used as denominators in conjunction with statistics from the health and education departments) within 12 to 18 months of the completion of census enumeration. It is inefficient and duplicative when such departments compute their own population figures (too often quite far-fetched¹) instead of drawing on a common set of demographic projections. In such a case, “advocacy” means “marketing:” in the present environment, statisticians and demographers should be able to “sell” themselves.

This relationship between the census/statistics office and specialized departments is crucial but should be correctly understood. Indeed, PHCs can only provide “snapshots,” data that describe only a specific point in time. In the case of population data, the demographic techniques allow statisticians to project likely population estimates into the future. But this is not the case for other data estimated through censuses: most of them are static estimates, without any clue as to their dynamics. Even in the best case, when two (or more) censuses provide comparable data, we get only an indication of the variation over time of what we observe, but not an accurate estimate of its trends. Adhering to the basic principle of “making things do what they do best,” census data should not be used for programme monitoring. In the case of health and education, administrative record systems and other focused data collection systems are the best tools for getting numerators, while the

census and the demographic estimates derived from it provide the denominators.

For the Millennium Development Goals (MDGs), most progress indicators are ratios of observed (or observable) data to population data. Only the latter may accurately rely on census information. One of the indicators commonly discussed is the rate of maternal mortality. Demographic methods can be used to provide estimates based on survey and/or census data. However, even without questioning the quality of such answers when derived from a census, these estimates seem misleading and unreliable, at least for programme monitoring, because they measure past events, generally 8 and 12 years before enumeration.

The growing need for indicators, not only for MDGs but also for most Action Plans (Cairo, Beijing, “Education for All,” “Health for All,” etc.), convinces us of the need for “advocacy and resource mobilization”—but we strongly believe that we cannot think of “censuses” as isolated entities. The best strategy is for demographers and statisticians to promote integrated national statistics plans, where the census bureau, as a part of the statistics office, plays a central role in the coordination of several activities: the census itself, regular surveys, specialized information systems in the technical departments and so on. We should be aware that indicators *are* more widely computed and used, often with little involvement from statisticians and demographers, at the request of the powerful international funding agencies. These agencies do not wait until elaborate data are prepared: indicators have to be presented on a yearly basis.² A full system of current indicators is thus under development in some countries. This is a great opportunity for census/statistics offices to go beyond mere advocacy: to be full participants in this trend and to demonstrate, by their actions, how useful they can be.

¹ Let us just mention, for instance, some WHO software using constant multipliers of the total population for computing the age groups (i.e., women in childbearing age are 23, 5 percent of the total and so on).

² For instance, the new funding strategy of the European Union, the “conditional budgetary assistance,” follows the yearly evolution of selected indicators, whose expected value for the current year is “contractual:” whenever the actual performance of some indicator falls under the expected one, the E.U. assistance is reduced by a few points. This new strategy is presently extending to more countries and, in these countries, to larger amounts each year; and other agencies are following the same scheme.

Annex

The “Summary Statement”

(distributed at the Meeting)

This statement is based on past and ongoing population census experience (including electoral censuses) both in Africa and Belgium. It reflects only the views of the author.

Determining the persistent problems

Lack of capacity: two related observations

- Many high-level officers employed during the years of extensive funding of the PHC are not supported between censuses by the national budget, and are no longer available for the next large-scale operation.
- Find a way to provide long-term job security for a permanent staff—maybe larger than presently—rather than the usual ups and downs in staff.
- Limit the size of a permanent staff to specific posts (field statisticians, demographers, economic statisticians, etc.).
- A ten-year balanced agenda of field operations (PHC and related sample surveys) may help to keep the workload steady.
- It may be preferable to subcontract with outside specialized agencies rather than try to develop experts and specialists within the statistical/census organization. The most striking example is the “census cartography.” Census organizations should be **users**, not producers of maps and GIS.
- National geographic institutes and other mapping departments should play a major part in cartography—and be supported for this task. A PHC team does NOT need detailed and exact maps for field work; if they are not available, enumerators, controllers and other field workers only need sufficient information to locate inhabited places and the boundaries between enumeration areas.
- Most issues addressed by a census will be better analysed by ad hoc experts or groups than by in-

house staff; subcontracting out specialized **monographs** to outside authors which may prove to be more time- and cost-efficient.

Persistent problems of design:

- A PHC is often designed as a mere sequence of related operations (backed by operations research tools like Gantt diagrams in the best case), without a central thread.
- Special attention should be paid to the maintenance of a permanent and thorough “system” of population data analysis supporting short-term projections (“demographic audit”); the resulting population baseline would be the backbone for the control and follow-up of the whole cycle of operations.

Incompleteness of censuses:

- Incomplete coverage:
 - Personnel and funds may be diverted from in-house cartography activities towards better cooperation with specialized departments, to achieve more complete coverage of inhabited places.
 - Depending on local conditions, the enumeration of nomads may be considered a special case and carried out separately from the PHC.
- Incomplete enumeration:
 - In line with the permanent “system” of population data analysis, the earlier stages of census field operations deserve more attention. An efficient follow-up tool using “pre-enumeration” data (during the location and identification of dwellings and households) will: 1) reveal inconsistencies with the trends of expected population size; and 2) immediately detect discrepancies with the actual counts in the PHC.

- Incomplete or inaccurate data:
 - Design less complex questionnaires for the PHC—scrutinizing every item for its relevance to a general census rather than a sample survey.

Ascertaining the reasons for under-utilisation and poor dissemination

Major reasons seem to be well-known:

- Outdated results due to delays in analysis are often due to a vicious circle: unexpected initial delays—cost overruns—staff reduction—slowdown in production (i.e., additional delays).
- Simplification of questionnaires allows concentration on the basics.
- Priority should be given to decision makers' (public or private) needs when scheduling the analyses.
- Subcontracting allows more analyses to be done at the same time. Delays become more simultaneous than sequential.
- Even when delivered on time, most results are unattractive and not directly useful for most end-users: the best analyst may not be the best writer. To make information not only available, but easy to understand and use is a skill in itself.
- The “monograph” approach may contribute to solving this problem (provided that appropriate terms of reference are specified).
- Most end-users are more interested in trend forecasting than in data analysis as such. Forecasts are usually more complex than the common population projections. For example, a school forecast includes projections of the number of children in school ages, but must estimate the number of teachers needed following several “scenarios,” as well as the need for new teachers and schools for teachers. Present decisions on the latter will partly determine the future of schooling of children not yet born). Such specialized forecasts are often requested by decision makers.

Ascertaining the availability or lack of resources

This subject is not really in the “domain” of the private expert; however, we think that information supporting better governance (better monitoring, better forecasts, and more timely and cost-efficient operations) leads to a better use of funds and encourages donor support.

Redefining and asserting the value of PHCs

The relationship of the Poverty Reduction Strategy Papers (PRSPs) and MDGs, to “conditional funding” by donors, is expanding. For some countries, the MDGs seem impossible to reach, virtually ensuring that a country will lose conditional funding.

A permanent PHC programme can help resolve these issues:

Helping to set more accurate objectives.

- Setting and measuring objectives on an annual basis is unrealistically frequent.
- Statisticians and demographers are much more sensitive to figures and to trends than most administrative officers and decision-makers.
- A permanent programme of data analysis and projections would help monitor progress towards MDGs more efficiently, by
 - Playing the role of an early-warning system, avoiding a delay of many years before PHC data are available.
 - Suggesting specific studies (e.g., sample surveys) whenever significant discrepancies appear between an actual or expected trend and the desired trend (MDG).
 - Helping to monitor and audit the data related to individual short-term objectives.

In brief

In our remarks, we aim to be consistent with basic principles of governance: improved efficiency, better monitoring, evaluation and validation of data (*audit*), a proactive approach with a faster reaction time and more consideration for people.

Written Statement from the UK Delegates to the UNFPA Census Meeting

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Key messages

- At present international architecture for conducting the census is grossly under-developed. Plans urgently need to be put in place to pool and allocate resources for developing country census programmes.
- Without the 2010 census, most of the Millennium Development Goals (MDGs) cannot be accurately reported against and progress towards many of them may be seriously hindered.
- Countries and the international community should think carefully about the approaches they adopt towards carrying out a census. There is no “one size fits all” model for census-taking and high-tech approaches are not necessarily the most effective.

Detail

For many years, the UK has been a key sponsor of international statistical work including censuses. We have sponsored census work on a bilateral basis in the countries of Eastern Europe and the Former Soviet Union and in Africa. Our experience of bilateral census sponsorship makes us fully aware of the size and scale of plans to carry out a census in every country worldwide between 2005 and 2015, a multi-billion dollar undertaking.

A project of this size will require a commitment to provide resources from both donors and partner countries, and a commitment to coordination and collaborative working by bilateral and multilateral donors.

At present, we are concerned that the international architecture is not sufficiently developed, including guidance for the technical aspects of undertaking, analysing and disseminating census results. We believe it is crucial to discuss the role of the different international institutions in coordinating this effort.

Technical aspects of the census; design, operation, analysis and capacity

Different census models exist and there is no “one size fits all” approach that will work in every country world-

wide. Core issues include deciding between a small questionnaire, to allow for ease of collection and minimize costs, and a more detailed questionnaire including questions on infant and maternal mortality. Other considerations include whether to run a “snap shot” or a more long-term “rolling” census programme. A rolling census helps to preserve expertise in-country, but may also cause difficulties when attempting to extrapolate a national picture. Countries will also have to decide between high-tech and labour-intensive approaches to census-taking. A PARIS21/UNFPA conference in 2003 for sharing census experience revealed that high-tech approaches often bring new problems, as well as solutions, to census-taking and are therefore not necessarily the best way to proceed.

Each country will have to consider the best approach for their circumstances. UNFPA should consider conducting a study examining appropriate census models for different country groups based on key parameters such as country size, budget, access to technology and human capital, and labour costs.

One possible framework for regional cooperation might rely on a group of countries carrying out a rolling census between them. Under this approach, three countries could work together at a time, with each having the respective roles of expert, journeyman or apprentice. For example, Uganda might work with Tanzania to conduct their census with an apprentice team from Kenya in support. Following this, Tanzania would then help Kenya in their census with a team from Ethiopia acting as an apprentice and so on. This process would continue until all countries had a complete census.

Strategies to ensure utilisation and dissemination of results

A good strategy for the dissemination and use of census data should be part of the initial planning process, as this will affect the design of the questionnaire and have resource implications. Identifying and consulting key users in-country during the design phase should therefore be an established part of census methodology.

Statistics offices need to consider a marketing strategy for the final census results, to ensure use. In many countries, increasing demands for local and regional data can only be met by the census.

Data should be made as accessible as possible for users. Two-page summaries for regions, tables giving clear figures for areas identified as important by users and census user workshops, should all be considered. Internet dissemination should be employed wherever possible to reduce dissemination costs and increase utility.

DFID is currently examining ways of “unlocking” demand for statistical data at the country level including the use of a social marketing approach to encourage greater use of statistical information by governments and donors alike. We will be happy to share this work with UNFPA for helping countries increase demand for census data.

Identifying sustainable strategies for addressing resource and budget constraints

Countries will need to find resources from their own governments as the donor resources to fund a census in all IDA countries simply do not exist. A mechanism for pooling donor resources should be developed to ensure effective resource allocation.

Local and regional government bodies should be viewed as potential sources of funding for the census alongside national governments. Mobilising local government resources will be easiest where there is clear demand for census data at the local level. Delegates should con-

sider the demands of sub-national users of census data.

In post-conflict countries, such as Afghanistan and Iraq, there may not be a need to conduct a full census and a “quick count” approach may be more appropriate.

DFID is, in principle, happy to consider funding applications for international work towards the global census but these must be realistic and have adequate commitments of funds from other donors. International initiatives for undertaking the census must propose a clear system for ensuring the most effective possible use of scarce resources.

The value of censuses in measuring progress towards the MDGs

Bilateral and multilateral donors should be aware that having a census is crucial to *achieving* the MDGs, not just *monitoring* progress towards them. Censuses are used for mapping poverty and population needs and therefore are a key tool for developing a targeted Poverty Reduction Strategy.

Census data is the denominator for most MDG indicators. The MDGs will therefore not be accurately measurable where a recent census does not exist. Where census questionnaires include questions about maternal mortality, they may represent the only means by which this can be monitored.

Statisticians working for donors and partner countries will need to think carefully about how censuses may be used to access difficult population groups, such as slum dwellers or people living in remote regions.

Agricultural Censuses and the Millennium Development Goals¹

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The Millennium Development Goals (MDGs) and their associated targets and indicators provide a framework for sustainable economic growth, with the focus on reducing poverty and enhancing human rights. This chapter assesses how the agricultural census can be used to help in monitoring the MDGs, and discusses issues in the design of agricultural censuses to meet MDG needs.

What are the MDGs?

In the United Nations Millennium Declaration of 2000, governments around the world committed themselves to sustainable economic growth, focussing on the poor and with human rights at the centre. The Declaration called for combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women.

To help track progress in meeting the commitments of the Declaration, a set of time-bound and measurable Millennium Development Goals (MDGs) was developed. The MDGs comprise a framework of 8 goals, 18 targets and 48 indicators to be used to assess progress between 1990 and 2015, when targets are expected to be met. Monitoring of the MDGs will be done through the 48 basic MDG indicators, supplemented by other background data series to provide for more in-depth analysis.

MDG indicators and the agricultural census

Country-level monitoring of the progress towards the MDGs has become an important element in formulating economic development strategies, and countries have begun to focus on the need for MDG-related indicators as a key component of the national statistical programme. A variety of data sources are being sought for this purpose. An agricultural census is one of the largest national statistical collections undertaken by a country, and its use as a source of data for monitoring the MDGs should be taken into consideration in the census planning and design.

The new modular approach used for the current round of agricultural censuses, based on the census

core and supplementary modules, together with the thematic agricultural surveys, enhances the usefulness of the agricultural census/survey programme as a source of data for MDG monitoring. Countries could look to carrying out regular agricultural surveys, based on the agricultural census frame, to provide additional MDG-related data to complement the data collected in the agricultural census. For example, the decennial agricultural census could provide basic gender indicators for each district or village, while annual agricultural surveys could collect more in-depth gender-related data to provide a wider range of gender indicators at the national level.

Coordinating the agricultural census with the population census may also provide opportunities for a wider range of data for monitoring the MDGs. Population censuses provide a lot of data specific to the MDG indicators, such as child mortality, school enrolment, the gender indicators, and perhaps even income/poverty and literacy. If the agricultural census data could be linked to the population census data, it would open up the possibility of providing these MDG indicators for specific groups of farm households. For example, child mortality and poverty/income indicators could be available for different types of farm households, such as rice farmers, livestock holdings and small/large holdings.

One problem in using the agricultural census for monitoring the MDGs is that, normally, it covers only agricultural holdings; that is, economic units of agricultural production (see paragraph 3.33). Thus, any indicators provided by the agricultural census relate specifically to agricultural holdings, not to all households or even all rural households. The 2004 agricultural census programme provides the option to widen the scope of the

¹ This statement was taken from Chapter 2—Importance of the Census of Agriculture, from the FAO publication under development, titled *FAO Statistical Development Series No. 11: A system of Integrated Agricultural Censuses and Surveys Volume 1: World Programme for the Census of Agriculture 2010*.

agricultural census to cover all rural households (see Chapter 12), which might provide more useful MDG measures. The need for such MDG data might be an important factor in a country deciding to widen the scope of the agricultural census. Despite the limited coverage of MDG measures from the agricultural census, it can still provide valuable supplementary MDG measures, as well as helping to understand the factors influencing the MDG indicators, especially in relation to agricultural production issues such as farm size and cropping systems.

Agricultural censuses are normally undertaken every ten years and this provides a good basis for monitoring the MDGs over time. Many countries will carry out three agricultural censuses during the 1990–2015 MDG reference period. Often, the agricultural censuses are conducted in the early years of each decade, which can be especially suitable for MDG monitoring.

Agricultural censuses could provide a range of data of interest to the MDGs:

- **MDG Goal 1: Eradicate extreme poverty and hunger.** This goal calls for halving the proportion of people who suffer from hunger. Two MDG indicators are used: the prevalence of underweight children under five years of age (indicator 4); and the proportion of population below the minimum level of dietary energy consumption (indicator 5). A thematic module on nutrition could be used to help better understand changes in the structure of agriculture and their effect on food supplies and household food security. For example, if anthropometric data are collected in such a thematic module, the prevalence of underweight children could be analyzed in relation to such things as farm size, cropping systems, agricultural practices and land tenure to understand why people are food insecure.
- **MDG Goal 2: Achieve universal primary education.** Some data relating to enrolment ratios in primary education (MDG Indicator 6) are often available from the agricultural census. This enables enrolment data for different groups of households to be analysed, and the factors contributing to low school enrolment, such as farm labour requirements and distance from school, to be studied.
- **MDG Goal 3: Promote gender equality and empower women.** MDG Indicators 9–11 relate to gender disparity in education and non-agricultural employment. The agricultural census does not directly provide these measures, but it provides a range of data related

to the role of women in agricultural production activities and the participation of rural women in non-farm economic activities.

- **MDG Goal 7: Ensure environmental sustainability.** This calls for “integrating the principles of sustainable development into country policies and programmes and reversing the loss of environmental resources.” Agricultural censuses collect a range of environment data related to irrigation, soil degradation, use of mineral fertilizers and use of pesticides. Agricultural censuses may also be useful for two specific MDG indicators.

Indicator 25 refers to the proportion of land area covered by forest. The agricultural census provides data on the forest land operated by agricultural holdings. If a community-level collection is undertaken as part of the agricultural census, it could provide detail on community forest land.

Indicator 32 refers to land tenure in urban areas. The agricultural census provides land tenure data for agricultural holdings. This is of interest in understanding the effect of security of land tenure on agricultural practices and household food security.

- **MDG Goal 8: Develop a global partnership for development.** MDG Indicator 45 refers to the unemployment rate for persons aged 15 to 24. These data are available from the agricultural census for household members of agricultural holdings. If the scope of the agricultural census was widened to cover all rural households, more meaningful MDG-related data relating to the rural sector could be provided.

The community-level data collected as part of the agricultural census could also provide data to help in monitoring the MDGs, especially for MDG Goal 7: Ensure environmental sustainability. The community-level collection could provide data relating to several MDG indicators for this goal:

- Indicator 25: proportion of land area covered by forest.
- Indicator 30: proportion of population with access to safe drinking water.
- Indicator 31: proportion of population with access to improved sanitation.

The 2010 agricultural census programme, presented in this document, has been formulated with the MDG indicators in mind. Particular attention has been given to ensuring that concepts and definitions for the agricultural census are consistent with international standards and with the requirements for monitoring

the MDGs. For example, the definition of forestry used in the agricultural census to measure forestry activities on agricultural holdings should be consistent with the MDG forestry concept, so that the agricultural census data can be meaningfully related to the relevant MDG indicator.

World Bank Support for the 2010 Census Activities

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Better statistics are an important part of the World Bank's results agenda. Managing for results requires timely and reliable statistics at both the country and global levels. Even before the Millennium Summit, Poverty Reduction Strategy Papers (PRSPs), introduced in 1999, emphasized the need for quantitative indicators to monitor countries' own development goals. But the demands that an evidence-based approach to development places on national statistical systems exceeded the capacity of the poorest countries. Despite decades of technical assistance and financial aid directed towards statistics, many are not performing adequately. Externally funded initiatives are not being sustained, and many national systems are caught in a vicious spiral of underperformance, domestic under-funding and conflicting donor agendas.

The statistics community has responded in a variety of ways to the growing demand for better data, from setting up the PARIS21 Consortium and creating a global Trust Fund for Statistical Capacity-Building to adopting the Marrakech Action Plan for Statistics. The latter, drawing on the recent experience of countries and their development partners, recommended short- and medium-term actions consistent with long-term, sustainable improvements in national and international statistics. The actions are interdependent: improvements in national statistical systems will lead to improved international statistics, while a more effective international system can provide more consistent advice and better support for improving national statistics.

World Bank support for the 2010 Round of Population and Housing Census (PHC) operations will be set within the framework of the Marrakech Action Plan for Statistics, which emphasizes the role of timely and reliable statistics for results-based management. The main financial instruments that can be used to provide resources for pre- and post-census activities and census operations are: the Development Grant Facility; the Trust Fund for Statistical Capacity-Building (TFSCB); STATCAP, the Bank's lending programme

for developing statistical systems; and regular Bank instruments, such as loans and credits.

Development Grant Facility: As part of a wider programme to support the Marrakech Action Plan for Statistics, a proposal for a grant of USD \$3 million over three years has been prepared. This would be used to help the United Nations Statistics Division (UNSD) provide support for the 2010 population census round by:

- advocacy among developing countries on the importance of census-taking and participating in the 2010 census round;
- improving the data needed to measure progress towards the Millennium Development Goals in 2015;
- developing and disseminating of good practice material on census planning and management to reduce costs and increase efficiency; and
- providing technical support to countries for census planning.

Special attention will be given to countries that will be conducting censuses under difficult circumstances. The aim is to develop both short- and long-term capacity for the collection and analysis of demographic data.

Trust Fund for Statistical Capacity Building (TFSCB): The TFSCB is a global funding facility, managed by the Development Data Group of the World Bank on behalf of donors. Its objectives are to strengthen the capacity of statistical systems and to make investments at the national, regional and global levels to improve the collection, processing, analysis, storage, dissemination and use of timely, good quality statistics to support poverty reduction, and economic and social development. Countries may apply for support for censuses through this Fund, but proposals will be measured against the

extent to which the statistical capacity-building objectives of the Fund are met. The Bank has recently approved a grant of USD \$335,700 for UNSD over 3 years for pre-census and census operations. The main components are:

- regional workshops in Africa, Asia and Latin America for national statistical offices on planning and management of census operations and dissemination of results;
- intra-regional study tours to create opportunities for national staff to benefit from and share experiences;
- provision of technical assistance and advisory services to assist selected countries in the implementation of their censuses; and
- the development of a harmonised census resource website with links to countries. The website is intended to be a directory of progress taking place in censuses and a venue for sharing experience by national statistical offices, research institutions and civil society.

It is expected that sustainability of activities and capacity-building will be ensured by exchange of professionals such as sampling specialists, geographic information specialists, specialists in using administrative data, training programmes and materials, and improvements of concepts, definitions and classifications, questionnaires and coding practices.

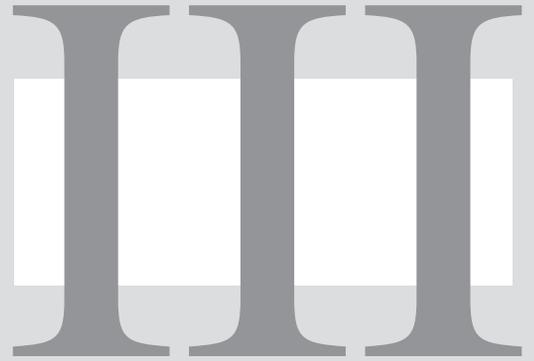
STATCAP: STATCAP is a multi-country lending programme which makes it easier for individual countries to obtain loans or credits to finance comprehensive or sectoral national statistical capacity-building projects. National projects are appraised and prepared for approval following normal provisions for investment lending. It provides flexible financing, including meeting recurrent costs, providing new means for financing

investments and making the best use of all sources of technical support and advice. The fundamental principle is that investment in statistics should be built around comprehensive National Strategies for the Development of Statistics (NSDS); STATCAP investments may focus on the development of statistics in specific sectors, or may finance the implementation of a comprehensive statistical development plan. Individual country projects would normally include five main components:

1. Improving the statistical policy, regulatory and institutional framework, including issues such as independence and confidentiality, the adequacy of legislation and the dialogue with data users;
2. Supporting the development of statistical infrastructure, including such aspects as business registers, sampling frames, classifications, database structures and geographic information systems;
3. Upgrading and developing statistical operations and procedures;
4. Providing investments in physical infrastructure and equipment; and
5. Improving the use of statistics.

Two projects have been approved under the STATCAP programme for Burkina Faso and Ukraine, with Kenya and others in the pipeline. Where, they may be supported as part of the country's statistical development plans.

Use of other Bank financing instruments: Other Bank projects may also provide a mechanism for financing census operations. For example, IDA credits were used to finance census operations for Côte d'Ivoire and the Gambia. Experience suggests that this kind of financing is more suitable for pre-census activities.



Notes

Past Experience and Future Plans on Census in India

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Introduction

In the 2001 Census, India counted 1,028 million persons in 193 households living in about 6 hundred thousand villages and more than 5 thousand towns. Prior to the conduct of the population enumeration during 9–28 February 2001, the house listing operations were undertaken from April to November 2000, to prepare a frame for the population enumeration and collect data on housing, household amenities and assets. Two million field workers, mainly schoolteachers, accomplished these tasks. The questionnaire for the 2001 Census was printed and canvassed in 16 languages including English. The multi-ethnic, multi-cultural and multi-linguistic fabric of the Indian population, coupled with its size, makes the Indian census one of the most challenging administrative tasks in the world. In the next census, 1,197 million persons (projected population) will have to be enumerated and the complexities will persist. *Therefore, India must prepare for the challenge of the next census, knowing that unanticipated problems and bottlenecks that are likely to be encountered.*

Legal framework—The Census Act of 1948, as amended in 1998, provides the necessary legal backing for the conduct of a census in India. The law, among other things, enables the central government to set up a census hierarchy in the states, makes providing of information compulsory and ensures confidentiality of data. *The Rules for implementation should be reviewed for opportunities to improve the implementation of the census.*

Resources—The central government bears the entire cost of the census. The central government provides funds in its budget and no problem is likely to be encountered in funding the 2011 Census. The total budget for the 2001 Census, excluding the administrative cost of running the census organization was approximately 8,000 million Indian rupees (INR) or INR 8 per person. The introduction of Intelligent Character Recognition (ICR) technology to capture the 2001

Census data has resulted in estimated saving of INR 6,000 million.

Manpower is a major problem as teachers and government officials are unwilling to work on the census with such low compensation. *Hiring of NGOs and private individuals may be an alternative that can be explored.*

Design—India has an unbroken series of censuses since 1881, when the first coordinated census was taken in the country. It has a tradition and continuity and yet has always adapted well to the contemporary needs. The contents and methodologies more or less conform to the United Nations Principles and Recommendations.

Operations—Strong legal backing, a well established administrative structure extending to the lowest geographical unit, the unflinching support of the state governments and their staff and the cooperation of the people, all contribute to the success of the census operations. *The size and complexity of the census will only increase. Nevertheless, all of the problems of census implementation will have to be overcome.*

Technical capabilities and Analysis—The census organization has in-house technical capability in designing the census operations. During the planning and preparation phase, a Technical Advisory Committee, consisting of representatives of important ministries, demographers and population experts, is established to finalize the contents and concepts for the census. The census organization also has the capacity to analyze data. However, *with increasing constraints in the availability of technical staff, more collaboration with outside institutions will be needed for analysis of data.*

Capacity-Building—Capacity-building is a continuous activity and a programme is being developed for training census staff, especially in the area of data analysis. Staff members are also sent to professional institutions

for training in demography, statistics and population studies. *The capacity-building in new areas of work, for example, data dissemination, mapping and data processing, which have strong technological components, will be done through international training and visits.*

Data dissemination and utilization of census data—

Data dissemination has been a major activity in the 2001 Census. A very aggressive and pro-active strategy is being adopted for disseminating the 2001 Census data. Dissemination is not limited to the national or state headquarters' levels, but taken to the district and sub-district levels. The census is being made visible through participation in book fairs and exhibitions, the Internet and the media. Census data are being widely used for policy formulation and planning both at the central and state levels. The private sector is fast becoming a major user of census data. Demand for special tabulations is on the increase. The work of reapportioning electoral constituencies is in progress based on 2001 Census data. *The data dissemination activity will be continued with more vigour.*

New features and achievements in 2001 Census

- The Household Schedule was used for enumeration replacing the traditional individual slips. This has made it possible to produce several household level tables.
- The signature of respondents on the forms confirming the entries was taken for the first time.
- In towns with a population of over 50,000, slum enumeration blocks were identified. This will help in producing special tabulations on slums.
- An aggressive gender sensitization strategy was adopted to capture women's economic activity. UNFPA, UNICEF and UNIFEM provided support for this activity. The special effort resulted in a fair degree of success in capturing women's work.
- A special effort was made in training of field staff. Master trainers were appointed exclusively for improving the quality and content of training.
- A widespread and intense publicity campaign was undertaken.

- Census Help Centres and Census Help telephone lines were set up all over the country to register public complaints for non-enumeration.
- The census forms (A-3 size) were scanned through powerful scanners and the handwritten numerals on the forms were converted into digital format for processing using ICR software. The alpha-characters on the forms such as religion, mother tongue, educational status, etc., were coded directly on the computer through Computer Assisted Coding (CAC) from a drop-down directory.
- In the earlier censuses, a large number of tables were produced on a 10 percent or 20 percent sample although information on all items was collected on all persons. The ICR technology has helped capture all of the information on the forms, thus making it possible to produce all of the tables using all of the data.
- A very pro-active data dissemination strategy has been put in place for disseminating data throughout the country.

Constraints

- Appointment of enumerators is increasingly difficult as teachers and other government staff are unwilling to participate in the census.
- The maps of enumeration blocks are hand-drawn by the enumerators themselves for their assigned area of work. This results in omission or duplication of areas, especially in urban areas.
- Printed publications are still an important way of disseminating data. The restrictions imposed on printing in private presses cause delay in publication.
- The standard tables are being produced with great speed because of the new data capture technology and high computing speed. A large number of tables are being generated in a very short period of time, but, given the resources available within the organization, reviewing them for quality and putting them in the public domain are major constraints.

Future plans

The issues that have to be addressed and special efforts to be made for the 2011 Census have been indicated in italics. However, some of the important plans contemplated for the future are listed below:

- Several methodical studies for improving the quality of the data collection have been proposed.
- Capacity-building within the organization on several aspects of the census is being planned through training and workshops.
- The size and complexity of the Indian census are making it an increasingly demanding and arduous task. The methodological aspects of census have to given a fresh look. The feasibility of canvassing a short schedule and a long schedule, as is done in several other countries, should be studied.
- The rural and urban frame is prepared afresh prior to every census. This is a painstaking task. Action has been initiated to update the 2001 Census frame at specified intervals to overcome the problem in the next census.
- Plans call for dividing cities into areas with a population of 5,000 to 6,000 and preparing maps for these areas showing permanent boundaries. These maps can be used to guide supervision in urban areas and reduce the problems of duplication and omission of areas in the next census.
- An experiment will be carried out to test the use of hand-held computers for the field data collection.

The African Census Analysis Project (ACAP)

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Background and Rationale

Over the last ten years, the African Census Analysis Project (ACAP) has developed a close working relationship with African governments and scholars. This relationship has given ACAP the exclusive rights to develop a platform for making African census data available and accessible to scholars, international agencies and researchers. These data are the most important source of population data in Africa that will allow policymakers and development planners to do their work more effectively. Most African countries do not have effective national vital registration systems. The project has benefited from funding from the Fogarty International Center, National Institute for Aging, National Institute for Child Health and Development, the Mellon Foundation and the Rockefeller Foundation. The next phase of this project—providing Internet-based access to these data—will require a substantial investment by the population and development community. The various African governments are ready to make this historic move.

For the majority of the global population, there is relative scarcity of research and, consequently, evidence and information to guide policy and planning. Data and information are crucial elements in the development and planning of any country. Indeed, reliable, consistent, accurate and timely data are required for the purpose of policy formulation, monitoring of programmes in any democratic society. Monitoring of programmes allows for identification of areas of sub-standard performance that deserve more focused attention. Africa, over the past few decades, has progressed dramatically from the “data-poor” to “data-rich” situation with most countries having conducted at least two censuses and several demographic and health surveys (DHSs). However, this wealth of information, some of which have now deteriorated due to poor storage, has rarely been used in the past because of a lack of availability of the data to researchers. A new window of opportunity is now available. With the recent wave of democratization

and decentralization of planning, there is increasingly, a general need for information and data at the local level that will enable informed, comprehensive development planning alongside efficient monitoring and assessment of the effectiveness of the programmes implemented.

Response to the Problem

Census data are particularly useful because they provide a clear snapshot of the target populations for the various programmes even at the lowest administrative level. Existing censuses will allow for more accurate evaluation of the gravity of problems and thereby contribute to more effective solutions. They also offer a great potential for the training of new cadre of population researchers in Africa. Besides, they provide the basic indicators for monitoring progress in welfare planning and policy-relevant population-based interventions. Indeed, the numerators and denominators of most MDG indicators can only be obtained from the census. Moreover, by allowing for the study of demographic processes at the local level, census data reveal important ecological relationships and provide knowledge about the society (beyond what can be adequately investigated or captured using existing survey data alone) which allows policymakers and managers alike to do their work more effectively.

We propose to use the Pan-African Census Explorer (PACE) to deliver a unique collection of African census micro-data and enhance the capacity to access, manage, analyze, interpret and disseminate census data/information electronically and allow informed health planning and service delivery at the lower administrative levels. This is particularly helpful in providing the basic data needed for strategic planning, policy formulation and implementation of democratically based welfare programmes at the sub-national level. Besides providing access to the vast amount of data collected, the programme will also enhance the current level of information technology in the selected countries.

Institutional Capacity

For the past ten years, ACAP has been a joint initiative of the Population Studies Center, University of Pennsylvania, and African institutions. We have collaborated with various African governments and research centres/institutions at archiving and analyzing African census data, both at national and sub-national level, in order to inform appropriate policy interventions in the continent. ACAP has promoted the use of census micro-data for a better understanding of African population and society. We have pursued three specific aims: demographic capacity strengthening in Africa; research collaboration with African researchers; and the development of the Pan-African Census Explorer (PACE), for the purpose of data management and enhancing easy access to and utilization of the massive African census micro-data. With support from a few foundations, ACAP has attempt-

ed to strengthen the research capacity of African researchers in several ways: granting support to students for training in Africa; collaborating with and supporting selected population oriented scholars working in Africa; bringing African students and researchers to the University of Pennsylvania for Masters and Ph.D. degree training, or post-doctoral research; organizing workshops for scholars using census data in their research; and co-organizing or regularly participating in seminars, conferences and census-related training workshops or activities in Africa. In order to facilitate research collaboration with African demographers, ACAP has concluded collaborative agreements with over thirty African institutions, research centres or universities, and regionally based consortiums. ACAP has enhanced its unique census micro-data collection with all of the available census data from over thirty African countries.

Advocacy & Resource Mobilization towards the Successful Implementation of the 2010 Round of Censuses – the Case of CIS & SEE (Balkan) Countries

Note jointly prepared by ECE (Statistical Division) and UNFPA (DASE) and presented by ALAIN MOUCHIROUD, Bratislava, Slovak Republic

Challenges faced by the Commonwealth of Independent States (CIS) and South East Europe (SEE) countries in the Implementation of the 2010 Round of Censuses

During the 2000 Round of Censuses, a population and housing census was carried out in most CIS and SEE countries. In some countries, financial and/or political problems resulted in the cancellation or postponement of the census. In a few countries, the population census did not cover the entire territory, because parts of the country were not under the control of the government. Examples are: Abchasia and South Ossetia in Georgia, and Transnistria in Moldova. Kosovo was not covered in the 2000 Round.

The 2000 Round was the first census undertaken as an independent state for the majority of CIS and SEE countries. Although it was the first time that the newly created statistical offices had to design and implement census operations, many of them could benefit from past experience in implementing field census operations as regional offices, following instructions from a central office. The experience of the 2000 Round showed that the organization and management of field operations were quite successful, but that some countries faced difficulties in new areas of responsibility, including: data processing, quality and coverage evaluation, dissemination, questionnaire design, involvement of stakeholders, mapping and quality assurance. For the 2010 Census Round, the CIS and SEE countries need assistance in these areas to make sure that the problems of 2000 do not resurface.

In addition to the difficulties stated above, there was a shortage of skilled professional statisticians, computer professionals and cartographers in the 2000 Round. This suggests the need for stronger training programmes, the strengthening of the exchange of experiences through international workshops and the

development of a regular programme of technical assistance, to be implemented jointly by the UNECE Statistical Division and Eurostats.

In most of the CIS and Balkan countries, covered by the UNFPA Division for Arab States and Europe (DASE), the census will remain the main, and sometimes almost unique, source of data countrywide. The accuracy of the enumeration is, even more than elsewhere, of prime importance, and emphasis should be placed on insuring a complete and accurate enumeration.

Because, as noted above, the census will remain the main source of data nationwide, it will be difficult to design a “lighter” questionnaire. In the absence of an integrated programme of sample specialized surveys, information on employment, education, housing and in some countries because of legal requirements, ethnicity, religion and language, will have to be collected.

Questionnaire development: stakeholders' involvement and design

- **Stakeholders' involvement:** In the past, the design of census questionnaires was centralized and there was little interaction among the Central Statistical Office, regional statistical offices and other governmental institutions, the primary users of the data produced.

In the 2000 Census Round, efforts were made to initiate a dialogue between statisticians and potential data users; but this will be a long-term effort. Potential users need to be trained to better understand the value of the census, develop the capacity to express their information needs and use census data for policy formulation and monitoring. Census statisticians need to better understand the technical and methodological requirements of census data users, and improve their communication with the media, research users and other stakeholders.

In many countries, the move from statistics as government property to “public good” has to be strengthened, neutrality and transparency have to be reaffirmed, and access to data improved.

- **Content of the questionnaire:** During the 2000 Round of Censuses, most of the CIS and Balkan countries complied with the generally recommended definitions, with one notable exception, economic activity.

Some CIS countries continue to define employment, unemployment and status of employment on the basis of source of livelihood, which is not consistent with ILO standards. The definition of self-employment remains confused, particularly for unpaid family workers (often women).

Other problems include: difficulty in distinguishing between enrolment and school attendance, the lack of information on the highest grade completed, the inability to identify reconstituted families and consensual unions, and no information on stocks and flows of migrants.

The November 2004 joint ECE-Eurostat Work Session on Population Censuses made appropriate recommendations to address these difficulties.

Evaluation of census results

According to the information collected by ECE on the implementation of the 2000 Round of Censuses, only three CIS and three SEE countries are able to provide estimates of the census overcount, undercount and net error. Almost none of the CIS countries carried out a quality and/or coverage study in the form of a Post Enumeration Survey. Only two CIS countries compared the census results with other sources and only three performed a demographic analysis based census evaluation. More evaluation procedures were carried out in SEE countries, but still two countries did not implement a quality or coverage study. In the mid-1990s, the concept of census evaluation was new to these countries and, as a result, there are no measures of the quality of the censuses carried out in the 2000 Round in many CIS and some SEE countries. All CIS countries carried out a random 10 percent re-interview of households. Unfortunately, this procedure was used only for quality control and, although the errors found in the checked households were corrected and recorded, no statistics were generated on the total number of errors and the nature of the errors.

For the 2010 Round, the countries of the region (and particularly the CIS) need to build into their census plans the concepts of census quality control and coverage evaluation.

Data processing and management of Information Technology (IT)

IT can contribute substantially to the successful implementation of a census. If used and managed properly, IT can improve the quality, timeliness and accessibility of census data. However, the management of IT is still a challenging issue in many countries. OCR/OMR has worked well to speed data entry and coding in some countries, but in other countries, OCR/OMR has proven less effective. The success of census IT depends on the availability of hardware, human resources and an understanding of the advantages and limitations of the technology itself. Sometimes, the use of intermediate technology is more appropriate than the latest technology. In the 2000 Census Round, nine countries used manual data entry, three used OMR and four used OCR/OMR.

The majority of the countries developed their own software programmes to perform data entry, coding and editing. This indicates that the national statistical offices in the region have skilled programmers, but the implementation of some of these software systems demonstrated the difficulty of developing a large operation like the census for the first time. For the 2010 Census, the countries in the region need to make more efficient use of technology. Countries will need assistance to make the right choices for data entry, coding and editing. They will need to properly assess the national circumstances and adopt the technology that will produce the best results, given the circumstances. Regional cooperation can play a role in this. The adoption of common technologies could assist the countries in the region to make more cost-effective choices by approaching vendors jointly to negotiate better prices, organize regional training and support each other in the use of common technology.

Some of the countries in the region subcontracted census data processing operations in the last census. It is likely that this practice will be extended to other countries in the next round. Although subcontracting may be seen as a safe alternative where there is no internal expertise, in reality, many countries need assistance to properly manage outsourcing. A census office must have a thorough knowledge of the entire data processing cycle to be able to interact and give proper direction to vendors.

Census management, quality assurance and legal framework

Although CIS and SEE countries have a strong tradition of managing field operations, they lack similar experience in applying quality assurance to the full cycle of census operations. Countries need assistance in developing quality assurance frameworks that consider all aspects of data quality (relevance, cost, timeliness, accuracy, accessibility, interpretability and coherence). There is the tendency in national statistical offices to focus on accuracy, but a broader view is needed. Each choice during the census process implies a trade-off among the components of quality. For example, higher accuracy can be obtained at the price of higher costs and less timely results. Maximising quality means making the best trade-off that “fits the purpose:” frequently implying compromises among accuracy, timeliness, relevance and other components of quality.

Quality assurance should be included in every aspect of the census as a basis for regularly measuring the components of quality (in particular, relevance, costs, timeliness and accuracy), detecting quality problems and preventing errors. In the 2000 Round, countries in the region faced problems with the use of new technology that were detected too late to be fixed before they affected census results (particularly in relation to the timeliness of releasing the census results). For example, questionnaires were used that were incompatible with the scanners selected for the census. In other instances, questionnaires were designed without coding space, not recognizing that scanners would fail to recognize some responses and they would need to be coded.

The establishment of a legal framework for the census is also an important issue. In the 2000 Round, some CIS countries experienced difficulties because the legal framework did not provide for sufficient operational flexibility to improve methodologies (particularly questionnaire design) and deal with problems when they arose.

Mapping

Mapping is an essential activity in carrying out a census and the quality of the maps determines the coverage of a census. Half of the CIS and SEE countries reported mapping as one of the main problems faced during the last census. Large investments are required in order to build and maintain accurate maps. Only one country in the region reported using digital maps in the last census. For the 2010 Round, substantial resources will be needed for map updating, and possibly for the development of digital maps and the use of GIS for data dissemination.

Dissemination

For some of the censuses in the 2000 Round, it was several years before the data were disseminated. Reasons varied from lack of resources to miscalculation of the time needed for data processing. The time lag between the census and the dissemination of the results needs to be shortened, and issues related to the improvement of user-friendly dissemination tools, and the development of analytical and thematic reports should be considered.

Use of data

Many CIS and SEE countries have developed or are developing dissemination strategies to maximize the use of census data. Some benefited from donor assistance in developing analytical reports or CD-ROMs. However, there are still areas where the use of the census data can be improved. For example, an assessment by ECE and UNDP on gender statistics, found that data on employment by occupation collected in the census in one country was not used in gender publications, despite the census being the only source for this indicator and the great importance this indicator has in measuring gender inequality in higher positions.

Maximizing the use of census data among all stakeholders, including the national statistical office, should be one of main objectives of a census. National statistical offices need assistance in producing census products and the user community needs support and training to upgrade its capacity to utilize advanced statistical products. Statisticians and users should be supported to better use census data for monitoring gender equality and MDGs.

Funding

Many CIS and SEE countries received external funding for their 2000 Census and, in some of these countries, it is likely that a donor involvement will still be needed in 2010. According to data collected by ECE from countries in the region, donors covered from 3 to 80 percent of the national census costs in the 2000 Round. Despite this assistance, a lack of funding was reported to be a problem by almost half of the countries of the region. Enumeration and “general preparation and logistics” were reported to be the most costly census activities in the 2000 Round. The table below shows the average distribution of census costs reported by selected CIS and SEE countries.

In the 2010 Round, donor funding will be needed for the poorest countries in the region to meet government shortfalls. Technical assistance should be provided to most countries in the region to address some of the

problems experienced in the 2000 Round. A cost-effective mix of regional, sub-regional and national assistance should be provided. In particular, quality improvement activities may need support as they are often undervalued by country governments. These activities may include evaluation, quality assurance activities (for example, field supervision and data entry random checks) and piloting testing.

UNFPA, at headquarters, regional (Brussels and Bratislava) and country levels, should organize a “working group” with a goal of securing early and complete funding for the 2010 Censuses in the ECE region. Cooperation with Eurostat, PARIS21, OCDE and ECE (Statistical Division) should be strengthened.

ECE-Eurostat recommendations for the 2010 Round of Censuses

ECE and Eurostat are jointly working to prepare the new set of “Recommendations for the 2010 Censuses of Population and Housing in the ECE Region,” to be finalized by 2006. To better assist the countries of the region in the implementation of their 2010 Census, “Recommendations” will include new sections on methodologies, technology, evaluation, dissemination and user support. Given the new census methods that are emerging in the ECE region, “Recommendations” will help countries choose the best approach for their

TABLE: Average census cost distribution, based on 12 CIS and SEE countries

Average percentage of census cost allocated to each activity

General preparation, services, logistics	18.9
Pilot micro-census	1.0
Cartography, Mapping	4.3
Publicity and information	1.6
Enumeration (including training)	44.4
Post-enumeration evaluation	0.7
Data processing, checking, coding	7.5
Elaboration and analysis	4.6
Equipment	12.6
Publication, dissemination and documentation	4.7
Other	6.0

census by illustrating the advantages and disadvantages of each approach, and describing the conditions under which the approaches can be successfully implemented. “Recommendations” will also be updated to reflect emerging issues and new developments. Major revisions are expected in the sections related to migration, definition of usual residence, families and households, and institutional households. Agriculture and disability are among the new topics that will be included.

Council of Europe—ECE—Eurostat Advisory Group on censuses

To support the 2010 Round of Censuses, the Council of Europe, Eurostat and ECE have discussed establishing a joint permanent Advisory Group for Census Monitoring, to address the requests for census monitoring in the ECE region. In the past, three organizations were involved in monitoring census operations on an ad hoc basis (the latest were in Moldova and in the Former Yugoslav Republic of Macedonia (FYROM). The idea would be to create a permanent organization to respond to future requests and coordinate the monitoring in a more efficient way. UNFPA should consider participating in this organization.

Regional programme of assistance to be jointly supported by UNFPA

“Recommendations” will also encourage a regional approach to censuses in CIS and SEE countries, harmonise the methods used with those of the European Union (EU) and encourage countries to learn from each others’ experiences. Beyond “Recommendations,” regional support will be needed for common census activities. Support, provided by UNSD and ECE Geneva, will be need in:

- the management of census operations and quality assurance;
- the design of a census questionnaire;
- encouraging user involvement: user understanding of the value of the census, user capacity to specify their needs and user understanding of census quality considerations;
- census data processing and the proper use of IT; and
- census evaluation.

Statistical Capacity in CIS and East European Countries to monitor MDG

The CIS and East European countries have inherited a rich system of administrative records which is able to produce a broad range of statistics. However, the transition from the planned economy to the market economy has affected the accuracy, coverage and relevance of these administrative records. The social and economic information now needed is very different. Many of the important issues that emerged after transition can be adequately measured only through population-based data collection activities (sample surveys or censuses). Issues, such as poverty or unemployment, if measured through administrative records, show very different pat-

terns than if measured through surveys or censuses.

Since the mid-1990s, all Eastern Europe and CIS countries have moved at different speeds, from statistical systems almost exclusively based on administrative records to systems where sample surveys are also used. Some countries already have a permanent survey programme with a regular labour force, and income and expenditure surveys, but some countries still carry out surveys on an ad hoc basis and only with donor support.

Coordination between the samples for household surveys and the Demographic and Health Survey/ Reproductive Health Survey (DHS/RHS) should be encouraged in order to get data (for instance, fertility or infant mortality, by level of income) at the local or district level, as a basis for designing policies to meet the needs of groups at risk.

Brief Note on the Conduct of Censuses in Ethiopia

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Ethiopia conducted its first population and housing census in May 1984. A Census Commission was established by proclamation No. 252/1983. The Central Statistical Authority was the Secretariat of the Commission. All technical aspects of the census, such as cartographic work, preparation of questionnaires, data collection, processing, analysis and dissemination were the responsibility of the Secretariat.

The structure of the census commission during the census operations was:

- National Census Commission in Addis Ababa, Chaired by the Deputy President;
- Regional Census Commission in each Region, Chaired by the Chief Regional Administrator;
- Awraja Census Commission in each Awraja, Chaired by the Chief Awraja Administrator;
- Wereda Census Commission in each Awraja, Chaired by the Chief Wereda Administrator; and
- Kebele Census Committee in each Kebele, Chaired by the Kebele Administrator.

In all Census Commissions, the Secretariat work and technical operations were performed by staff from the Central Statistical Authority.

Prior to the 1984 Census, the only demographic data available for the country were from two sample surveys that covered the most settled population and from the Ministry of Interior headcount for the remaining and nomadic populations. In 1982, the total population of the country was estimated at 32,775,000. However, the 1984 Population and Housing Census estimated the population of Ethiopia at 42,616,876. The areas covered

in the census had the *de jure* population of 34,500,972 and the rest was estimated from the previous sample surveys. Because of the civil strife at that time, only 81 percent of the population was covered. The population of Eritrea was estimated at 2,748,304.

At this period, the country had fourteen regions and two administration areas. The regions had 101 Awrajas (provinces), 604 Wereda (Districts) and 819 urban centres.

For the delineation of enumeration areas (EAs), maps were prepared for most settled population areas where security for the work was adequate. A total of 40,765 EA maps were drawn for the 1984 Census. An EA consisted of 150–200 households.

For the census, each enumerator had an EA map showing the boundaries, the locality positions and other major establishments within this enumeration area. Supervisors had their supervision area maps and also EA maps under their supervision. The supervisor enumerator ratio was 1:5. The census enumeration lasted for about fifteen days. Though enumerators in urban areas finished their enumeration in about five days, those who went to the most remote and scattered settlement areas took about fifteen days. UNFPA provided financial, material and technical assistance for the 1984 Census. This was the only external assistance for the census project.

The second Population and Housing Census of Ethiopia was conducted in October 1994. The second census of the country was conducted under the auspices of the Population and Housing Census Commission, which was established by proclamation No. 32/1992. The Central Statistical Authority served as the Secretariat of the Census Commission. All technical operations of the census were the responsibility of the Secretariat. The structure of the Census Commission was similar to the 1984 Census, except that at the national level, the Commission was chaired by the Prime Minister and the Awraja Census Commission was replaced by the Zone Census Commission.

The 1994 Population and Housing Census covered the entire country. Cartographic work was essential and an important undertaking in the census operations. The delineation of enumeration areas was conducted in the settled population areas over a two-year period and 49,978 EAs were drawn. An enumeration area consisted of 150–200 households. In the mostly nomadic regions, enumeration areas were not drawn. However, population headcount was carried out before the census by asking heads of households the number of persons living with them as a basis for estimating the population and identifying areas where people were temporally settled.

The 1994 Census enumeration was conducted in October 1994, with 11 October 1994 as the Census date. Two types of questionnaires were administered. The long questionnaire was administered in all urban areas. In the rural areas, the short questionnaire was administered to all households and the long form was administered to 20 percent of the households. The Census operation took 5–10 days. However, in the two mostly nomadic regions (Afar and Somalie), the Census operation encountered problems. Therefore, the Census results of these two regions were rejected. The Population and Housing Census Commission ordered the Census enumeration in these regions to be conducted again. In the Afar Region, the Census operation was carried out in July 1996, and in the Somalie Region, in October 1997. Population data for these regions were projected backwards to October 1994, to standardize them with the data from the other regions.

The 1994 Population and Housing Census estimated the population of Ethiopia at 53,477,265. The male population was 26,910,698 and the female population was 26,566,567. The urban population was 3,534,805 males and 3,788,402 females, for a total of 7,323,207.

The Ethiopian Government covered nearly all Census expenditures. In the second Census, UNFPA was the major external donor, UNDP, USAID and SIDA also provided some assistance. Italy financed collaboration with Italian Universities and IRP in the in-depth analysis of the Census.

Ethiopia is planning to undertake the third Population and Housing Census in 2007 and preparation for the census cartographic work is now in progress. Delineation of enumeration areas is being performed using the Global Positioning System (GPS) for the first time. The GPS is used to identify border points of EAs, Kebeles and Weredas and also socio-economic structures, natural features and settlement localities. All spatial data that are collected will be used in the Geographic Information System (GIS) along with demographic and housing data.

The cartographic work started in September 2003, in areas near Addis Ababa, the capital city of the country, and where settlement is relatively dense. As of 31 January 2005, about 27,900 enumeration areas have been delineated. The expected total number of EAs in the country is about 90,000. At the moment, there are 45 teams working on the demarcation of EAs, each team having six field cartographers and a supervisor. The delineation of EAs should be finalized by mid-November 2006. Each EA should have 150–200 households.

Thereafter, four-stage training on the conduct of the census enumeration will be undertaken. The Population and Housing Census date is planned to be in February 2007.

During Census enumeration about 100,000 enumerators, 20,000 supervisors and 5,000 others, at various levels, will be engaged in the field activities. About USD \$60 million is the planned cost of all of the Census operations.

Note to UNFPA Regarding Technical Assistance Requirements of Pacific Island Countries with the 2010 Round of Censuses, in Light of the 2000 Experience

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Some Pacific Island countries' 2000 Censuses are not of the same quality as those of earlier times. Unlike the situation with the 1990 Round of Censuses and earlier censuses in the 1970s and 1980s, when external financial assistance and technical support were available to countries from UNFPA—both through direct bilateral country programme initiatives, as well as via regional census support programme initiatives, executed by SPC—many Pacific Island countries experienced considerable difficulties in financing their most recent census operations. This was reflected in routine census operations, where accepted best-practice procedures, such as commencing census field operations with updated (and complete) household listings, data verification (completeness checks) at enumeration stage, and undertaking comprehensive data edits before embarking on tabulations, were either ignored or severely reduced. It also meant considerable delays in producing different census outputs, as well as compromising the types of outputs produced.

With a growing demand placed on countries for reliable and timely data and information for a broad range of policy development and planning applications across sectors, including national commitments to MDG reporting and pro-poor planning and budgeting, and with **population censuses representing the only truly national stock-taking of socio-demographic and socio-economic features and developments in the Pacific Island region**, it is absolutely critical, the Pacific avoid the more obvious failures of the 2000 Round just mentioned.

The SPC Demography/Population Programme can, in the context of its current strategic plan objectives (2003–2005), staffing contingent and budget, provide limited support to countries planning a Census in 2005–2006, with a focus on data analysis and dissemination. But we are in **no position** to provide much needed ongoing technical assistance (and training) with Census planning/operational design/management and data processing as was

the case in the 1990 Round, where the programme was complemented by two UNFPA-funded advisors (population specialist and data processing advisor), in addition to being able to call on the superb collaborative support provided by the ESCAP/UNFPA-CST Census and Survey Advisor (Mr. Laurie Lewis).

While we recognize that in the context of overall funding constraints, as well as UNFPA's general policy outlook, financial assistance to individual countries as during the 1980 and 1990 Rounds will be highly unlikely, Pacific Island countries require continued (technical and financial) assistance with undertaking national censuses. Regarding the technical side of things, we see assistance with census planning/operational design/management and data processing as the two most critical areas which we cannot cover from SPC, and regard a **regional approach** as a preferred option, in terms of cost-effectiveness, maximum impact and sustainability (sustaining regional, rather than creating an ad hoc national capacity in different countries), as compared to some countries embarking on individual, bilateral initiatives with donor agencies and others missing out altogether.

We would welcome discussing this matter more fully with UNFPA.

Postscript

Since drafting this note, negotiations between the Secretariat of the Pacific Community (SPC) and the Australian International Development Assistance Bureau (AusAID) have resulted in funding for a three-year technical assistance project, allowing SPC to provide Pacific Island countries and territories undertaking a census over the coming two years, with much needed technical assistance in two critical areas of census planning, design and operations management, and data processing. Two experienced experts are currently being recruited.

Censuses in South and West Asia, A Note For Discussion

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Overview of census situation in SAWA

Among the nine countries of which the South and West Asia (SAWA) region is comprised (Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan and Sri Lanka), there are vast differences in their histories of population census-taking. To a large extent, these differences run parallel with the presence and nature of their colonial history. The countries in this region that were under British rule have a long history of census-taking. Even though censuses in colonial times were centrally administered, national capacities for implementing population censuses in these countries tend to be somewhat better than in the other South Asian countries. In general, national capacities to carry out a population census remains a major concern in most SAWA countries. It is important, however, to distinguish in which respects capacities are wanting.

The presence of conflict situations is an important factor which tends to prevent full national coverage of censuses or causes them to be postponed. SAWA countries affected by this are Afghanistan, Bangladesh, India, Nepal, Pakistan and Sri Lanka. Perceived issues regarding ethnicity should be mentioned also at this point, with Bhutan as notable example.

The use of new technologies, most notably optical character recognition/optical mark recognition (OCR/OMR) and digitized census maps (through aerial photography or satellite imagery), has so far proved to be a mixed blessing. While some good results were obtained through these techniques (India, Pakistan), there are several cases where they actually caused delays, increased costs, and/or compromised quality (Bangladesh, Iran). A lesson learned from this could be that technology is no substitute for capacity.

Most countries that did a census in the 2000 Round are using the Internet for dissemination of census results. The availability of census results in this manner ranges from downloadable official census reports to basic tabulations of population or household numbers

by area. For census data users interested in statistical indicators at sub-national levels, the census outputs available through the Internet tend to be of limited use. It should be noted that available database technologies remain severely underutilized in this regard.

Seven out of the nine SAWA countries conducted censuses in the 2000 Census Round. Only Afghanistan and Bhutan did not. For the 2010 Round, censuses are planned in every SAWA country.

Country level discussions

AFGHANISTAN

The last census conducted in Afghanistan was in 1979. It was never fully completed, due to wartime conditions. To date, however, population projections based on data from this census continue to be used, despite the fact that these have no longer any bearing with reality.

Overview of Census Dates in the SAWA Region

Country	1990 Round	2000 Round	2010 Round
Afghanistan	x	X	mid-06
Bangladesh	Feb-91	Jan-01	Jan-11
Bhutan	x	X	May-05
India	Mar-91	Mar-01	Mar-11
Iran	Oct-86	Nov-96	Nov-06
Maldives	Apr-95	Apr-00	Apr-05
Nepal	Jun-91	Jun-01	Jun-11
Pakistan	x	Mar-98	Mar-08
Sri Lanka	x	Jul-01	Jul-11

A new census is planned for mid-2006. UNFPA is the major agency supporting this operation. Preparatory phase (phase I) of the census is nearly completed. It includes rehabilitation of infrastructure required for conducting the census, capacity-building for the staff of Afghanistan's Central Statistical Organization (CSO, the agency vested with responsibility for conducting the census), preparation of household listing and village-level data, and advocacy for donor support for phase II of the census operation. The total census operation for Afghanistan is estimated to require some USD \$27-30 million.

Problems of security pose real threats to the successful completion of Afghanistan's forthcoming population census. Several staff members of Afghanistan's Central Statistical Organization (CSO), the responsible agency for the census, lost their lives during the field work for the household listing. Limited national capacities in all census-related activities are also a major cause for worry. It must be noted, however, that these unfavourable conditions are to some degree offset by the fact that a relatively high proportion of current staff members at the CSO worked on the 1979 Census, retaining a strong sense of professionalism, and displaying a commendable determination to make the forthcoming census a success.

In view of the development needs and potentials in present-day Afghanistan, investment in its forthcoming census would probably be one of the most worthwhile contributions towards achieving its development goals that donors could make.

BANGLADESH

Bangladesh conducted its most recent population census in 2001. This was the fourth population census since independence in 1971. Previous censuses did not cover the entire country, due to insurgency in the south-eastern hill districts. A peace treaty, signed in 1997, allowed these areas to be included for the first time.

The national agency responsible for conducting population censuses is the Bangladesh Bureau of Statistics (BBS). The total budget for the 2001 Census was approximately USD \$11.3 million. Some 10 percent of this was covered through UNDP, which funded procurement of new aerial photography and data processing equipment. UNFPA supported cartographic activities for the 2001 Census. This support focused on improved coordination among mapping agencies, and capacity building of cartographic staff at the BBS, in terms of human resources as well as equipment and software. The UNFPA support amounted to some USD \$1.1 million.

Based on the 1991 Census experience, it was recog-

nized that improvements would need to be made with regard to the training of census enumerators and the use of GPS and satellite imagery for preparation and updating of enumeration area maps. The BBS has subsequently participated in a UNFPA-funded regional project on utilization of new technologies for censuses. Under this project, pilot applications were developed for using GPS and aerial photographs/satellite imagery for preparation of census enumeration area maps.

During the preparations for the 2001 Census, problems with outsourcing of the processing of aerial photographs caused a delay of nearly a year, with the consequence that digitized census maps were not ready in time for the census enumeration. Further, the aerial photographs were on a scale of 1:25,000 which made them unsuitable for use in urban areas. OMR and OCR equipment was purchased for use with the 2001 Census, but its use was delayed, reportedly due to vendor-related problems. Several of these problems are traced back to inadequate donor funding, which had substantially decreased in comparison to the 1991 Census.

While numerous reports have been published on the 1991 Population Census, to date, only a preliminary report is available for the 2001 Census results. A final census report is expected to be released in 2005.

BHUTAN

Bhutan is about to conduct its first modern population and housing census, in May 2005. Previously, the Royal Government of Bhutan had relied on district-level headcounts, mostly for administrative purposes. For the 2005 Census, UNFPA is the only agency requested by the Bhutanese Government to provide support. Bhutan's National Bureau of Census and Immigration is the main national institution implementing the census.

UNFPA support to the Bhutan census is being provided through the services of a census adviser and a census cartographer, both through short-term missions. UNFPA is also supporting training in data processing, outside of the country.

Census mapping is currently ongoing, using GPS and cadastral maps from the Survey Department. In the absence of village-level digitized maps, available cadastral maps are updated and used to define enumeration areas. The Bhutanese Government aims to utilize the census maps and census data to develop a GIS.

There is little concern about national capacities to implement this census operation. With the possible exception of data processing, national staff members appear to be capable of handling required tasks.

Bhutan's unique background, the fact that its upcoming census will be its first ever, and UNFPA's special

relation with this country, are important reasons why UNFPA gives high priority to this operation. The relatively modest amounts of funds required are considered to be worth it.

INDIA

India (together with Bangladesh, Pakistan and Sri Lanka) has a long history of census-taking: its first population census was conducted in 1872. The 2001 Census of India is the fourteenth in this series. Unlike the previous census in 1991, this census includes (part of) the disputed area of Jammu and Kashmir.

India's 2001 Census cost a total of approximately USD \$150 million, and was funded entirely by the national government.

Gender has been the main concern of UNFPA's involvement with India's census of 2001. Gender imbalances in the census results had been observed throughout earlier censuses, and had been subject of much debate. From earlier census data, it was clear that in many states, men vastly outnumber women, and that female workforce participation rates were often remarkably low. One major concern in this regard is whether these findings were due to biases in data collection operations or due to real life conditions. Addressing these issues, UNFPA set out to support engendering the 2001 Census of India.

Image based form processing technology (ICR/OCR) was introduced for processing the census 2001 data. Another innovative approach was decentralized data processing, at 15 regional centres. The implementation of these innovations was deemed successful, which was partly due to careful initial scrutiny of available technologies and suppliers, and linking payments to actual productivity. This resulted in considerable cost savings and completion of data processing within two years.

Despite the successful completion of the 2001 Census operation, this experience did give rise to some considerations for further improvement. For the 2011 Census, India may opt to use the dual enumeration method, full coverage with a short form and sample coverage with a long form, to reduce the sheer workload imposed by 100 percent coverage. In order to improve census coverage, pre-census mapping activities need to be strengthened. Capacity-building needs are identified with regard to data quality control, data analysis and dissemination.

IRAN

The most recent population census in Iran was carried out in 1996. The next one will take place in 2006. Preparatory activities for the 2006 Census started in

2003. The responsible agency for census-taking in Iran is the Statistical Centre of Iran (SCI). UNFPA assisted the SCI in designing and conducting the 1996 Population and Housing Census, as well as the analysis and dissemination of census results. Capacity-building, in these areas, has been part of each of UNFPA's country programmes for Iran. It may be noted that UNFPA was the only donor agency to provide support to Iran's 1996 Census. The total cost of that census was approximately USD \$44.2 million.

A number of innovations, as compared to previous censuses, were used in the 1996 Census. The inclusion of identity card numbers for individuals and post office household listing serial numbers is one set of such innovations. The use of Optical Mark Recognition/Reading (OMR) and data imputation procedures for non-response data is another set. The implementation of these innovations may have contributed to increased under-enumeration in the 1996 Census, as compared to previous censuses in Iran. On the other hand, it reportedly took just six months from data collection to publication of initial census results.

Lack of gender-disaggregated data and analyses features prominently among the identified limitations with regard to Iran's census outputs. Considerable time lag between data collection and publication of detailed results is reportedly another problem, exacerbated by limited depth of data analyses. However, in recent years, Iran has paid considerable attention to gender-sensitive research and analysis, and has done a commendable job in preparing a range of ICPD and MDG indicators, all of which can be accessed through the SCI's website. While these may not be census-based, these successes should be noted and appreciated. In line with this development, is UNFPA's support to Iran's 2006 Census, which focuses, to a large extent, on engendering the census, in terms of questionnaire design, data analysis and dissemination.

MALDIVES

The first modern population and housing census in the Maldives was conducted in 1977, which laid the foundation for a new era of census-taking in the country. In view of this experience and rapid changes in the population characteristics, the Government decided to conduct national censuses every 5 years instead of every 10 years as in most other countries. The new series began in 1985, followed by censuses in 1990, 1995 and 2000. The responsible agency is the Ministry of Planning and National Development. UNFPA provided technical assistance for the 2000 Census.

Basic tabulations of the 2000 Census data became

available in 2001 and an analytical report was published in 2002. This is a considerable improvement over the 1995 Census, for which data processing was not completed until 1999. However, the quality of the 2000 Census data leaves much to be desired. To a large degree, this is believed to be caused by poor data collection procedures, including a weak questionnaire.

The 2000 Census was reportedly done on 'de facto' basis, but suffers from definitional problems in this respect. Attempts were made to collect data on Maldivians abroad. These were enumerated according to their last place of registration. This, however, violates the 'de facto' principle. The census contains data on place of enumeration, place of current residence, place of usual residence and place of previous residence. The difference between these categories, especially the first three, remains unclear, however.

The definition of a household is a problematic issue in this census, as indicated by the fact that the census data contains households with two heads and also households with no head. Another problematic issue is the distinction between 'individual' and 'collective' households. Two different questionnaires were applied for these two types of households. This is believed to have caused data processing problems, as most data for members of collective households appear to be missing.

Although to date, no request was received from the Maldivian government for UNFPA support of their forthcoming population census in 2005, the 2000 Census results indicate that there is need for continued technical backstopping.

NEPAL

Population censuses have been carried out in Nepal since 1911. The most recent was done in 2001. The responsible agency for conducting the census is Nepal's Central Bureau of Statistics (CBS). UNFPA supported this census with technical assistance, vehicles, computers and other non-expendables, and enumerator kits; UNDP, with field of training of census field staffs and advocacy through the Mainstreaming Gender Equity Program (MGEP); UNIFEM, in census publicity and advocacy; and UNICEF in the field of media campaigning. The EU and bilateral donors provided ongoing support to census mapping activities.

The total cost of the 2001 Census reportedly was

USD \$5 million.¹ UNFPA's support, including post-census activities up to the year 2004, was approximately USD \$900,000.

The 2001 Population Census of Nepal used two types of questionnaires: a short form, for the full enumeration, and a long form, where detailed information on a sample basis was collected. This was the first census in Nepal to include use of the sampling approach.

Gender issues were addressed in this census through gender sensitization workshops for census staff, recruitment of female enumerators (20 percent), and adding questions related to women's empowerment, such as real estate ownership by women and extended occupation and industry classifications.

Dissemination of Nepal's 2001 Census reports was done through printed hardcopies, on CDs, and through a website. Sample raw data were made available on CD.

The 2001 Census faced problems with regard to budget allocation, logistics, disruption of census enumeration field work by Maoist insurgents (in 12 districts), inadequate enumeration area (EA) maps and limited data processing capability. The latter issue was resolved through outsourcing. USD \$4 million was originally allocated by the government for census field work. Due to a government-imposed austerity programme, only USD \$2.6 million was actually made available for this purpose.

For the 2011 Census, the Nepali CBS may face some serious challenges. Many of its qualified staff will be reaching retirement age before the next census. New staff will need to be recruited and trained. Even then, they will be lacking the practical experience of conducting a population census. Given the increasing problems posed by the Maoist insurgency and consequent further tightening of government funds, the CBS is likely to require considerable donor assistance for carrying out the 2011 Census.

PAKISTAN

The latest population enumeration for Pakistan took place in 1998, after an interval of seventeen years from the previous census, which was held in 1981. Pakistan's Population Census Organization (PCO) is the agency designated for conducting population enumerations.² It falls under the Ministry of Finance, Economic Affairs and Statistics. The cost of the 1998 Population Census

¹ The reported figures on government and various donor contributions do not add up to this amount. Some of the reported figures of donor contributions do not refer to the census operation *per se*.

² In collaboration with United Nations High Commissioner for Refugees (UNHCR), the Pakistani government, through its PCO, is currently undertaking a census of all Afghans who are living in Pakistan. The field work for this enumeration is expected to be completed by the end of February 2005. The census will record the gender, ethnicity, address and source of livelihood of each Afghan recorded. It will also note when the individual arrived and whether or not they intend to return to Afghanistan.

for the Pakistan government was approximately USD \$41.2 million. This excludes the contribution to this census from UNFPA.

Within the framework of its sixth country programme, UNFPA is supporting the 1998 Census operation through a project on census data analysis, implemented through the Pakistan Institute of Development Economics, and in collaboration with the PCO. Besides in-depth demographic and socio-economic analyses, the project also aims to support capacity-building of the PCO, particularly analytical and research capacities.

Pakistan's 1998 Census was carried out in close collaboration with the armed forces. The latter provided logistical assistance and ensured safety. Pairing armed forces staff with census enumerators reportedly served to ensure full coverage of the census operation. For Pakistan's 1998 Census, no Post Enumeration Survey (PES) was carried out, which makes it difficult to assess if this strategy was successful.

OMR equipment was used for the 1998 Census in Pakistan. With the assistance of UNFPA advisers, the census questionnaires were designed for this purpose. Its deployment was reasonably successful, although some 15 percent of the forms still needed to be processed manually. Some delays were incurred due to late installation of the OMR equipment and problems with electricity supply.

One of the more fundamental problems affecting reliability of Pakistan's census data is its linkage with political representation, allocation of national funds to provinces and recruitment quotas for civil servants.

SRI LANKA

Sri Lanka shares its long history of census-taking with Bangladesh, India and Pakistan. Its most recent, the 13th population census was carried out in 2001, after a gap of 20 years. The responsible agency for census-taking is the Department of Census and Statistics (DCS). The 2001 Census cost is USD \$42 million, covered entirely by the Sri Lankan government.

Due to the political situation in Sri Lanka at the time of the 2001 Census, only 18 out of 25 districts were fully covered. Census analyses and publications were done on the basis of these 18 districts, while various methods were used to arrive at estimates of total population for the remaining districts.

The 2001 Census did not incorporate a sample approach for collecting specific detailed information. It did, however, use a separate schedule for collecting data on disabilities.

Sri Lanka's 2001 Census was done on a 'de facto' basis, which was the practice in previous censuses. The

census tabulations present the population according to the place of enumeration, rather than on the basis of their usual place of residence. Some problems were encountered in dealing with people travelling on census night. The presence of large numbers of displaced households and individuals in Sri Lanka probably exacerbated the problems related to 'de jure' and 'de facto' enumeration methods. Other issues noted from the 2001 Census experience focus mostly on the time-consuming manual procedures of coding, data entry and correction/verification.

For the 2010 Round, changing the enumeration from 'de facto' to 'de jure' and using new technologies for automated data entry and processing, particularly OMR/OCR, are being considered.

Availability of Round 2000 census data in SAWA

In this section, special attention is given to the availability of census results through the Internet. The rationale for this is that dissemination is, arguably, the most effective strategy for advocacy, and that the Internet is the most efficient dissemination method, allowing instant access to information and, with the proper database technology, allowing data users to obtain exactly what they need.

BANGLADESH

With regard to Bangladesh's 2001 Census results, little information is available on the Internet. As far as actual census results are concerned, only a preliminary report is available. It may be possible that census results can be accessed through Bangladesh's national data base, but access to that website is password-restricted.

INDIA

For the 2001 Census, several websites exist which present a wealth of information on this census. Tabulations and thematic maps at various administrative levels are available. Surprisingly, however, many of the tabulations are reportedly based on provisional results, and the web pages appear not to have been updated for several years. While many tabulations are available, it is not possible for the user to generate customized cross-tabulations. The thematic mapping application is quite flexible, and offers a wide range of indicators for display.

IRAN

Perhaps due to the fact that Iran's latest census was some nine years ago, there is no web page dedicated to presenting its results. Some basic tabulations from this

census are incorporated into Iran's statistical yearbooks, which can be accessed through the SCI website.

MALDIVES

Results from the latest population census in the Maldives are available through the website of the Maldivian Ministry of Planning and National Development. The official census tabulations are posted on this website. Interestingly, the site mentions the availability of raw census data on CD.

NEPAL

Web-based dissemination of Nepal's 2001 Census results is done through the website of the Nepal CBS. It consists of some background information on the census and census tabulations as published in the official census report. While all tabulations from that report are listed, only some of these can actually be accessed.

PAKISTAN

A selection of tabulations and indicators from Pakistan's 1998 Census is made available on the PCO's website. More detailed tabulations, at various administrative levels, are only available on CD.

SRI LANKA

Although Sri Lanka conducted its latest census in 2001, the website with census results states that the presented results are preliminary. Census data users can access a database which allows the user to generate basic tabulations at various administrative levels. While a wide range of variables is available for selection, no cross-tabulations of these variables is possible, which severely limits the potential usefulness of this database. The website also presents a range of ready-made basic tabulations, as well as tabulations based on a 5 percent sample of the census data.

Role of census data for measuring progress towards achieving MDGs

Localizing MDG indicators

Due to its very nature, a census can provide only a limited number of MDG indicators. This is because of the need to keep census questionnaires as short and simple as possible. Typically, MDG indicators available from census data pertain to demographic characteristics, most notably mortality estimates, educational characteristics and some indicators regarding women's labour force participation.

On the other hand, the fact that a census provides full

national coverage is clearly its major benefit, even when part of it (detailed census form) is done on a sample basis. Those MDG indicators which can be derived from the census data, can be derived at almost any desired administrative level, thereby bringing out differentials at those levels.

Within SAWA, India and Nepal serve as good examples where selected MDG indicators have been developed across the hierarchy of administrative units in the country.

Providing denominators

For several MDG indicators, a census provides only the denominator values. Such indicators are typically of macro-economic nature, where a 'per capita' value is indicated. For most developing countries, a census is the only source of data that can provide these required denominator values.

Providing sample frames for detailed surveys

Perhaps the most important justification for countries to continue conducting census operations every ten years is that a census provides the master sample frame for surveys. A reliable master sample frame is a requirement for designing a statistically representative sample survey. Such surveys can then be used for much more detailed data collection than is possible within the framework of a population census.

Some thoughts on future census support

Capacity-building

In several countries in the SAWA region, implementation of a population census remains hampered by limited national capacities. Capacity-building should remain a priority in UNFPA and other donors' support for census operations. As some SAWA countries have experienced expensive lessons with poor deployment of modern technologies, capacity-building efforts may need to focus increasingly on the utilization of such technologies. This argument also extends to web-based dissemination of census results.

Assessment of dissemination efforts

Data dissemination activities are present in all census work plans. These typically take the form of workshops or seminars, hardcopy publications, distribution of outputs on CD and posting of census results on a website. Rarely, if ever, are (potential) data users asked for feedback on these dissemination efforts. Hence, most census organizations do not know whether or not their efforts

at data dissemination properly address the requirements of (potential) census data users.

In preparation for the 2010 Round of Censuses, it would be very useful if census organizations would carry out an assessment of how well their efforts at census data dissemination have served the needs of potential data users. Such an assessment could easily be carried out as a web-based survey. Alternatively, it could be done within the framework of census preparatory meetings with stakeholders. More importantly, such an assessment should go beyond the circle of known census data users, and include those who are potential users.

Standardization of questionnaires

This is not the first time that a call for improved standardization of census questionnaires has been voiced, and probably will not be the last. Its potential benefits are obvious: improved comparability of statistical indicators; reduced time and costs for questionnaire development, data processing and analysis; better options for collaboration and sharing of expertise between countries. Also, it does not require countries to forfeit their unique data needs, as these can be serviced through separate questionnaire modules. Nevertheless, it is also clear that several other considerations play a role in counteracting the above arguments.

In the face of ever increasing census costs, increased questioning of the use of population censuses, and increased awareness of the need for standardized indicators such as the MDG indicators, the 2010 Round of Censuses would seem to be the most opportune time to advocate for improved standardization, and incorporate this objective within frameworks of future donor support to census operations.

Engendering censuses

Initial efforts towards engendering censuses were made by UNFPA and others during the 2000 Round. Advocacy and support to this extent has prompted more than half of the countries in SAWA to incorporate gender issues into their plans for censuses in the 2010 Round. Most of them expect and require further donor assistance in this regard. In countries where the principles of engendering censuses have not yet met with affirmative response, advocacy on this issue needs to be stepped up.

For further reading

[Http://unstats.un.org/unsd/demographic/meetings/egm/CensusEGM04/list_of_docs.htm](http://unstats.un.org/unsd/demographic/meetings/egm/CensusEGM04/list_of_docs.htm)

[Http://unstats.un.org/unsd/demographic/meetings/egm/Symposium2001/docs/symposium_52.htm&e=747](http://unstats.un.org/unsd/demographic/meetings/egm/Symposium2001/docs/symposium_52.htm&e=747)

[Http://www.paris21.org/pages/events/paris21-events/list/index.asp?orderby=c&orderin=1](http://www.paris21.org/pages/events/paris21-events/list/index.asp?orderby=c&orderin=1)

<http://www.unescap.org/stat/meet/census2004/>

[Http://www.un.org.pk/unfpa/programesf.htm](http://www.un.org.pk/unfpa/programesf.htm)

http://www.plusnews.org/report.asp?ReportID=45020&SelectRegion=Central_Asia

<http://www.bbsgov.org/2001/content.htm>

http://www.bbsgov.org/s_census/contents.html

[Http://www.censusindia.net/](http://www.censusindia.net/)

[Http://www.censusindiamaps.net/](http://www.censusindiamaps.net/)

[Http://www.sci.org.ir/index.htm](http://www.sci.org.ir/index.htm)

<http://eamar.sci.org.ir/>

[Http://www.planning.gov.mv/census2k/index.htm](http://www.planning.gov.mv/census2k/index.htm)

[Http://www.cbs.gov.np/pop/Webpage/html/conents.htm](http://www.cbs.gov.np/pop/Webpage/html/conents.htm)

[Http://www.statpak.gov.pk/depts/pco/statistics/statistics.html](http://www.statpak.gov.pk/depts/pco/statistics/statistics.html)

<http://www.statistics.gov.lk/census2001/index.html>

Population and Housing Census (PHC-1997)

Executive Summary

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General Background

- Census Date: 10/12/1997
- Duration of Data collection: 2 weeks
- Number of employees: more than 7,000
- Includes: Population, Housing, Buildings and Establishment Censuses
- 2.6 million: actual count
- 210 thousand: estimate for the annexed part of Jerusalem
- 83 thousand: estimate of the uncounted population
- Two census pilots were conducted before the census
- Total census cost: USD \$7.5 Million
- Source of funding: National Government, UNFPA, the British Government through the Department for International Development (DFID), the Swiss Government through the Swiss Development Cooperation (SDC), the Norwegian Government through (NORAD), the World Bank (WB) through the Palestinian Economic Council for Development And Reconstruction (PECDAR)
- Technical assistance by UNFPA: Chief Technical Advisor (CTA) and Country Technical Services Team (CST) during the preparatory stage and data collection
- By DFID and UNFPA: under the Dissemination, Analysis and Training for Effective Utilization of Census Findings Project

Objectives

- Population estimates;
- Socio-economic indicators;
- Sampling frames;
- Small area population;
- Updating registers;
- Develop special standards, definitions and manuals; and
- Building of national capacity for the statistical system.

Dissemination

- The results were made available within six weeks for preliminary results, and within eleven months for the final results.
- The census data disseminated at the national level, regional level (West Bank/Gaza Strip), Governorate level, locality level, by type (Urban/Rural/Camps) and the main characteristics disseminated by the locality level.
- More than 150 reports were published (paper, Internet).
- A public use file (raw data) was prepared and disseminated.

Major Challenges

- The first ever census to be conducted in Palestine;
- The lack of quality data and high demand for competing priorities;
- The Census did not cover those parts of the Jerusalem Governorate, which were annexed by Israel in 1967, due to Israeli restrictions;
- The external factor resulting from the Israeli Government passing a law prohibiting fielding the census in East Jerusalem and its intervention, aimed at annoying and harassing field workers in some areas surrounding Jerusalem;
- Lack of capacity in the field of data analysis;
- Absence of political stability;
- Lack of technical infrastructure; and
- Inadequate budgets.

Invoking Stakeholders Interest

- Should satisfy users' needs;
- Should involve stakeholders at early stage; and
- Should include the government, research community and public at-large (including Traditional leaders).

Definitions, Questionnaires and Classifications

- UN standards and definitions were adopted;
- Long form questionnaires;
- Special attention to groups like Bedouins, people in transit and persons living in institutions; and
- Several classification manuals were prepared and tested.

Organizing Fieldwork Activities

- One enumeration area (about 150 households) for one enumerator;
- Five enumerators for one crew leader;
- Five crew leaders for one supervisor; and
- One governorate director and one assistant.

Quality Assurance

- Selection of census fieldworkers;
- Training programmes and plans were carefully designed in advance;
- Direct interviewing technique was solely adopted in the enumeration process;
- A “reminder” questionnaire was distributed to all households before the actual enumeration started;
- Revision techniques and error correction mechanisms and instructions were prepared;
- Supervisors personally reviewed a sample not less than 5 percent and the crew leaders reviewed 10 percent of the households;
- Two central operation headquarters operated continuously 24 hours a day;
- A special office and computer editing manual was prepared in advance, which included all possible checks and controls that could be applied to the census data;
- All census data processing employees were selected from the best fieldworkers for office editing;
- The editing of the census questionnaires was subject to 100 percent verification;
- At the beginning of the census data entry stage, 100 percent verification was implemented to identify weaknesses among data keyers; and
- At later stages, only 10 percent verification of data entry was applied.

Evaluation

- A Post Enumeration Survey (PES) was conducted to estimate the net undercount rate (1.82 percent).
- A 4.4 percent random sample of all enumeration areas were re-enumerated and matched against the census records in these enumeration areas. Then, the dual-system method was used to estimate both the under-coverage of the census and the total population.
- PES was conducted immediately after the census.
- No fieldworker in the PES worked in the same area that he worked in during the census.
- PES was conducted without reference to census forms.
- The best crew leaders in the census were selected to participate in the PES.
- The internal consistency and comparability of the census was assessed using other data sources, such as the population register and the Voter Register.
- The highest under-coverage rate was in the Jerusalem Governorate.
- Some people in Jerusalem were missed because they were not willing to be enumerated due to a fear of losing their Israeli ID Card if they participated in the census.
- Since the enumeration period was not long (two weeks), the chances of duplication due to mobility was reduced.
- The timing of the census, in a month of little mobility, reduced the chances of omitting people spending holidays away from home.
- Census findings on the aggregate level showed consistency with the demographic survey.
- Census findings showed consistency with the findings of the Labour Force survey.

Utilization of Census Results

- Increase awareness at various levels, about the available wealth of data and its usefulness in revising, updating and reformulating various sector plans, as well as ensure that overall population concerns are also taken into consideration.
- Increase utilization of census results immediately after the census.
- Link population variables within socio-economic policies; decision-making to achieve the MDGs.

Recommendations for the Next Census in 2007

- Comprehensive census (no sampling);
- No durable goods collected in the next census;
- Collect data about use of computers and the Internet;
- Collect data to calculate Maternal Mortality;
- Strengthen the utilization of census results immediately after the census;
- Link population variables with MDG;
- Conduct a Post Enumeration Survey to evaluate coverage and content errors;
- Take innovative action to counter the political constraints/problems raised by the Israeli authority;
- Start early, on the preparation of a project document for the next census, including cost estimations;
- Include the PES and support for the utilization of census results in the census plans and budgets;
- Test all of instruments, procedures, instructions, costs and quality assurance for hand-held devices (HHD), before adoption;
- Use the results from the first census to evaluate the next census; and
- Increase awareness, at various levels, about the available wealth of data.

IV

Papers

Background Paper for the Advocacy and Resource Mobilization International Meeting towards the Successful Implementation of the 2010 Round of Population and Housing Censuses in Developing Countries, 24-25 February 2005, New York

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List of Acronyms	84
Executive Summary	85
Chapter 1: Introduction	87
Background of the Meeting	87
Census Issues in Perspective.....	88
Implementation Status of Censuses.....	89
Africa	89
Asia	90
Pacific Islands	90
Central America	90
Importance of Population and Housing Censuses	90
Evolution of the Modern Census of Population and Housing	91
UN Support to Census Activities	91
UNFPA's Key Role in Supporting Censuses	92
Planning for the 2010 Round of Censuses.....	93
Chapter 2: Recent Discussions on Current Issues of PHC	94
Debates on Census Issues	94
Utilization and Dissemination of Census Results	94
Chapter 3: Census Advocacy and Resource Mobilization	96
Advocacy for Increased Resources	96
UNFPA/PARIS21 Expert Group Meeting on Strategies for Reducing Census Costs.....	96
References	98
Annex 1: Current Status of Population Censuses	99
Annex 2: Feedback from Countries on Census Issues	100

Note:

The views and opinions expressed in this note are those of the author and do not necessarily reflect those of the United Nations Population Fund (UNFPA).

LIST OF ACRONYMS

ACS	American Community Survey	PHC	Population and Housing Censuses
CST	(UNFPA) Country Support Teams	PIC	Pacific Island Countries
DFID	Department for International Development (UK)	SADC	Southern African Development Community
ECA	Economic Commission for Africa	SPC	Secretariat of the Pacific Community
EU	European Union	UN	United Nations
GIS	Geographic Information System	UNDP	United Nations Development Programme
ICPD	International Conference on Population and Development	UNFPA	United Nations Population Fund (formerly the UN Fund for Population Activities)
IDB	Islamic Development Bank	UNICEF	United Nations Children’s Fund
IMF	International Monetary Fund	UNSC	United Nations Statistical Commission
JICA	Japan International Cooperation Agency	UNSD	United Nations Statistics Division (formerly UNSO)
MDG	Millennium Development Goals	USAID	United States Agency for International Development
OCR	Optical Character Recognition/Reading	WB	World Bank
OMR	Optical Mark Recognition/Reading	WPHCP	World Population and Housing Census Programme
PARIS21	Partnership in Statistics for development in the 21st Century	WPPHC	World Programme on Population and Housing Censuses
PDS	Population and Development Strategies		
PES	Post Enumeration Survey		

EXECUTIVE SUMMARY

A Population and Housing Census (PHC) is the primary source of information about the number and characteristics of a given population. Most countries are following the earlier recommendations to conduct their censuses at least once every ten years. On the other hand, the paucity of financial and human resources and lack of understanding of the strategic importance of censuses weigh heavily against periodic census-taking, particularly in developing countries in Africa. Some developing countries did not undertake a census during the 1990 Round (1995–2004), and in others, census data analysis and dissemination were either delayed or left incomplete.

In pursuance of the recommendations of the United Nations Statistical Commission (UNSC) at its 35th session, the United Nations Statistical Division (UNSD) organized, in the recent past, meetings of experts and Member States. The United Nations Population Fund (UNFPA) organized workshops on census cost saving strategies, and census data dissemination and use. These deliberations have provided a set of useful suggestions and guidelines to deal with current census issues.

The objective of the present meeting on international advocacy and resource mobilization is to identify the persistent problems encountered at different stages of the census, analyse their causes and identify appropriate approaches to solve them in order to ensure a smooth and successful 2010 Round of Censuses. The problems generally pertain to design and operations, serious under-utilization and poor dissemination of census results, and constraints of human and financial resources. The meeting would also attempt to redefine and assert the value of PHCs in measuring progress towards the achievement of the MDGs.

It is high time that the planners and decision-makers in national governments realise that a PHC is a worthwhile investment which provides an enormous wealth of information. A PHC provides the denominator in the calculation of several of the indicators of development. A PHC provides many useful indicators for monitoring progress towards the MDGs and targets. PHC is an indispensable tool for measuring progress and development.

An examination of the census-taking experience in developing countries especially, in sub-Saharan Africa, reveals that nations do appreciate the usefulness of a census, but default on the ten-year periodic-

ity due primarily to financial constraints and the high costs of the operation, as well as the absence of political will, a lack of national capacity, and/or civil strife and disturbances.

The other recurrent weaknesses identified are dependence on external funding, long delays in the release of the census results and poor quality census results. There is a need to regard PHC as an integral part of the national statistical system and not as an ad hoc project activity, as it is now regarded in many cases. Often census data, collected at great cost, are not properly analysed, disseminated and utilised, because the census project has ended and there are no additional funds available in the national budget to carry on these important post-census activities.

Yet another problem in the implementation of censuses is the lack of coordination of donor contributions. In some cases, funds do not arrive at the appropriate time. In some governments, the procedures for the release of even budgeted funds are so cumbersome that activities are seldom funded on schedule. This delay in the release of funds leads to difficulties in completing census activities on schedule, which ultimately affects the quality of data collected. The efforts to build sustained national capacity do not succeed due to a large turnover of trained staff. Cartographic capacity is not maintained through the intercensal period and outdated maps have to be either updated at the last minute or used “as is” leading to the omission of areas and population.

A number of factors result in under-utilisation of census data. There is no special effort to promote utilisation of census data through the establishment of a data user’s service centre; planners are not trained in the use of census data for development work; and when census data are released, they are readily available only in large cities and provincial capitals. People and planners at district, commune and village levels, and in remote areas never get an opportunity to learn about the results and use them in their work.

Several countries have reported that their censuses have been delayed because of procedural delays in releasing funds, whether government funds or donor funding. It is necessary to eliminate such bottlenecks well before the census so that the census will not be jeopardized. Almost all countries want to cut census

costs. They are not in a position to shift to alternative census designs, as their infrastructure is inadequate to support technological and methodological innovation. However, new technology can help cut data processing cost. Hence, countries should think of adopting such technologies with proper guidance and by exchanging of knowledge with countries in their region.

The depleted strength of trained staff due to large-scale turnover is of concern to countries for the 2010 Round. One way to solve this problem, with the help of a country's own resources, is to utilize the senior trained staff, wherever they are, to train the future staff.

In some countries, while there is national capacity to collect data and complete data entry, there is very low capacity in cartography (GIS application), data processing (computer editing, tabulation, etc.) and data analysis. That is why such countries stop with the publication of population figures and do not complete the analysis, write analytical reports, or produce thematic maps or Atlases. It is often necessary to provide technical assistance in these cases.

The *2010 World Programme on Population and Housing Censuses (WPPHC) for 2005–2014* is being initiated by the UNSD. The goal of this programme is to bring about an agreement among all countries and areas regarding a set of accepted international principles and recommendations governing the conduct of censuses; to conduct a census during the period 2005–2014; and to disseminate census results in a timely manner. In order to succeed, the *World Programme* has to be supported actively by Member States in a working partnership with the United Nations, its Regional Commissions and other intergovernmental and non-governmental organizations.

One of the sure ways to make the case for increased investment in censuses is to build demand for better data, with the support of donors and other partners. Advocacy for increased resources is required not only for censuses, but rather as part of the wider development process. The focus should be not just on the cost of conducting censuses, but rather on the cost of not having the data.

Technical expertise and financial assistance from international organizations have played an important role in census-taking in many developing countries in the past and will continue to be needed in the future. For more than three decades, the United Nations Population Fund (UNFPA) has played a leading role in supporting censuses in developing countries and countries in transition. There are other donors as well who have been supporting censuses. However, as censuses become more expensive and donor funding declines, some countries have been unable to complete censuses on schedule. It is necessary to identify new sources of funding, such as public and private national agencies, and conduct more research on ways to reduce the cost of censuses. At the sub-regional level, it would be useful to explore the possibility of coordinating and sharing census activities among groups of neighbouring countries with similar data needs. For example, census organizations could work together to develop core census questionnaires, prepare training manuals, share appropriate data-processing technology and coordinate dissemination strategies.

This background note draws heavily on the recommendations of the UNFPA/PARIS21 Expert Group Meeting on Strategies for Reduced Census Costs. These recommendations will be useful to all countries and are worth serious consideration.

Introduction

Background of the Meeting

The United Nations Population Fund (UNFPA), in collaboration with the United Nations Statistics Division (UNSD), Department of Economics and Social Affairs, is organizing an international meeting on “Advocacy and Resource Mobilization towards the successful implementation of the 2010 Round (2005–2014) of Population and Housing Censuses (PHCs) in Developing Countries.” This report, which is intended to be the background document for this meeting, provides a situation analysis of census activities over the last one or two decades. Based on the concept paper released by UNFPA in this connection, the background and objectives of this meeting are presented in this section.

The United Nations Statistical Commission (UNSC) at its 35th session, in the area of demographic and social statistics held in March 2004, laid down a range of activities for UNSD to ensure the success of the 2010 Round of Population and Housing Censuses. These activities included the establishment of an Expert Group to set census priorities, the development of a well-structured website to exchange census data and experiences and to set up the foundations for the 2010 World Programme on Population and Housing Censuses (WPPHC), and the drafting of a resolution in this regard (United Nations Economic and Social Council, Official Records, 2004).

The United Nations Symposium on Population and Housing Censuses was conducted in New York during 13–14 September 2004. It defined a range of activities relevant to the 2010 Round; identified specific issues and areas warranting further actions based on the experiences and lessons learned from the 2000 decade; set priorities for the Expert Group to Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses; and provided inputs for the drafting of a resolution for consideration by UNSC with respect to the development of the 2010 WPPHC.

The United Nations Expert Group Meeting to Review Critical Issues Relevant to the Planning of the 2010

Round of Population and Housing Censuses was held in New York from 15 to 17 September 2004. It produced a set of recommendations and conclusions regarding the technical and scientific aspects of emerging issues and topics, such as alternative census designs, core national data sets and updating and revising the *Principles and Recommendations for Population and Housing Censuses*. It also established terms of reference outlining the role of the Expert Group in relation to the 2010 WPPHC.

In emphasizing the need to ensure the success of the next round of census-taking, the Symposium and the Expert Group requested UNSC submit for adoption to the United Nations Economic and Social Council a Resolution on the 2010 WPPHC, supporting the 2010 census programme. The Resolution urged all Member States *inter alia*, to hold a population and housing census at least once in the period 2005–2014.

In addition, UNSD and the Regional Commissions undertook a set of activities in response to the decisions of UNSC at its 35th session. UNSC, at its 36th session in March 2005, will consider the resolution in support of the 2010 WPPHC.

UNFPA organized three workshops in the recent past focused on cost-saving strategies for censuses, and census data dissemination and use. The workshop on “In-House Capacity Building Workshop on Population Censuses: New Directions and Cost Saving Strategies” was held by UNFPA in Princeton, New Jersey, from 21–23 October 2002. This workshop was attended by UNFPA headquarters staff, CST Advisers and a few external experts including from the U.S. Bureau of the Census, Statistics Canada and South Africa. Two other workshops were both held in Pretoria, South Africa (“UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26-29 November 2001” and “UNFPA/PARIS21 International Expert Group Seminar on Population Census Data Dissemination, Use and

Advocacy, 10-12 November 2003”).

In pursuance of the recommendations of the UNSC, the UNSD-organized meetings and the UNFPA-organized workshops mentioned above, UNFPA, in collaboration with UNSD, proposed holding the present international advocacy and resource mobilization meeting with the objective of identifying appropriate approaches to:

- (i) Determining the persistent problems pertaining to the different stages of the census (e.g., design, operations, analysis, technical deficiencies, lack of capacity and problems of incompleteness of censuses) both within and across regions and identifying appropriate capacity-building strategies;
- (ii) Ascertaining the reasons for the serious underutilisation and poor dissemination of census results at the national and sub-national levels, and identifying appropriate strategies to reverse this trend;
- (iii) Ascertaining the availability (or lack) of resources and budgets, both internally and externally, and identifying appropriate strategies to address the resource constraints in a more sustainable manner, both by donors and census countries for the 2010 Round of Censuses; and
- (iv) Redefining and asserting the value of PHCs in measuring progress towards the achievement of the MDGs.

Census Issues in Perspective

To a lay person, the population and housing census may appear a simple affair of counting the heads, collecting some information about them and publishing the population figures. He or she has to be convinced that the decennial collection, processing and release of reliable and timely data calls for proper planning and management as well as adequate funding. It is also high time that the planners and decision-makers in national governments realised that a census is the source of an enormous wealth of information which is worth the investment.

An examination of the situation of census-taking in developing countries, especially in sub-Saharan Africa, reveals that nations do appreciate the usefulness of a census but default on the ten-year periodicity due primarily to high costs of the operation, as well as the absence of the political will to conduct a census, the lack of national capacity, and civil strife and distur-

bances. The other recurrent barriers identified are: the high cost of census-taking, dependence on external funding, long delays in the release of the census results and the poor quality of the census results in many cases (Richard Dackam-Ngatchou, 2003).

The population and housing census is not viewed by most of these countries as an integral part of the national statistical system, but as an ad hoc project activity. There is no institutional basis for undertaking a census. Generally, a temporary census section established in the national statistics office works in relative isolation. It is closed after the census, to rise again like a phoenix before the next census. This approach has several weaknesses, the most serious of which is lack of a sense of ownership by the government. The census is viewed as a separate project, starting a few months before the census day and ending abruptly once the project is closed after the census. In many cases, census data collected at great cost, are not properly analysed, disseminated and utilised when the project is closed and there are no funds available in the national budget to carry on these important post-census activities. Another weakness in the implementation of census programmes in these countries is the lack of coordination of donor contributions, often resulting in funds not arriving at the appropriate time. In some governments, the procedures for the release of even budgeted funds are so cumbersome that activities are not funded on a timely basis. This type of delay in funding leads to difficulties in completing census activities according to the work plan, which ultimately affects the quality of the data collected. For instance, it is only after the commencement of the project, that the training programme for staff starts. Professional staff that are required for the census, are sent to training abroad and return only after the census is over. More often than not, staff members thus trained, are posted to other duties upon their return. Ultimately, the census does not get the benefit of trained staff. By the time of the next census, such staff members either retire or shift to different jobs. Generally, the training received in earlier years becomes outdated due to tremendous advancements in technology, especially in the field of data processing. The efforts to build national capacity are therefore not successful. Cartography is another area which poses serious problems in these countries. Cartographic capacity is not maintained through the interensal period and outdated maps have to be updated immediately before the census.

Other common problems encountered in developing country censuses are the failure to complete the analysis and dissemination of the census data and the low level of utilisation of census information, which results in a high cost-effectiveness ratio. A number of factors result in

under-utilisation of census data. Some of these are: the public in general and planners in particular, are not aware of the data available from the census as they are not informed through workshops and seminars of the data that are available and how to access them; there is no special effort to promote utilisation of census data by the establishment of a data users' service centre; when the census data are released, it is known only in large cities and provincial capitals; and the data are inadequate due to the lack of involvement of stakeholders when designing the questionnaire, and specifying the definitions and concepts used. People and planners at the district, commune and village levels, and in remote areas never get an opportunity to learn about the results and use them in their work. In the recent past, with UNFPA assistance, some countries have been conducting dissemination workshops at sub-national levels, such as provinces and districts

Implementation Status of Censuses

Annex 1 describes the current status of population censuses in a number of countries, based on information received by UNSD. With the objective of getting an up-to-date feedback on the status of PHCs during the 1990 and 2000 Rounds and on the plans of countries to take a PHC in the 2010 Round, a survey was undertaken with the assistance of UNFPA country offices. A questionnaire was circulated to those offices. Completed questionnaires were received for 63 countries. An analysis of the answers to the questionnaire has thrown some light on the status of censuses in the regions (See Annex 2).

Based on the constraints and lessons identified and reported by the countries, the following problems seem to call for attention and remedial action:

AFRICA

1. A funding crisis is the major cause for several national governments being unwilling to plan their censuses on a reasonable schedule. To put it in plain language, most of these countries will be willing to carry out a census if funds are assured by donors.
2. Politicization is a major issue in some countries. Due to rivalry between ethnic groups, each group wants to show an increase in relative population size in the census. This can lead to attempts to include fictitious persons in the count and get persons enumerated more than once. The village or clan chiefs encourage such acts. When population is linked to the allocation of funds, even local governments help attempts to boost their population. There is another risk in countries with this problem. It is the refusal of various segments of the

population to accept the census figures, stating that the population of their ethnic group or religion, or the population of their local government area was not properly enumerated and that there was bias in the census enumeration. Such complaints can stall the release and publication of the final results of the census. These practices have to be curbed by organizing proper advocacy programmes, by making census enumeration as transparent as possible and by involving leaders of different groups in census-taking.

3. Almost all countries want to cut census costs. They are not in a position to shift to alternative census designs, because their infrastructure will not support such innovation. However, new technology can help cut data processing cost. Hence, countries should think of adopting such technologies with proper guidance and by exchange of knowledge with countries in the region who have successfully implemented satellite imagery in cartography, scanning and OCR techniques in data processing, etc.
4. National capacity, built in the past, mainly through the efforts of UNFPA, was definitely useful in improving past censuses. However, in most countries there is a rapid turnover of trained staff as they either retire or move to better jobs. The depleted strength of trained staff, due to such turnover, is of concern to countries for 2010 Round. One way to solve this problem, with the help of a country's own resources, is to utilize the senior trained staff, wherever they are, to train the future staff. It is not an exaggeration to say that some of the countries (for example Nigeria, Tanzania and Kenya) have such remarkably trained and qualified staff that they can be advisors and resource persons for future staff. In this connection, regional collaboration can be encouraged and the exchange of technical know-how can take place. This will definitely prove very economical and promote self-confidence among the countries reporting lack of national capacity for future census-taking.
5. Several countries have reported that their censuses have been delayed because of procedural delays in releasing funds, whether by the national government or donors. It is necessary to eliminate such bottlenecks well before the census so that it will not be jeopardized.
6. In some countries, a strike call by national staff due

to their grievances mars the smooth organization of the census. Unrest in part of a country or the whole country also prevents census-taking in that part or the whole country.

7. In some countries, while there is national capacity to collect data and complete data entry, there is low capacity in cartography (GIS application), data processing (computer editing, tabulation, etc.) and data analysis. That is why such countries stop with publication of population figures, and do not complete the analysis, write analytical reports, or produce thematic maps or Atlases. It will likely be necessary to provide technical assistance in these cases.

ASIA

1. Barring post-conflict countries like Cambodia, Timor-Leste and Afghanistan; countries like Lao PDR, Mongolia and Nepal who need assistance; and Myanmar, which has no intention of conducting a census at present, the other countries who responded to the survey are in a position to carry out a census on their own. The two population giants, China and India, regularly take their censuses and analyse the results.
2. Due to the high cost of census-taking and difficulties in finding a large number of willing enumerators, countries like Bangladesh and India are thinking of making changes in their census methodology. Bangladesh is seeking UNFPA assistance in developing a vital registration system to replace the census in the future. India, for the first time, adopted scanning technology for data entry in the 2001 census. This had enabled the quicker release of the census results. For the next census, India is thinking of adopting a short form for the 100 percent enumeration and a long form for collecting detailed questions on a sample basis.
3. It is important to evaluate the census results. Only a few countries seem to organize Post Enumeration Surveys or other methods of evaluation. Only if proper evaluation is done, will census figures have credibility.

PACIFIC ISLANDS

The Pacific Island countries require continued (technical and financial) assistance for undertaking national censuses. For assistance, in census planning/operational design/management and data processing, which are the two most critical areas, a regional approach is a preferred option.

CENTRAL AMERICA

Nicaragua reported that its municipal boundaries were changed by the administration after census cartography. This led to a delay in releasing census results as the database had to be adjusted to the new areas. To avoid such delays, it would be advisable if the government or municipalities make all jurisdictional changes before the census and “freeze” the boundaries until the census is completed. Census data should be published for administrative units as they existed at the time of the census.

Importance of Population and Housing Censuses

Administrators and planners the world over have long recognized that Population and Housing Censuses (PHCs) are essential as the principal source of data to serve a wide variety of information needs. For any country, the population census is the primary source of information about population size, its geographic distribution, and the social, demographic and economic characteristics of its people.

Census data are used by most countries for apportioning electoral areas, for national and sectoral planning, for allocating resources, for providing roads and other infrastructure, and for marketing and distribution activities of the private sector, for making improvements to housing, schools, health and medical care, and employment. High-quality and timely census results enable the measurement of population trends, guide policies and programmes, control and monitor implementation, help set goals and priorities, and are incorporated in the design of funding procedures.

Population and housing censuses constitute the core of the national statistical systems. For the foreseeable future, they will continue to be a major source of data for governments and other organizations in many countries. A unique feature of the census is that it is the only source of data for the smallest geographical areas or localities within a country, and for special population groups and phenomena that change slowly over time. As a result, it permits, for example, the analysis of migrant populations, persons living in disadvantaged areas or circumstances, or female-headed households and other gender-related issues.

Censuses also enable development of reliable sampling frames for conducting intercensal sample surveys to gather information on important topics such as demographic trends, employment, expenditures and health indicators. Further, with the use of international definitions and classifications, censuses also provide for the comparability of basic development indicators among countries.

The process of completely counting each and every individual of a country's population, irrespective of age, sex, socio-economic status or place of residence, makes a census a unique and the most important statistical event of a country. The census takes stock of the human resources of countries—their most important asset. An important feature of a census is its complete coverage of the population in a country or area.

Together with the housing census, generally conducted simultaneously, the population census provides an important part of the foundation for good governance and development. Notwithstanding the substantial cost, the population census is considered a must. For more than two centuries, the industrialized countries of the world have conducted censuses every decade. Census data provided them the foundation for planning and good governance, for monitoring the development progress and for providing direction for the future. A lack of census data seriously hampered planning activities across a broad range of sectors in many countries, especially the measurement of progress towards national and international development goals.

This was particularly true as governments followed the road map towards the Millennium Development Goals (MDGs), which included establishing indicators and monitoring implementation by partnerships of national actors. Adequate gender-sensitive poverty assessments are rarely possible without the sex-disaggregated information provided by a census. Population data are a direct component of the MDGs. Further, they are also required as denominators to calculate ratios. Either way, without good quality population numbers and characteristics, measuring progress towards poverty reduction at both the global and national levels would be impossible. In most countries, the only source of population information is the census.

There are many indicators useful for monitoring MDGs that can be obtained from census data. For example, in monitoring the goal of universal primary education, the indicators that can be derived from the census are the gross enrolment ratio in primary education, the proportion of pupils starting grade 1 who reach grade 6 and the proportion of 10–15 year-olds completing primary education. For the promotion of gender equality and empowering women, which is another MDG, a census can provide the following indicators: the ratio of girls to boys in primary, lower secondary and higher secondary gross enrolment; the ratio of literate females to males among 15 to 24 years old; and the share of women in wage employment in the non-agricultural sector. For the goal of developing a global partnership for development, the unemployment rate of 15–24 year-olds obtained from

the census can be useful. Thus, there is a justifiable need for proper investment in census programmes.

Censuses should be taken on an established schedule so comparable information can be made available for fixed intervals. A series of censuses makes it possible to learn from the past, accurately describe the present and estimate the future. Most countries are following the earlier recommendations to conduct their censuses at least once every ten years. Some of them find it necessary to carry out the censuses every five years (e.g., Australia, Japan, New Zealand, the Republic of Korea and some of the Pacific Island countries).

On the other hand, the paucity of financial and human resources and the lack of understanding of the strategic importance of censuses weigh heavily against periodic census-taking, particularly in developing countries. A review of the implementation of the 2000 Census Round (1995 to 2004), especially in developing countries, shows that some countries did not undertake a census during that round and, in others, census data analysis and dissemination were either delayed or abandoned.

Evolution of the Modern Census of Population and Housing

Even in ancient times, rulers felt the need to take a complete headcount for administrative purposes. The early inventories were made more for taxation and recruitment for military duties or public works. From such early enumerations, the modern population census, with the characteristics of universal enumeration, and a wide scope for inquiry and a provision of information for administrative and statistical purposes, can be said to have evolved. Today, the census is probably the most prolific source of information on the population and housing condition of the people at the national, sub-national and local levels. The census has to be considered as an exercise of national importance and not as a routine governmental activity.

The scientific recording of the population, i.e. census-taking as it is currently known, dates back to the mid-19th century in some countries. In others, the first census was taken only in the late 20th century. The evolution of census methodologies and their adoption have differed widely from country to country. The scope and content of the census have also varied among countries and in some cases, from one census to another in the same country.

UN Support to Census Activities

It was only in the 1950s that many countries agreed on global and regional recommendations for more stan-

standardized census design, concepts, definitions and procedures. It was then a worldwide consensus developed on the essential features of a census: individual enumeration, universality within a defined territory, simultaneity and defined periodicity.

Over the past five census decades, the major role of the United Nations in support of the World Population and Housing Census Programme (WPHCP), has been in developing and providing guidelines and prescribing international standards to guide the collection and production of population and housing statistics and facilitate the international comparability of such statistics.

The primary goal of the census programme of the United Nations Statistics Division (UNSD) is to assist countries in planning and carrying out improved and cost-efficient censuses, and to disseminate reliable results in the shortest possible time. This goal has been achieved through the preparation of reference and training materials and the provision of technical assistance services. The programme includes the following set of activities, among others:

- establishing principles and recommendations for population and housing censuses in collaboration with member countries;
- building national capacity in the production and dissemination of census data; and
- international data compilation and dissemination.

For over six decades, the United Nations Statistical Commission (UNSC) and UN Regional Statistical Committees have been supporting national census-taking. UNSC established the 1950 and 1960 World Population Census Programmes that were followed by the 1970, 1980 and 1990 World Population and Housing Census Programmes (WPHCPs). These initiatives by UNSC were then followed by the initiation in 1994 of a 2000 WPHCP supporting worldwide census-taking.

Under the various mandates of the 1950–2000 WPHCPs, UNSD, as Secretariat to UNSC, and in collaboration with the Regional Commissions of Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and Western Asia, played a key role in the coordination of the World Programmes. This includes the preparation of principles and recommendations, the setting of standards and methods, the dissemination of census results through the United Nations Demographic Yearbook database system and the provision of technical cooperation for census operations.

The United Nations Principles and Recommendations for Population and Housing Censuses, Revision 1, provide agreed definitions, concepts and harmonised procedures for census-taking (United Nations, 1998). A series of Handbooks were also prepared. It is important to note that UNSC at its 35th session, requested that Principles and Recommendations, and related handbooks be reviewed and updated, in light of the experiences provided by the last round (1995–2004) and for planning the next decade (2005–2014).

The success of the WPHCPs is, in no small measure, due to the support of international funding agencies such as the United Nations Population Fund (UNFPA), and other international organizations, such as the United Nations Development Programme (UNDP) and the World Bank. These agencies have supported the conducting of censuses through the provision of funds, loans and technical assistance.

UNFPA's Key Role in Supporting Censuses

For more than three decades, the United Nations Population Fund (UNFPA) has been playing a leading role in supporting censuses in developing countries and countries in transition. Many countries, across all continents, could not have conducted their censuses but for the timely assistance provided by UNFPA. This ranges from support for the entire cost of the census in some countries, to technical aspects of capacity-building, including in cartography, data collection, processing, data analysis and dissemination, in others. In this endeavour, UNFPA has been working in close partnership with other international, technical and donor agencies, especially the United Nations Statistics Division (UNSD), EU, the U.S. Census Bureau, agencies within the UN system and the United Nations Regional Commissions. UNFPA's technical and financial assistance to developing countries has contributed to successful censuses in many countries and strengthened their capacities to conduct modern censuses. Apart from its direct support at the country level, UNFPA provides regional technical support through a network of Country Technical Services Teams (CSTs) and interregional support through a team of experts at the U.N. Statistics Division.

UNFPA provides support to data collection activities like the census and population surveys under the subprogramme, Population and Development Strategies (PDS). The other major substantive thematic area guiding the operational activities of UNFPA is reproductive health—with advocacy and gender as important cross-

cutting dimensions. The focus of PDS is on integrating population issues into sustainable human development processes and on examining the impact of development processes on population variables.

Guided by the ICPD Programme of Action, the recommendations of ICPD+5 and the Millennium Declaration, achieving an improved balance between population growth, and economic and social development is the goal of the Fund's work in this area. The Fund helps support country efforts to formulate population and development policies and programmes; strengthen national capacity in the area of data collection and analysis; and promote knowledge of the linkages between population variables, and economic and social development.

These linkages may be found, *inter alia*, among poverty, environment, migration, urbanization and population ageing. In carrying out its mandate, the Fund attempts to ensure maximum impact on the lives of the poor and especially women. UNFPA's assistance to South African Development Community (SADC) countries is an example of UNFPA's efforts to promote regional cooperation in census matters.

Planning for the 2010 Round of Censuses

The *2010 World Programme on Population and Housing Censuses (WPPHC) for 2005–2014* is being initiated by UNSD (United Nations, DESA, ESA/STAT/AC.97/1, 2004). The goals of this programme are to bring about an agreement among all countries and areas regarding a set of accepted international principles and recommendations governing the conduct of censuses; for every country to conduct a census during the period 2005–2014;

and to disseminate the results of all censuses in a timely manner. In order to succeed, the *World Programme* has to be supported actively by Member States in a working partnership with the United Nations, its Regional Commissions and other intergovernmental and non-governmental organizations (United Nations, DESA, ESA/STAT/AC.97/2, 2004).

The World Programme mainly seeks to build support for the implementation of the principles and recommendations approved by the UN Statistical Commission and other UN Regional Bodies, including the United Nations Principles and Recommendations for Population and Housing Censuses and other such recommendations. The 2010 World Programme will promote the collection, compilation and dissemination of results using internationally agreed upon standards and methods. One of the aims of the World Programme is to provide sound technical advice to national statistical offices and strengthen overall national statistical capacity in the process of conducting censuses and intercensal surveys, as well as in the effective use of information technology (IT).

The United Nations Statistics Division, in support of the 2010 World Programme, will coordinate the review and publication of a set of accepted international principles and recommendations governing the conduct of censuses, prepare training materials and conduct expert group meetings and workshops in support of their implementation. Among other activities, UNSD will initiate its activities in support of the World Programme upon the recommendations taken by the Expert Group meeting (15–17 September 2004) on critical issues related to planning the next round of population and housing censuses and the resultant actions taken by UNSC at its future sessions.

Recent Discussions on Current Issues of PHC

Debates on Census Issues

In the last two decades, census planners have faced increasing demands from stakeholders for detailed data and more rapid feedback while they seek ways to increase citizen participation in censuses. Over the past few years, a number of debates, symposia and expert group meetings have been organized at regional and international levels to review the experiences of countries in the 2000 Round and to consider solutions to overcome the problems observed. The main objective of these meetings, attended mostly by census planners and experts, was to discuss as to how these experiences might guide countries in the planning of the next round of censuses.

Significant issues relating to the successful implementation of census programmes were discussed and highlighted by census planners and experts at the Symposium on “Global Review of 2000 Round of Population and Housing Censuses: Mid-Decade Assessment and Future Prospects” organized by UNSD in New York during 7–10 August 2001. The full report of the Symposium and related documents can be found at the UNSD website <http://www.un.org/Depts/unsd/demog/census/index.htm>.

The United Nations Symposium on Population and Housing Censuses convened in New York on 13–14 September 2004 (as already mentioned), was attended by representatives from 17 countries: Australia, Brazil, Canada, Chile, China, Egypt, India, Islamic Republic of Iran, Israel, Jamaica, Japan, Peru, Russian Federation, South Africa, Thailand, United Kingdom and the United States of America; four United Nations Regional Commissions and 12 other organizations and Institutions.

Papers contributed by participants were presented under each broad topic followed by the exchange of national experiences that enriched the discussions and raised issues on: the use of alternative census designs; incorporation of new census topics; experiences with using new technology such as those used in scanning

questionnaires, handheld devices, and Internet dissemination of data; the importance of public perception of the census; promotion of census data to users and ability to show the value of census information; coordination of technical support at interregional, regional and sub-regional levels; the changing definition of a census; non-statistical use of census operations and ensuring data confidentiality; the importance of updating the *Principles and Recommendations for Population and Housing Censuses* in light of emerging experiences; and the ways in which countries have responded to increasing financial constraints. The papers and the report of the symposium are available on the website of the United Nations Statistics Division at: <http://unstats.un.org/unsd/demographic/meetings/egm/Symposium04/>.

The United Nations Expert Group Meeting to Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses in New York on 15–17 September 2004 (as already mentioned), was attended by representatives from 18 countries, four United Nations Regional Commissions and 14 other organizations and institutions. The meeting discussed in detail the various topics relating to the census and gave its recommendations. The report and other documents of this meeting can be accessed on the website http://unstats.un.org/unsd/demographic/meetings/egm/CensusEGM04/list_of_docs.htm.

Utilization and Dissemination of Census Results

Unless the census data, produced at a great cost, are disseminated, the census will not have achieved its objective. Moreover, it is important to avoid undue delay in production of results. Results delayed amount to results denied.

There are several challenges in the area of census data utilization. The first is the challenge of education of users, the public and key stakeholders. Second, there is

the challenge of increasing access to data, such as by making them available free of charge or including them on the Internet. The third is the significant challenge of improving dissemination by customizing products to fit different needs, including using Geographic Information System (GIS) technology for data dissemination, and in planning census outputs in consultation with stakeholders and users.

On the issue of promotion, usage and dissemination of census results, the following proposals of the Expert Group meeting for the 2010 Round of Censuses deserve emphasis in this context:

- (i) There is a need for future expert group meetings to consider the merits and demerits of the use of census activities for non-statistical purposes, taking cognizance of the *Fundamental Principles of Official Statistics* with respect to the consequences to confidentiality and public trust.
- (ii) An expert subgroup should be established to prepare guidelines on the dissemination of census results and public relations, with the goal of “making value visible” in censuses. This will include

guidelines on: the planning of outputs; the preparation of brochures and other announcements of data availability; and the ways to improve electronic exchange of outputs. Such guidelines should also provide methods for maintaining data confidentiality, especially when disseminating individual and small area statistics.

- (iii) In order to increase the level of reporting of census data by countries to the *Demographic Yearbook* system, UNSD was asked to explore the availability of requisite data on national websites. It was also recommended that UNSD coordinate the multiple data requests by various United Nations agencies, in order to reduce duplicate and overlapping requests to countries. This move would reduce the response burden on countries.
- (iv) Workshops or meetings on usage of census results should be organized to help to enhance the value of census data by training users at different levels and perspectives. Such users are likely to provide crucial feedback for the planning of future censuses.

Census Advocacy and Resource Mobilisation

Advocacy for Increased Resources

One of the sure ways to make the case for increased investment in censuses is to build demand for better data and to enlist support from donors and other partners. Advocacy for increased resources is required not only for censuses, but rather as part of the wider development process. The focus should not be just on the cost of conducting censuses, but rather on the cost of not having the data.

Technical expertise and financial assistance from international organizations have played an important role in census-taking in many developing countries in the past and will continue to be needed in the future. However, as censuses become more expensive and donor funding declines, some countries have been unable to complete censuses on schedule. It is necessary to identify new sources of funding, such as public and private national agencies, and conduct more research on ways to reduce the cost of censuses. At the sub-regional level, it would be useful to explore the possibility of coordinating and sharing census activities among groups of neighbouring countries with similar data needs. For example, census organizations could work together to develop core census questionnaires, prepare training manuals, share appropriate data-processing technology and coordinate dissemination strategies.

After three decades of support, primarily by UNFPA, many countries have not developed the national capacity to conduct their own censuses or finance census activities. Given all of these problems and constraints, the time is ripe to consider cost-saving strategies and approaches, extending beyond national boundaries.

UNFPA/PARIS21 Expert Group Meeting on Strategies for Reduced Census Costs

As already mentioned at the outset, UNFPA, in collaboration with PARIS21 (Partnerships in Statistics for

development in the 21st Century), conducted an International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs in Pretoria, on 26–29 November 2001 (United Nations Population Fund, 2002).

A core aim of this meeting was to ensure the stability of funding for future censuses in developing countries, taking into account the role of key stakeholders: the United Nations, UNFPA in particular; donors and providers of technical assistance; national governments and their statistical agencies; and cross-national institutions providing cooperation and coordination, such as SADC and the PARIS21 group. Also discussed was the sharing of experiences between countries, often facilitated by the existence of regional institutions, leading to greater rationalization in the design of census instruments, in processing technologies and in the sharing of resources. This Expert Group meeting reviewed census funding issues, and provided a road map to achieving stability and cost-effectiveness in the future funding of censuses.

The meeting was attended by experts from 41 countries and territories, mainly from developing countries, especially from Africa and including China, India and Palestine, as well as developed countries, donors and multilateral agencies. The important conclusions and recommendations of this meeting, which are the outcome of intense discussions and exchange of experiences by census experts, donors and multilateral agencies, are given below to underline the need for census advocacy and resource mobilization in the 2010 Round of Censuses. More details about this meeting can be obtained on: http://www.paris21.org/html/TT_census.htm and <http://www.unfpa.org/>.

The majority of countries represented at the meeting had recently taken a census, and much of the discussion focused on recent experiences with census-taking and the immediate future. Despite wide differences in political, economic, social and cultural characteristics, the

experts identified a number of common problems with census-taking including, *inter alia*, skill shortages and other capacity constraints, and insufficient analysis, dissemination and use of census results—all problems frequently stemming from funding gaps. The meeting recognized that countries lacking recent census data would face immense problems in ensuring the effective functioning of many of their democratic institutions. They would also confront a lack of population-based data for formulation of national and local policies and plans, as well as in tracking progress towards national and international development goals. There was a consensus among the experts on the need to improve the efficiency of census-taking without compromising the quality of census information. Cost-effective strategies and methodologies that will lead to reductions in census costs without changing the goals of census-taking, especially completeness of coverage and quality of information, need to be implemented. The cost of a census, when spread over a 10-year period, is only a very small proportion of the government budget.

The experts agreed that census-taking should be fully integrated within the national statistical system and not be seen as a stand-alone operation. Census information should be seen as essential for meeting the needs of programmes to reduce poverty. A multi-disciplinary perspective and approach should be taken when planning, conducting and supporting the use of a census, taking into account the views and needs of stakeholders. This would help broaden ownership of the census and build alliances that could support the mobilization of the necessary resources.

The meeting recommended that: census users be consulted on the nature of future data dissemination and analysis; the potential outputs be used to encourage greater participation of stakeholders to enhance the legitimacy of the census, and provide advocacy for funding and continuity in census-taking; the time-lag between enumeration and dissemination of results be reduced to no more than 12–18 months, consistent with the generation of high quality census products, to shorten the need for temporary staffing and enhance the value of the data to users; caution be exercised in cutting costs from census activities; and in designing the census, cost-effective strategies and methodologies be developed to reduce costs without impairing quality.

Concerning the planning and mobilization of resources for the census, the experts recommended:

1. Appropriate linkages should exist between all components of the census, e.g. links between questionnaire design and data processing.
2. Census data products should be recognized as the objectives and drivers of the census, and should be designed at a very early stage.
3. Efforts to mobilize support and comprehensive planning for the census should commence well in advance.

On census financing, the experts proposed that sufficient focus be placed on securing resources to help fill the funding gaps in the later stages of the census cycle, following census data processing, including analysis, data dissemination, storage, archiving and policy dialogue on census findings.

Censuses could be cost-effective if: (i) the census topics consisted of a minimum number of basic topics with pre-coded responses; (ii) the questions were easy to follow and culturally neutral; (iii) sampling was used in data collection and data processing; (iv) the recruitment, training and management of a temporary field force of census supervisors and enumerators were undertaken with careful planning. Where sampling is employed, the qualifications of the field staff should be better than those involved in the full census count; and (v) adopting appropriate data processing technologies such as, optical mark/character recognition/reading (OMR/OCR), computer-assisted coding (CAC) and user-friendly multi-functional software packages.

The above-mentioned approaches required strong political commitment from countries, sub-regional cooperation and networking. To achieve this, countries would have to play a more pro-active role in clearly specifying their needs and the directions they would like to take. Technical cooperation among countries within sub-regions would contribute to the success of their censuses. It is apparent that new sources of funds for supporting censuses will need to be tapped. Greater involvement of the private sector should be further explored in the years ahead.

REFERENCES

- United Nations Economic and Social Council, Official Records (2004), Supplement No.4, *United Nations Statistical Commission Report on the Thirty-fifth session (2–5 March 2004)* E/CN.3/2004/33, New York.
- Laurence Lewis (2003), *Regional Census Strategies: Reduction of Censuses Costs in the Small Pacific Islands* Counting the People, Constraining Census Costs and Assessing Alternative Approaches, PDS Series Number 7, UNFPA, New York.
- Richard Dackam-Ngatchou (2003), *New Strategies to Improve the Cost Effectiveness of Censuses in Africa* Counting the People, Constraining Census Costs and Assessing Alternative Approaches, PDS Series Number 7, UNFPA, New York.
- United Nations (1998) *Principles and Recommendations for Population and Housing Censuses Revision I, Series M, No.67/Rev.1*, Sales No.E.98, XVII.8, New York.
- United Nations Population Fund (2002), *Population and Housing Census, Strategies for Reducing Costs*, PDS Series Number 4, UNFPA, New York.
- United Nations DESA (2004) *2010 World Programme on Population and Housing Censuses and related Surveys*, ESA/STAT/AC.97/1, 24 August 2004. Paper presented at the United Nations Symposium on PHCs 13–14 September 2004, New York.
- United Nations DESA (2004) *United Nations 2010 World Programme on Population and Housing Censuses and related Surveys: A proposal for Active Involvement of Member States*, ESA/STAT/AC.97/2 24 August 2004. Paper presented at the United Nations Symposium on PHCs 13–14 September 2004, New York.
- United Nations, DESA, Statistics Division (2004), *Population and Housing Census Dates Website: <http://unstats.un.org/unsd/demographic/census/cendate/index.htm> as of 3 December 2004*. New York.

Annex 1

Current Status of Population Censuses

At least one census has been conducted by almost all of the countries in the world. As of 3 December 2004, out of the 230 countries and areas of the world that report to the United Nations Demographic Yearbook, a total of 203 have conducted a population and housing census or a population-register-based census since 1995 (United Nations, DESA, Statistics Division Website, 2004). This number includes countries that have conducted more than one census in that period, though such countries were counted only once for this purpose. Of these countries, 7 out of 10 have provided the United Nations with census information on at least their total population by sex. Countries that have not conducted a census since 1995 are as follows:

AFRICA:

Sixteen out of fifty-six countries, viz. Angola; Burundi; Cameroon; Chad; Democratic Republic of Congo; Djibouti; Eritrea; Ethiopia; Guinea-Bissau; Liberia; Madagascar; Nigeria; Somalia; Sudan; Togo; and Western Sahara. Some of the countries like Nigeria, plan to conduct a census in 2005.

AMERICA, NORTH (INCLUDING CENTRAL AMERICA AND THE CARIBBEAN):

One out of thirty-seven countries, viz. El Salvador.

AMERICA, SOUTH:

Two out of fourteen countries, viz. Columbia and Peru.

ASIA:

Five out of fifty countries, viz. Afghanistan; Bhutan; Democratic People's Republic of Korea; Lebanon; and Uzbekistan. Some countries like Afghanistan and Bhutan, plan to conduct censuses in 2005.

EUROPE:

Two out of forty-eight countries, viz. Bosnia & Herzegovina; and the Svalbard Jan Mayen Islands.

OCEANIA:

One out of twenty-five countries, viz. Pitcairn.

It is important to note that about 89 percent of the world's population resides in a country that has conducted a census since 1995. Only 52 percent of the Africans reside in a country that has conducted a census compared with 99 percent of Europeans and 95 percent of Asians.

Though most of the countries provided population counts by sex soon after the census, many of them have not provided results on other important population characteristics such as literacy, educational attainment, etc.

Annex 2

Feedback from Countries on Census Issues

The following analysis of the census situation is based on the filled-in questionnaires received. A few general comments have been added based on other available information. The former is presented under “survey” and the latter under “general.”

AFRICA **Survey**

Out of fifty-six countries in Africa, thirty-seven or 66 percent completed questionnaires. The present analysis relates to these countries only. Among the thirty-seven countries, twenty-three carried out a census in the 1990 Round of Censuses and twenty-six did a census in the 2000 Round. In other words, a census was taken by 62 percent of the countries in the 1990 Round and by 70 percent in the next Round.

Angola, Democratic Republic of Congo, Liberia and Togo did not carry out a census in either of the Rounds. Lesotho carried out two censuses (though counted as one for the purpose of number of censuses conducted) in the 2000 Round, in 1996 and 2001. Six countries did a census in the 1990 Round, but not in the 2000 Round. Another nine countries carried out a census in the 2000 Round, but not in the 1990 Round. The main reason for not carrying out a census was a lack of funds, although in some cases it was also a result of civil war or other disturbances.

Out of thirty-seven countries, thirty-two have plans to take a census in the 2010 Round. Twenty-two of these countries want to undertake the census between 2005 and 2010, with eight countries opting to do it in 2006. Four countries want to take the census in 2011, four in 2012, none in 2013 and two in 2014. Five countries have no plans to conduct a census in the 2010 Round, four due to financial constraints and one has not really considered a census although able to mobilize funds.

Out of the thirty-two countries planning to do the census in the 2010 Round, only South Africa categorically reported that funding would be forthcoming from the national government. However, sixteen of them (50 per-

cent) may expect only a minor support from donors and fifteen (47 percent) would need major financial support to conduct their next census.

Algeria carried out the 1998 Census with main funding by the national government. Botswana received 27 percent of its census cost from UNFPA in 1991. Having become ineligible for further funding, Botswana carried out the 2001 Census entirely funded by the government. South Africa got full support from the government, as already mentioned. Apart from these three countries, the following countries carried out a PHC in the 2000 Round with the respective governments being the major (more than 50 percent of the total cost) source of funding: Congo, Republic of (Brazzaville); Côte d’Ivoire; Egypt; Ethiopia; Ghana; Kenya; Malawi, Morocco; Namibia; Nicaragua, Senegal; Tanzania; Uganda; and Zimbabwe. Countries, which were externally funded for the major portion of the census cost in the 2000 Round, were: Guinea (UNFPA contributing 71 percent of the cost), Lesotho (UNFPA contributing 98 percent), Burkina Faso (mostly funded/assisted by EU, UNFPA, UNDP, UNICEF and the African Development Bank (ADB)) and Mauritania (fully funded by WB, EU, JICA and the Arab Fund for Economic and Social Development (AFESD)).

In the 1990 Round, nine out of thirty-seven countries had received external assistance, with UNFPA funding all of the nine countries. In eight out of the nine countries, other agencies had joined with UNFPA in the funding process. These agencies are: UNDP, USAID, WB, EU, DFID, JICA, UNICEF, IDB; the governments of China, Canada, United States of America, Germany, Netherlands, Norway, Sweden, Denmark, Italy and Finland; the African Development Bank and the Arab Fund for Economic and Social Development. The U.S. Census Bureau, ECA and UNFPA CSTs provided technical assistance. Out of the nine countries that received UNFPA funding assistance, three received more than 50 percent of the census cost, two received 25 to 49 percent of the cost and four countries got less than 25 percent of the cost.

Out of twenty-nine countries who received external assistance in the 2000 Round, UNFPA funded twenty-eight countries. Mauritania was funded by other agencies, as already mentioned. Among these twenty-eight countries, four received more than 50 percent of the census cost from UNFPA. Six countries received 26 to 49 percent and eighteen countries got less than 25 percent of their census cost from UNFPA.

Of the twenty-six countries funded by other agencies, more than 50 percent of the cost was borne by them in six countries; 26 to 50 percent for seven countries; and less than 25 percent for thirteen countries.

AMERICA, NORTH (INCLUDING CENTRAL AMERICA AND THE CARIBBEAN)

Survey

The three countries that responded to the survey are: El Salvador, Haiti and Honduras. El Salvador is eager to conduct a census in 2006, as the last census was taken thirteen years ago, in 1992. There is a dire need for population data because of the enormous social changes and natural disasters that have occurred in the interim. It has been reported that financial resources for the next census are not available and that an IDB loan is being sought. Training of officials for the census is also necessary as there is a paucity of staff skilled in census-taking. The senior staff, trained for the 1992 Census with UNFPA support, have retired.

The national and U.S. governments were the primary sources of funding for the 2003 Census in Haiti. UNFPA/CST support missions assisted in the preparatory work and data processing. Taking into account the constraints faced and lessons learned from the Census, for the 2013 Census, Haiti wants to implement improved strategies to ensure public interest in census-taking, a more careful updating of cartography and better supervision of the data collection.

Honduras did not conduct a census in the 1990 Round. The last census was conducted in 2001 with major financial assistance from Sweden and IDB. The U.S. Bureau of the Census provided technical assistance for data processing. IDB and UNFPA assisted in cartography and data dissemination. The main constraint was a lack of trained personnel for data analysis.

General

The U.S. Census Bureau has proposed changes in the design of future censuses in the United States of America. The new approach includes a decennial census based on a short form, an American Community Survey (ACS) and the updating of the master address

file. However, concerns have been expressed by some users regarding this approach.

AMERICA, SOUTH

Survey

Colombia and Paraguay are the two countries who have returned the completed questionnaires. The last census was conducted in 1993 in Colombia, which plans to take its next census on 22 May 2005. The upcoming census is being funded by the national government and will employ some technological and methodological changes, which are being tested with UNFPA assistance.

Paraguay took the 1992 Census with UNFPA assistance and the 2002 Census with IDB support. Technical assistance was received from UNFPA and UNICEF in the 2002 Census. Cartography and logistics posed several problems. In the next census, improvements are contemplated including adoption of scanning technology.

ASIA

Survey

Nineteen out of fifty countries (38 percent) in Asia have responded to the survey. Among these nineteen countries, fourteen and sixteen countries had conducted a census in the 1990 and 2000 Census Rounds respectively. In the latter Round, the Philippines took two censuses, in 1995 and 2000. Cambodia, Nepal and Sri Lanka, who did not take censuses in the 1990 Round, took censuses in the 2000 Round. Uzbekistan did not carry out a census in the 2000 Round, although they conducted a census in the previous Round. Afghanistan and Myanmar did not carry out a census in either Round

EUROPE

Survey

Belarus, Bulgaria, Moldova and Romania have returned completed questionnaires. All of the four countries had regular censuses in both the previous Rounds and have plans to take a census in the 2010 Round. The future censuses will likely exhibit departures from the traditional method of census-taking.

General

There are forty-five countries in Europe. It may be useful to give an overview of the trend in census methodology in Europe, which may be called the transition from traditional to register-based censuses. Increasing costs and pressure to reduce the response burden have created a strong incentive for some countries in Europe to seek new solutions in census data collection and more effective methods of data processing. The increased use of administrative registers and data

sources, and the development of automatic procedures in data capturing, checking, editing and coding are examples of how European countries are responding to these pressures.

OCEANIA

Survey

Papua New Guinea did not take a census in the 1990 Round. It reported that support for the last census in 2000 was received from AusAID and UNFPA. Advisors from the Australian Bureau of Statistics provided technical guidance. The 2000 Census results were released in two years' time through CD-ROMs and hard copies. Dissemination and use are ongoing, with UNFPA support. Building national capacity and resource mobilization are the major concerns for the next census in 2010.

General

About 7,500 islands spread over 30 million square kilometres in the Pacific Ocean comprise twenty-two Pacific Island countries of the South Pacific. The largest of these is Papua New Guinea, with a population of over five million. There are small islands with populations of below 2,000 as well (Laurence Lewis, 2003).

The beginning of the 2010 Round of Censuses in the Pacific Island countries will be marked by the Census of Kiribati in November 2005. This will be followed by four countries in 2006 (Cook Islands, Fiji, Tonga and Samoa).

The following census situation in the Pacific countries has been reported by the Secretariat of the Pacific community (SPC). The 2000 Round censuses of some of the Pacific Island countries are not of the same quality as those of earlier times. For the 1990 Round of Censuses and earlier, external financial assistance and technical support was available to countries from UNFPA, both through direct bilateral country programme initiatives, as well as via regional census support programme initiatives executed by SPC. In the 2000 Round, many Pacific Island countries experienced considerable difficulty in financing their census operations. This had a negative impact on routine census operations, with countries either ignoring or severely short-cutting accepted best-practice procedures. Some of the shortcomings are: undercounts in many areas due to an absence of updated maps, low level of training of the field staff, poor training and organization of data processing work due to the absence of consistent technical assistance or backstopping, considerable delays in producing census outputs and lower quality outputs.

Australia conducts a traditional drop-off/pick-up census, with collection control being undertaken by the local collector and the use of a record book. With the introduction of an Internet-based return of forms, a system needed to be developed to advise the collector in a timely fashion when a form was received from a particular household.

2010 World Programme on Population and Housing Censuses

SRDJAN MRKIC
United Nations Statistics Division¹

Background

For over six decades, the United Nations Statistical Commission and UN Regional Statistical Committees have played a key role in supporting national census-taking. The UN Statistical Commission established the *1950* and the *1960 World Population Census Programmes* that were followed by the *1970, 1980 and 1990 World Population and Housing Census Programmes*. These initiatives by the Statistical Commission were then followed by the initiation in 1994 of a *2000 World Programme of Population and Housing Censuses* in support of census-taking worldwide. These most recent actions taken by the Commission resulted in a resolution by the Economic and Social Council of the United Nations (ECOSOC), in support of the *2000 World Population and Housing Census Programme* (Resolution 1995/7).

How successful was the *2000 World Programme of Population and Housing Censuses*? Considering the complexity and multitude of issues related to conducting population and housing censuses, the answer is not straightforward. Measured by the number of world countries or areas that conducted a census, of the 230 countries and areas that report to the United Nations

Demographic Yearbook, a total of 201 have conducted a population and housing census or a population register-based census, since 1995. Censuses vary greatly in their total populations that they must cover: from fewer than 100 persons in small island areas, to more than 1 billion persons in countries, such as China and India.

It is important to note that 91 percent of the world's population resides in a country that has conducted a census since 1995.² This is a significant success. Much, however, remains to be done; only 57 percent³ of Africans reside in a country that has conducted a census in the African region, compared with almost 100 percent in Oceania,⁴ 99 percent in Europe⁵ and North America,⁶ 97 percent⁷ in Asia and 80 percent in South America.⁸

2010 World Programme on Population and Housing Censuses

On the basis of previous programmes and the experiences from the 2000 Round of Population and Housing Censuses, the draft ECOSOC resolution on the 2010 World Programme on Population and Housing Censuses supports the 2010 World Programme, urges

¹ Prepared by the Demographic and Social Statistics Branch.

² This and all other percentages in this paragraph are computed on the basis of population estimates for year 2000, as presented in *World Population Prospects, The 2002 Revision, Volume I: Comprehensive Tables*, United Nations Publication, Sales No. E.03.XIII.6, United Nations, New York, 2003, page 559.

³ On the basis of reports submitted to the *Demographic Yearbook*, in the period 1995–2004, a population and housing census was not conducted in Angola, Burundi, Cameroon, Chad, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gabon, Guinea-Bissau, Liberia, Madagascar, Nigeria, Somalia, Sudan, Togo and Western Sahara.

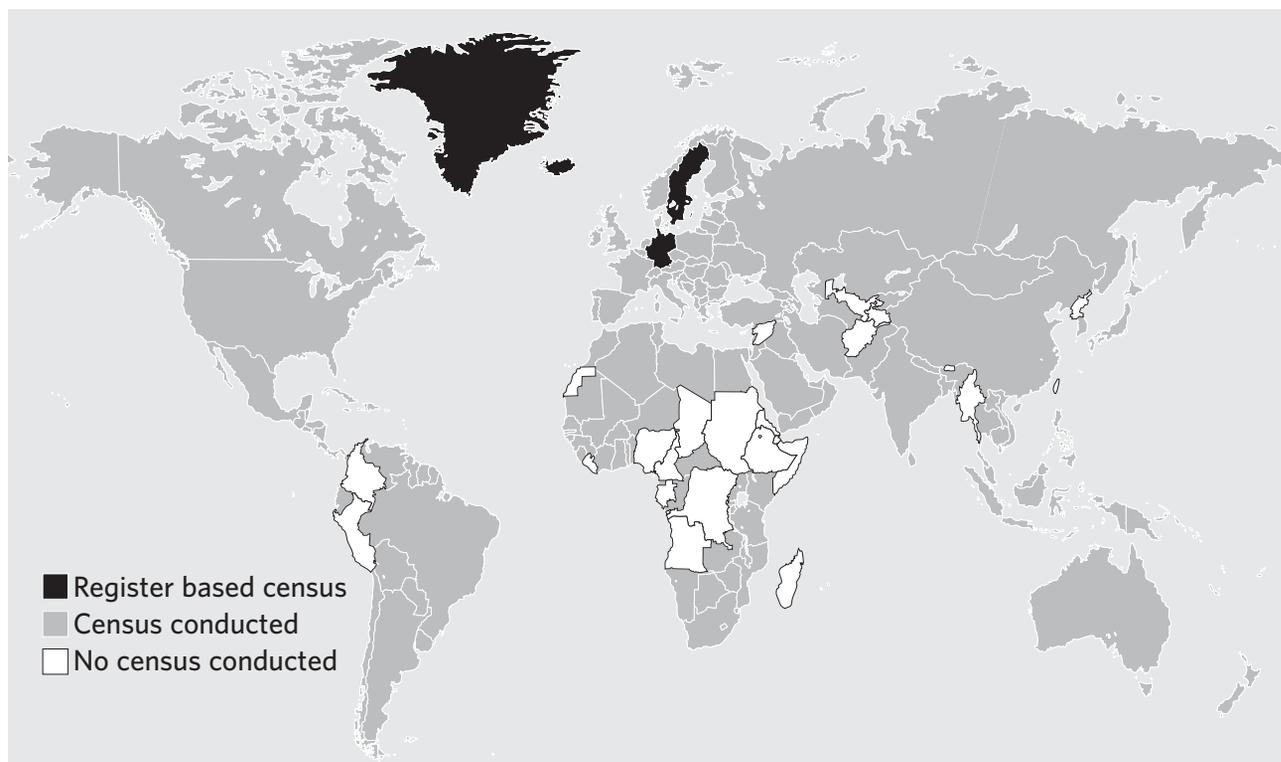
⁴ With the exception of several small islands.

⁵ On the basis of reports submitted to the *Demographic Yearbook*, in the period 1995–2004, the population and housing census was not conducted in Bosnia and Herzegovina.

⁶ On the basis of reports submitted to the *Demographic Yearbook*, in the period 1995–2004, the population and housing census was not conducted in El Salvador.

⁷ On the basis of reports submitted to the *Demographic Yearbook*, in the period 1995–2004, the population and housing census was not conducted in Afghanistan, Bhutan, Democratic People's Republic of Korea, Lebanon, Myanmar and Uzbekistan.

⁸ On the basis of reports submitted to the *Demographic Yearbook*, in the period 1995–2004, the population and housing census was not conducted in Colombia and Peru.



Member States to carry out a population and housing census and to disseminate census results as an essential source of information for small areas, regional, national and international planning and development. It also asks the Secretary-General of the United Nations to implement the 2010 World Programme.

The 2010 World Programme on Population and Housing Censuses builds on the Marrakech Action Plan for Statistics,⁹ more specifically, on recommendations for Action 2: Prepare for the 2010 Census Round. These recommendations emphasize the substantive work that needs to be undertaken in order to ensure the success of the 2010 Round of Censuses. They also outline the need for developing an overall strategy for funding and conducting censuses in low-income countries. The Marrakech Action Plan emphasizes the role of the United Nations Statistical Commission as an official governing body to address technical and coordination issues.

In that context, the Statistical Commission set a number of goals for the 2010 World Programme on Population and Housing Censuses. For the purpose of this paper, these goals are grouped into the following three broad categories:

Goal 1: Conducting at least one population and housing census in every country or area in the period 2005–2014;

Goal 2: Producing an updated version of the United Nations Recommendations for Population and Housing Censuses; and

Goal 3: Providing a platform for the comprehensive exchange of experiences, countries' participation, technical assistance, information and data dissemination.

Progress report

The activities under Goal 1 of the 2010 Programme were initiated by convening a United Nations Symposium on Population and Housing Censuses, in New York, 13–14 September 2004.¹⁰ The purpose of this Symposium was to set priorities for the upcoming round of population and housing censuses (2005–2014) in light of the experience from the previous census decade (1995–2004). The Symposium also aimed at providing inputs for the drafting of a resolution request-

⁹ *Better Data for Better Results: An Action Plan for Improving Development Statistics*, Marrakech, Morocco, February 4–5 2004, as presented at: <http://www.worldbank.org/data/results.html>.

¹⁰ The report of this Symposium is available in full at: <http://unstats.un.org/unsd/demographic/meetings/egm/Symposium04/default.htm>.

¹¹ Official Records of the Economic and Social Council, 2004, Supplement No. 4 (E/2004/24), chap. II. B, paragraph. 2 (a).

ed by the Statistical Commission at its 35th session, calling on the Secretary-General to proceed with the development of a 2010 World Programme on Population and Housing Censuses.¹¹

The Symposium addressed the roles and actions of national statistical/census authorities, the United Nations Statistical Commission, United Nations Statistics Division and United Nations Regional Commissions, and other sub-regional organizations, in support of the 2010 World Programme on Population and Housing Censuses. In this context, the Symposium recommended that the United Nations Statistical Commission, at its 36th session, adopt a draft of a Resolution on the 2010 World Programme on Population and Housing Censuses for the Economic and Social Council's consideration and adoption, which would:

1. Support the 2010 World Programme on Population and Housing Censuses, consisting of a number of activities aimed at ensuring that Member States conduct a population and housing census at least once in the period 2005–2014;
2. Urge Member States to carry out a population and housing census and to disseminate census results as an essential source of information for small area, national, regional and international planning and development; and to provide census results to national stakeholders as well as the United Nations and other appropriate intergovernmental organizations, to assist in studies on population, environment, and socio-economic development issues and programmes;
3. Emphasize the importance of the 2010 World Programme on Population and Housing Censuses for socio-economic planning and request increased support for this Programme; and
4. Ask the Secretary-General of the United Nations to implement the 2010 World Programme on Population and Housing Censuses.

As mentioned, the United Nations Statistical Commission is holding its thirty-sixth session in New York, 1–4 March 2005 and it will review the report on the work of the Expert Group it established at its thirty-fifth session.¹² This report presents a set of recommen-

dations and activities of the Statistical Commission, its Expert Group and national statistical or census authorities that were adopted at global and regional meetings.

The 22nd Population Census Conference in Seattle, 7–9 March 2005, is also providing an opportunity, in this early phase of the 2010 Round, to collect information on national plans in regard to conducting population and housing censuses. Participants will be asked to complete and return a sheet that requests some basic information about the planning for the next population and housing census (dates, deadlines for particular phases and so forth). This information will be posted at the 2010 World Programme on Population and Housing Censuses website, maintained by the UN Statistics Division. The updates on this site will enable continuous monitoring of national plans for population and housing censuses, thus providing guidance in regard to mobilizing the resources where they are most needed.

In an early effort to ensure the realization of Goal 1 of the Programme, the United Nations Population Fund (UNFPA), in collaboration with the UN Statistics Division, is organizing the Advocacy and Resource Mobilization International Meeting, in New York, 24–25 February 2005. This meeting is expected to focus on best advocacy strategies for donor countries as well as recipient countries, and on resource mobilization and capacity-building. It is also expected to recommend a yearly inventory of fund-raising activities within the framework of the 2010 World Programme on Population and Housing Censuses, to be held in conjunction with the session of the United Nations Statistical Commission, with the purpose of assessing progress in mobilizing resources and strengthening national capacities for conducting censuses in the 2010 Round.

The activities under Goal 2 of the 2010 Programme were initiated by the Expert Group to Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses, organized by the United Nations Statistics Division, in New York, 15–18 September 2004.¹³ The Expert Group called for the revision and updating, where needed, of the United Nations *Principles and Recommendations for Population and Housing Censuses* for the 2010 Census Round no later than 2008. In addition, the Expert Group established a framework of working groups with specific assignments in relation to the *Principles and Recommendations*.

¹¹ This report is available at: <http://unstats.un.org/unsd/statcom/sc2005.htm>.

¹² The report is available at: <http://unstats.un.org/unsd/demographic/meetings/egm/CensusEGM04/default.htm>.

¹³ The full report is available at: <http://unstats.un.org/unsd/statcom/sc2005.htm>.

More specifically, the meeting recommended the following:

- The establishment of an expert subgroup with the aim of reviewing, updating or developing standards and frameworks (topics, concepts, definitions, classifications and methods) for both the essential core set of outputs and the broader set of topics of general interest and concern.
- The list of topics in the *Principles and Recommendations* that should be revised to be as comprehensive as possible, taking into account different regional and national circumstances. Fully acknowledging that not all topics apply to all national statistical circumstances and that one size does not fit all, the experts proposed that the *Principles and Recommendations* should provide guidance on how to include topics in censuses according to national circumstances.
- The revised *Principles and Recommendations* should include a set of criteria that would guide national census authorities in determining the applicability as well as suitability of collecting data on individual topics through a census and also provide guidance on when alternative sources to censuses might be used.
- The *Principles and Recommendations* should provide guidance on the assessment of the level of disaggregation of the results needed so as to make a distinction between topics for which data are required at national/regional levels and consider best practices in addressing statistical needs for small areas. In addition, the recommendations should propose alternative sources of data as well as the suitability of the use of short and long census forms for the selected topics, depending on the level of detail required.¹⁴

Following this Expert Group Meeting, the Economic Commission for Europe (ECE) and the Statistical Office of the European Union (Eurostat) conducted a Joint ECE-Eurostat Work Session on Population and Housing Censuses, in Geneva 22–26 November 2005.¹⁵ The Session outlined the priorities and activities in regard to census-taking in the region. Similarly, the

United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) hosted the Expert Group Meeting on Population and Housing Censuses, in Bangkok, 9–10 December 2004,¹⁶ which emphasized the importance of early support and coordination for the 2010 World Programme on Population and Housing Censuses and identified priorities in the region.

Three working groups are being established to carry out the work of the Expert Group on the 2010 World Programme on Population and Housing Censuses. These working groups will be coordinated by a bureau, while the United Nations Statistics Division will act as Secretariat to the 2010 World Programme on Population and Housing Censuses and to the Expert Group. In order to benefit from the revision processes of the Regional Commissions and to ensure coordination and general agreement on decisions reached, the work of regional task forces and working groups will be incorporated into the framework of United Nations Expert Group working groups.

At the global level, the purpose of the proposed working groups is to work in conjunction with the Regional Commissions and other relevant organizations, maximize efficiency of the process, avoid duplication of effort and ensure coordination and harmonisation of the results.

The working groups and subgroups are as follows:¹⁷

2. Working Group on Standards, Frameworks and a Core Set of Outputs with particular attention to: marital status, households, families and living arrangements; employment; education; mortality; human functioning and disability; internal and international migration statistics; housing; and coordination of a core set of census tabulations for international dissemination:

- Technical subgroup on internal and international migration statistics
- Technical subgroup on marital status, households, families and living arrangements
- Technical subgroup on human functioning and disability

¹⁴ Paragraph 8 of the Conclusions and Recommendations of the Expert Group Meeting to Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses, available at: <http://unstats.un.org/unsd/demographic/meetings/egm/CensusEGM04/default.htm>.

¹⁵ Report of the November 2004 joint ECE-Eurostat work session on population censuses, CES/2004/49, United Nations, Geneva, 2004.

¹⁶ The full report is available at: <http://www.unescap.org/stat/meet/census2004/index.asp>.

¹⁷ A detailed Proposal for Working Groups, with descriptions of the working groups and technical subgroups, including areas of responsibility, composition and expected outputs is currently being prepared and is under consideration by the Expert Group.

- Technical subgroup on core set of outputs
- Technical subgroup on coordination of a core set of tabulations for international dissemination
- Technical subgroup on housing census topics

2. Working Group on Census Planning and Management with particular attention to alternative designs; strategies of integrated data collection and dissemination; quality assurance; outsourcing and IT:

- Technical subgroup on integrated data collection and dissemination
- Technical subgroup on quality assurance
- Technical subgroup on alternative designs

3. Working Group on Promotion of Censuses: Making Value Visible

Goal 3 of the 2010 Programme, to provide a platform for the comprehensive exchange of experiences, countries' participation, technical assistance and information, covers a broad area of activities. The activities proposed under this goal were initiated by the United Nations Symposium on Population and Housing Censuses¹⁸ and the Expert Group to Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses¹⁹ and emphasize the crucial importance of the active involvement of Member States in implementing the 2010 World Programme.

The Symposium expressed strong and unambiguous support for the concept of active involvement of Member States and establishment of a trust fund in support for the World Programme, coordinated by the United Nations Statistics Division. Active involvement refers, but is not limited, to identifying technical expertise and other resources to be shared by Member States in the conduct of their censuses which may result, for example, in the sharing of IT expertise; the short-term exchange of professionals; sharing of training programmes; and the exchange of census information and data exchange, through a coordinated programme of partnership activities. Active involvement also includes pledging financial contributions to

the Population and Housing Census Trust Fund by Member States and by other relevant intergovernmental and non-governmental organizations.

The Trust Fund would be used to bridge the barriers between national statistical offices in their exchange of resources and support, by providing the funds needed for travel, consultation, fellowships and advisory work, as well as for research and development of standards and methods necessary for the successful implementation of the World Programme. While the Trust Fund would involve relatively few resources, it would act as a catalyst for members providing assistance and support to each other or for sharing national experiences. The Trust Fund will be an effective source for facilitating the provision of technical assistance, with the understanding that such a trust fund is not meant to be the main source of funds for conducting a national census. The Symposium also recognized that the Trust Fund would enhance the capacity of the United Nations Statistics Division as a conduit for exchange of relevant information and experience, and a major repository of supporting materials and experiences.

As stated in the Conclusions and Recommendations of the United Nations Symposium on Population and Housing Censuses,²⁰ the United Nations Statistics Division together with the United Nations Regional Commissions, must be a broker of census experiences. A directory of census resources, national practices, experts and other available resources would allow countries to more easily obtain information when they need it. Sharing expertise among countries with mutual interests, within and across regions, such as the el Mercado Común del Sur (MERCOSUR) countries with Bolivia and Chile, should be encouraged and supported by the United Nations Statistics Division.

The 2010 World Programme was developed in such a way as to accommodate and welcome substantial contributions of the United Nations Population Fund and the United Nations Development Programme. It is of paramount importance to ensure the coordination of advocacy and fund-raising activities with substantive and technical ones.

In conclusion, these first few months of the 2010 Round of Population and Housing Censuses witnessed a number of activities, at global, regional and national levels, aimed at developing mechanisms for conducting population and housing censuses.

¹⁸ See footnote 10.

¹⁹ See footnote 12.

²⁰ See footnote 10.

Past Experience, Current and Future Activities of the Population Division of the Department of Economic and Social Affairs

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Introduction

Data collected by population and housing censuses are crucial to guide the implementation of the Programme of Action of the International Conference on Population and Development and to assess progress made in achieving its goals and objectives, as well as the Millennium Development Goals (MDGs). At the national level, census results are used to guide government decisions, including those related to budgetary allocations and political representation.

In most countries, population censuses are the only statistical instruments allowing a full count of the population and its major characteristics, including sex, age and household composition. Censuses provide therefore the statistical frame needed to conduct nationally representative sample surveys. Censuses also provide a basis for checking the representatives of surveys that have already been carried out. Because of current reliance on surveys to obtain estimates of indicators related to the achievement of internationally agreed development goals, the existence of censuses to validate or provide their sampling frames has become more urgent.

Furthermore, there are some indicators for which censuses remain the best source of data. Data on school enrolment or educational attainment are one example. Data on economic characteristics that can be related to other characteristics of the individuals enumerated are also relevant. Censuses are currently the best source of comparable information on the foreign-born or foreign populations of countries. Population and housing censuses are also a key source of information on population distribution and the quality of housing of people settled in different areas, that is, of information needed to study settlement patterns and the extent of slums.

For countries lacking adequate vital statistics systems, population censuses have long been a source of

information allowing the indirect estimation of fertility and child mortality, often supplementing or corroborating estimates derived from household surveys. More recently, censuses have become important sources of data on adult mortality, gathering information on deaths in each household over a given period. This type of data is very useful in trying to assess the impact of HIV/AIDS in countries lacking adequate vital statistics and being affected by the epidemic.

Past experience and current activities of the Population Division

Population censuses are vital for the work of the Population Division and the United Nations system as a whole. They provide inputs for the official United Nations population estimates and projections, which are used throughout the United Nations system as the basis for activities requiring population information. Data from population and housing censuses are also used to monitor, review and assess the implementation of the Programme of Action at the national, regional and international levels.

The Population Division has been preparing the official United Nations estimates and projections of the world's population since 1951 and, since 1988, has prepared and updated estimates and projections of the urban and rural populations of all countries in the world and of their major urban agglomerations. Each biennial revision of the urban, rural and city projections is consistent with the most recent revision of the estimates and projections of the total population, also prepared biennially by the Population Division. The most recent set of urban, rural and city population projections is *World Urbanization Prospects: The 2003 Revision*, which was consistent with the *2002 Revision of World Population Prospects*. The *2004 Revision of World Population Prospects* is being released at the end of

February 2004. The most common source of the data used in preparing these publications is the population census, although in some countries, data derived from population registers can be used instead.

The data presented in each revision of *World Population Prospects* represent a unique set of comprehensive, consistent and internationally comparable estimates and projections of population by age and sex as well as estimates and projections of mortality and fertility schedules by age and sex, and estimates of international migration for each country. Such data serve as a basis for the elaboration of sectoral estimates and projections produced by the various agencies and bodies of the United Nations system. They also provide a solid foundation for the global analysis of different aspects of population dynamics and for the analysis of the interrelations between other socio-economic processes and population dynamics.

Two of the major tasks in revising the estimates and projections of the population of each country or area of the world are to obtain and evaluate the most recent census information available, concerning the distribution of the population by age and sex and each of the three major components of population growth: fertility, mortality and international migration. For many countries in the less developed regions, information may be limited or lacking and the available data may be unreliable. Since the 1970s, however, the emphasis put on surveys and census-taking in the developing countries has considerably improved the availability of information. Thus, for the *2002 Revision*, census information was available for virtually all developing countries, and for 145 of the 173 countries or areas in the developing world, the census data referred to 1990 or later.

However, it is the information on the components of population growth, particularly on adult mortality, that is more often inadequate or outdated. Even in the case of countries that have a reliable vital registration system, data on both fertility and mortality by age and sex may not be available on a continuous basis, owing to either delays in processing the data or the difficulty of estimating appropriate denominators to calculate age-specific fertility and mortality rates.

Publications produced by the Population Division show all countries irrespective of the availability of the data considered, with the intention of bringing the need for the missing data to the attention of those countries. Furthermore, the analytical report for *World Population Prospects* provides some assessment of the timeliness of the information on which each revision of the population estimates and projections is based, by showing the distribution of countries by region and the popula-

tion according to the most recent data used for the estimates of fertility, child mortality and adult mortality. The information presented, however, does not distinguish between censuses, surveys or other sources for the most recent estimates used.

According to the *2002 Revision*, among the 192 countries with a population of 100,000 inhabitants or more in 2000, fertility data referring to 1995 or later, was available for 168 countries or 97 percent of the total population in those countries. Only two countries had no information whatsoever on fertility. All of the countries in Europe, North America and Oceania had information referring to 1995 or later, compared to thirty-nine out of fifty-four countries in Africa (or 85 percent of the population); forty-four out of fifty countries in Asia (98 percent of the population); and thirty-two out of thirty-five countries in Latin America and the Caribbean (99 percent of the population). Data on childhood mortality referring to 1995 or later, was available for 167 countries or 74 percent of the total population in the 192 countries considered. The regional breakdown was forty-five out of fifty-four countries in Africa (88 percent of the population); forty-three out of fifty countries in Asia (64 percent of the population); twenty-seven out of thirty-five countries in Latin America and the Caribbean (72 percent of the population); and eleven or twelve countries (83 percent of the population). Only one country had no information at all on child mortality, while four African countries and two Asian countries only had data referring to dates prior to 1990.

Information on adult mortality was the most inadequate and often outdated. Data referring to 1995 or later, was available in only 62 out of the 192 countries or areas considered, representing only 18 percent of the total population in those countries or areas. There was no information on adult mortality in seventy-seven countries (or 21 percent of the population), forty-eight of which were in Africa, eighteen in Asia, seven in Latin America and the Caribbean, and four in Oceania. Even in Europe and North America, seven countries had outdated data, referring to dates earlier than 1990.

The variability in data availability underscores the importance of population censuses and the resources required to analyse and disseminate the information. Estimates on child mortality are often derived from surveys, especially when countries lack a civil registration system or have one that is inadequate. However, the sparse availability of adult mortality data in similar contexts stem from the technical limitations of sample surveys as vehicles for the collection of data on adult mortality. By contrast, methods exist for the collection of data on deaths in households in the course of a

population census. Priority should be given to the collection of such data in the censuses of countries lacking adequate vital registration.

Future activities

The 2010 Round of Population and Housing Censuses has begun. The Population Division will bring to the attention of the 38th session of the Commission on Population and Development (CPD), scheduled to take place at the United Nations Headquarters in New York from 4–8 April 2005, this fact, underscoring the importance of population and housing censuses for the work on population and development of the entire United Nations system.

It is important to note, in this regard, that the United Nations Statistics Division has played a key role in coordinating and setting up the 2010 World Programme on Population and Housing Censuses, in preparing principles and recommendations for population and housing censuses and in the setting of standards and methods of census-taking. The Statistics Division recently organized a United Nations Symposium on Population and Housing Censuses as well as the United Nations Expert Group Meeting to Review Critical Issues Relevant to the Planning of the 2010 Round of Population and Housing Censuses, both of which were held in New York in September 2004. The United Nations Population Division participated in those activities and will continue to do so.

REFERENCES

United Nations (2004). *World Population Prospects: The 2002 Revision*, vol. I: *Comprehensive Tables* (United Nations publication, Sales No. E.03.XIII.6).

United Nations (2004). *World Population Prospects: The 2002 Revision*, vol. II: *Sex and Age* (United Nations publication, Sales No. E.03.XIII.7).

United Nations (2004). *World Population Prospects: The 2002 Revision*, vol. III: *Analytical Report* (United Nations publication, Sales No. E.03.XIII.10).

United Nations (2004). *World Urbanization Prospects: The 2003 Revision* (United Nations publication, Sales No. E.04.XIII.6).

Past Experiences and Future Plans for the Population and Housing Census in Nigeria

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Introduction

Preparations for the conduct of a population and housing census in Nigeria in 2005 are at an advanced stage. The Nigerian Government's desire to undertake a census is, in part, based on the need to generate up-to-date information on new concerns and issues such as the HIV/AIDS pandemic. There is also a pressing concern for gathering and utilizing data on social indicators of poverty, including measures of basic education, access to safe water supply, sanitation, waste disposal and housing conditions. In addition, there is a need for new figures for the delimitation of electoral constituencies for the 2007 National Election (the second election since the restoration of democratic governance in the country). Moreover, Census 2005 will hopefully provide a valuable source of data for assessing the impacts of the various programmes of the National Economic Empowerment Development Strategies (NEEDS), a short-term, economic recovery programme of the present administration.

Census History

Censuses have been held since 1866 in Nigeria, at least for several important towns, but the first census for the whole country was conducted in 1911. The figures obtained were based largely on estimates and guess work. Censuses were taken every ten years thereafter until 1931. Due to political disturbances in the Eastern flank of the country in the 1930s, no real enumeration took place there in 1931. Estimates from that period are therefore likely to be erroneous. The Second World War interrupted the pattern of decennial censuses in the country.

With the introduction of new socio-economic programmes and political reforms to meet with the Nationalists demands, a census was ordered held in the 1950s. It was conducted at different times throughout the country to ease the enormous work. The Census of Lagos took place in 1950–1951; that of the North, in May to July 1952; and the West and East, in May to

August 1953. Beyond issues of the timing and content, there was a general suspicion that the reason for the census was related to taxation and many inhabitants avoided the enumerators. Others held superstitious fears of being counted or revealing the number of children ever born to strangers. After adjustments to bring the figures to a common date (mid-1953), the total population was 31,556,500.

A census was taken in May 1962. A pre-census advocacy campaign was launched earlier in the year. Public figures "stressed, among other things, that the census had nothing to do with taxation, that social services would be provided on the basis of the population and that, in a reconstituted Federal Parliament, population would remain the basis of representation." The public awareness campaign on behalf of the census was more than successful. People not only made sure that they were not left out of the census, many saw to it that they were counted more than once. The emphasis on economic development of an area as well as its population size in the determination of electoral seats in parliament, led to mass census migration from places of work to hometowns or places of origin. Given the charged political atmosphere in the country, it was easy for the census results to be nullified. Another census was held in 1963. The result was not much better, but the final count of 55,670,000 became the benchmark for Nigeria's population until 1991. The Census of 1973 was never released.

The 1991 Census was the first census in Nigeria that addressed comprehensively the data needs of the country. The census figures were not only accurate and reliable, but also detailed, in terms of explaining the composition and characteristics of Nigeria's population by providing useful demographic and socio-economic data for design, implementation and evaluation of development programmes. Many policy-relevant monographs were produced from the census data.

Expectations of the 2005 Population and Housing Census

Although Census 2005 builds on the foundation laid by Census '91, there are significant differences between the two, in terms of the political environment, census administrative structure and census scope, techniques and procedures. Census '91 was carried out under the Military Government, with coercive powers, that decreed a three-day, work-free period without much opposition. The regime was also willing to approve extra funds for the National Population Commission (NPC) when unexpected contingencies arose. Under a civilian democratic administration, it might not be possible to get government to allocate funds with such ease and speed. Decision-making tends to be more inclusive and, therefore, slower. For the 1991 Census, the Commission was made up of seven commissioners plus a chairman. This is in comparison with the thirty-eight-member board as required by the *Third Schedule, Part I Section 23 (a & b) of the 1999 Constitution*, for the 2005 Census. The larger number of commissioners may make arriving at consensus more difficult and time consuming, but this is compensated by wider census ownership and acceptability.

The Census in 1991 was strictly a population census. In 2005, the census will cover both population and housing. This will place greater demand on the staff of the Commission, on other census personnel and also increase census cost. In addition, there will be improvements in census methodology for 2005. New methodologies in census mapping, enumeration and data capture, data processing and data dissemination will likely, all lead to higher costs.

Compared to the 1991 Census, the preparations for Census 2005 are more thorough and guided by well thought out census plans—a four-year work plan with detailed logistics, budget, monitoring and evaluation plans. All of these expectations are contained in the document, titled **Census 2005 Strategy and Implementation Plan**, prepared with input from the United Nations Population Fund (UNFPA).

Strategies for the 2005 Census

Specific objectives, which include the following, have been identified:

1.Improvement of the geographic sample frame—the National Frame;

- 2.Complete enumeration of all houses and people resident in Nigeria;
- 3.Acquisition of demographic, social and economic data about people resident in Nigeria, for policy interventions;
- 4.Consolidation of the Census '91 database, to produce time-series data that can be used to monitor and evaluate population and development programmes; and
- 5.Availability of reliable information on vulnerable groups such as the urban poor and the homeless, aggregation of data on emerging issues of poverty, and access to basic facilities such as safe water supply, sanitation, housing facilities and utilization.

To achieve these broad objectives, the following strategies have been identified:

- Effective advocacy and IEC, targeted at key stakeholders;
- Availability of technical manpower;
- Freezing the establishment of new administrative boundaries, to facilitate delineation of enumeration areas and the quick aggregation of results;
- Organization and provision of comprehensive logistics support;
- Acquisition of required maps and imageries;
- Development of geographic databases for census mapping;
- A carefully designed census instrument with a choice of topics, well-worded to enlist cooperation from the respondents, has been prepared;
- Enhanced speed and accuracy in data entry and processing;
- Development of a population database;
- Timely and exhaustive dissemination of a wide range of census data tailored to key users to make data available in multiple media formats;
- Strong collaboration with development partners;

- Adoption of cost and effectiveness monitoring of project implementation, to ensure adherence to the census work plan and budget; and
- Establishment of a Census Tribunal.

Effective Advocacy and IEC

A major problem that has affected previous censuses in Nigeria is the poor response of people to census matters as a result of misconceptions about and the politicization of the census.

One of the misconceptions about the census derives from superstitions about counting people, especially children. It is believed, in some cultures, that counting children can result in misfortune and may lead to the death of the children. There is also the misconception that giving out information during the census may lead to the divulging and exposure of one's secrets.

While issues of misconceptions about the census were more prominent before independence, the problem of politicization of the census became accentuated in post-independence Nigeria. The 1962 and the 1973 Censuses were cancelled due mainly to this problem. The over-politicization of censuses arose with the use of population as the basis for revenue and power-sharing among the heterogeneous peoples that make up the Nigerian Federation. Population is used for the delineation of constituencies and consequently, determining the membership of the legislatures. In Nigeria's multi-cultural society, the problem has been fuelled by mutual distrust and, today, the politicization of the census presents a major challenge. Indeed, a census could be conducted with technical accuracy and yet rejected for political reasons.

To address the problems of misconception and politicization, Census 2005 advocacy efforts have been designed to enhance the credibility and acceptability of census data by de-emphasizing the political benefits of the census and promoting utilization of the data for development planning. In this regard, all political parties have developed a common platform and national consensus towards the 2005 Census. The print and electronic media, as well as traditional institutions, are mobilized to play positive roles.

To reduce the cost burden on the Government and to ensure adequate and uninterrupted funding of the census, an advocacy strategy has been designed to mobilize resources beyond traditional government sources, to include the private sector, philanthropic associations, local communities and development partners. It was in this regard that the EU is supporting 52 percent of census project cost.

Furthermore, the Census 2005 strategic plan is designed to include the participation of stakeholders throughout the census process. For example, in the process of compiling an inventory of localities, Chairmen of Local Government Areas (LGAs) were allowed to see the list for their respective LGAs, after which they were required to confirm that the list covered all of the localities in their LGA before it was forwarded to the headquarters of the Commission. This process is to be replicated throughout all of the aspects of census administration, such that areas of suspicion are addressed as the exercise progresses to the release of final census figures.

To strengthen the census advocacy and IEC strategy, Census Publicity and Enlightenment Committees have been constituted at national, state and LGA levels. The Committees are responsible for educating and sensitizing Nigerians on census issues. In addition, they also mobilize financial, logistical and moral support for the census at these three levels.

Availability of Technical Manpower

In the past, censuses suffered from the problem of inadequate technical manpower. A major cause was the absence of a permanent organization charged with the responsibility of census-taking. Census administration was approached in an ad hoc manner, such that manpower for the census was assembled only for a particular census exercise. This arrangement affected the census in many ways. First, it led to a problem of dual loyalty among staff hurriedly assembled from States, LGAs and other agencies. This was the scenario in the 1962 and 1963 Censuses. The ad hoc approach also resulted in inadequate professional supervision leading to an extension in the duration of the enumeration in 1952/53. A third problem with the ad hoc arrangement was that it did not allow time for proper census planning.

In 1988, the National Population Commission was established as a permanent body responsible, among other things, for the conduct of censuses, with a view to putting an end to past problems. No doubt this new arrangement has paid off, as of today, the National Population Commission can boast of having one of the best staff compliments in the population sector.

Provision of Comprehensive Logistics Support

Poor logistics arrangements adversely affected some censuses in Nigeria. As part of the strategic plan for the 2005 Census, a comprehensive logistics support system has been put in place. For this purpose, Logistics Committees will be established at the national and state levels.

Identification and Acquisition of Maps

For the 1991 Census, the country was divided into 212,072 enumeration areas (EAs), compared to 111,833 EAs for the aborted 1973 Census. Sketches were produced for each enumeration area. One of the objectives of the 2005 Census is to replace sketches with geo-referenced EA maps. Towards this end, sufficient base maps, ortho-photo maps and photo images have been procured.

Enhancing Speed and Accuracy in Data Entry and Processing

One of the problems that affected the acceptability of previous censuses was the inability to release census figures quickly. Whereas provisional results for the 1991 Census were released within three months of the conclusion of the enumeration, it took another three years before the final results were produced and an additional three years, before formal acceptance for dissemination. Such delays cast doubts on the validity of the results and render the results of the census stale. To avoid undue delay in the release of 2005 Census results, an information technology solution that will enhance speed and accuracy in data entry and processing has been adopted.

Establishment of a Population Database

Under the National Population Policy, one of the functions of the NPC is to maintain a population database and the development of a population database has been embedded in the 2005 Census strategic plan.

Timely and Exhaustive Dissemination of Census Results

Apart from the undue delays in the release of census figures in the past, the results have not received adequate circulation to end users. The effect is that demographic factors have not been adequately integrated into planning for development. This weakens the justification for the huge amounts that are always spent on census-taking. A major thrust in the strategic plan is to ensure that results of the census are not only released on time, but are disseminated to end users in a user-friendly format.

Strong Collaboration with Development Partners

Census-taking is a complex and onerous task that can-

not be undertaken by NPC without the support and collaboration of others. For this purpose, a strategy has been mapped out to sustain collaboration and seek the support of development partners, including the entire donor community, especially the United Nations Agencies such as UNFPA, UNICEF and UNDP, in the provision of technical, financial and logistics support. In this regard, a Donors Conference was organized by UNFPA and the results were good. The Fund convenes regularly High-Level Donor meetings on Census 2005 with development partners, such as DFID, USAID, EU and JICA.

Cost-Effectiveness and Expenditure Monitoring

A cost saving and expenditure monitoring strategy has been conceived for the 2005 Census, to ensure that cost-effectiveness is sustained throughout the stages of census-taking and that the census work plan and budget are followed. In this regard, an internal monitoring system, in addition to the requirements of the Budget Monitoring and Price Intelligence Unit of the Presidency, is built into the census-taking process.

Establishment of a Census Tribunal

Pursuant to Decree (now Act) No. 23 of 1989, a Census Tribunal will be established to hear, consider and dispose of cases arising before, during and after the actual census enumeration. The Tribunal may order a recount or statistical verification of a disputed census result. The establishment of the Tribunal is in line with the experience of the 1991 Census, when a similar tribunal was established and is aimed at enhancing the acceptability of the census by affording interested parties the opportunity to challenge the census results.

Conclusion

Through strategic planning, the National Population Commission has determined how best to accomplish the mandate, given to it by the President, to conduct a national population census in the dry season of 2005. Although the strategic plan provides a framework for articulating programme goals, without the appropriate institutional framework to execute the plan, the realization of the 2005 Census would be impossible.

REFERENCES

Caldwell, J.C. & Okonjo C. (eds.): 1968 *The Population of Tropical Africa*. The Population Council/Longmans—London.

Ekanem, I.I. (1972): *The 1963 Nigeria Census: A critical Appraisal*: Ethiope Publishing Co., Benin City.

Fosu, G.B. (2002): *Issues and Challenges in Nigeria's 2004 Population and Housing Census*. A Paper presented at In-House Capacity Building Workshop on Population Censuses: New Directions and Cost Saving Strategies. Princeton, N. J.

Osagie, O. (1974): *Socio-Economic Aspects of Population Trends in Nigeria* (Unpublished Master Thesis) USL—Prague.

National Population Commission (1988): *1991 Population Census of the Federal Republic of Nigeria*. Analytical Report at the National Level, NPC Abuja.

National Population Commission (2004): *Census 2005 Strategic and Implementation Plan*, NPC Abuja.

Population and Housing Censuses in Developing Countries: Past, Present and Future Swedish Support

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Background

As requested by the convenors of the *Advocacy and Resource Mobilization International Meeting*, I hereby submit a brief statement regarding the Swedish International Development Cooperation Agency's (SIDA's) involvement in Population Census-taking. SIDA recognizes the importance of population census data for all kinds of planning, monitoring and follow-up of development at national, regional and local levels, as well as the importance of census data as a sampling-frame for various surveys in the intercensal period. Consequently, we welcome the UNFPA initiative and regret we are unable to participate in the February 24–25 meeting.

My comments do not follow the objectives and structure of the meeting, as stated in UNFPA's concept paper; the reason being, the strong links between the four objectives of the meeting. My humble comments on this vast and complex matter, are written from a donor's perspective, focusing on the way donors (or at least this donor) tend to look upon requests for census funding.

SIDA has partially funded a number of population censuses in Africa and Asia during the last two decades, in combination with the provision of technical support through the Swedish national statistical institute (NSI), Statistics Sweden. The support to census activities has, in most cases, been part of a broad, long-term, rather substantial institutional cooperation programme between Statistics Sweden and a partner NSI in a developing country. These more general capacity-building programmes have been ongoing for many years, up to 20+ years in one case (Tanzania), and support for censuses was a natural consequence of the long-standing partnership in statistics. Examples where Sweden has had a major financial and technical role in collaboration with UNFPA and bilateral donors include Lao PDR (1995, 2005—ongoing), Namibia (1991, 2001),

South Africa (1996), Tanzania (1988, 2002) and Zimbabwe (1992).

Persistent problems pertaining to the different stages of the census and some suggestions

Census support and other types of statistical capacity-building

Population and Housing Censuses (PHCs) are easily predictable as they, in most cases, follow the 10-year cycle. Yet, there is a tendency to look upon censuses as intermittent events, separated from the regular running of a statistical office and the links between the census and the regular production are seldom sufficiently appreciated. The ability to carry out a census is heavily dependent on the general capability of the statistical office, where poor overall capability and inadequate national resource inputs can lead to a statistical system that is entirely dependent on external technical agents and donors. Experience tells us that the census will boost the general competence of the office, establishing a technical standard which will benefit the office in the intercensal period and support activities beyond the census itself. Such logic should attract donor interest more than isolated census support. Consequently, investments in a census should be seen as investments in general statistical capacity-building over a longer period of time. Technical support to a census should be looked upon and presented as part of a statistical capacity-building programme over a longer period of time.

Investments in one census should also be viewed as an investment in future censuses. Let me take cartography as an example. The manual drafting of sketch maps for thousands of enumeration areas is still the common approach in many countries.

Census-illiterate donors may not understand the reasons for map drawing in the first place, while informed donors will wonder why modern GIS technology is not applied. Continuous maintenance of a spatial database during the intercensal period would reduce costs and time lags for an up-coming census. Donors are reluctant to fund enormously expensive exercises which start afresh every ten years. Starting all over again, time after time, with such a mammoth and expensive task is something donors will eventually shy away from, and sometimes rightly so.

Linking census support to other forms of public administration capacity-building

Database technology is extremely important for the running of any modern society. Population registers, business registers, and land and property registers are a few examples of key registers. Identifiers in the shape of a personal identification number, a business identification number or a cadastral ID-number are vital for register-matching.

Most developing countries have a long way to go in terms of administrative capacity—and in terms of stable democracy—before a system for current population registration can become anything but a distant objective. But the direction of movement should be clear. The role of a population census will vary depending on the circumstances, but the census will always be a potentially important tool for administrative purposes outside the realm of statistics.

Hence, links between censuses and other processes should be strengthened and better explained to politicians, civil servants, decision-makers and not the least, donors, in order to put censuses into a broader, administrative perspective. Issuing of ID-cards and drivers' licences, the registration of voters, the ownership of land/property and direct tax collection are examples of activities with close ties to population registration, censuses and GIS spatial databases derived from the census demarcation. Implementation of a system for current population registration might be distant in many countries, but the awareness of its potential should be raised today.

Education of donors and national decision-makers; adjusting to perceptions and language

Statisticians usually have a hard time convincing decision-makers and donors of the need for the current production of statistical information and the population census, being so costly, brings matters to a head. Still, these two stakeholder groups use information with a strong quantitative component on a daily basis.

It has been said many times before: statisticians and technical agencies need to come out of their isolated worlds and educate other stakeholders to the simple fact that the use of statistical data for MDG- and PRSP-monitoring is entirely dependent upon PHC data, directly or indirectly. The conversation must be in terms understood by the outside stakeholders, not the language of statisticians, in order to achieve results. Not all donor representatives will understand all implications of the census concept. Many will visualize a headcount and a few will understand the thematic scope of the concept, but all will realize that without data on demography, spatial household composition, education, literacy, economic activity, ethnicity, housing, etc., little can be achieved. Statistics are not what interest donor agencies; it is the ability of statistics to contribute to poverty eradication.

Consequently, the educational and pedagogical role of statisticians, and the way to express the census concept and context must be updated, communicated more widely and related to development targets.

Designing technical support

As mentioned above, SIDA has been supporting PHCs in many developing countries over the last two decades. My conclusions in this document draw on these experiences.

Needless to say, it is of utmost importance that national representatives (decision-makers, and NSIs), donors and technical agents work together in a coordinated and harmonised manner in all stages of the census cycle. This goes for funding as well as for technical input.

Most NSIs in developing countries need substantial (to say the least) technical support in order to carry out a census, the most challenging of all statistical exercises. Needs might occur in any given area, at any given time. It is SIDA's experience that technical support to a NSI/census organization is best supplied by another NSI, with genuine and recent experience with censuses in other countries. Such NSIs are able to deliver support and apply up-to-date methods and modern technology, without challenging the national ownership of the census exercise. Frankly speaking, technical support provided by international organizations and bilateral donors is not always solid and sustainable. Individual consultants from various walks of life, each with personal preferences, working with incompatible methods, will always prove inferior to a well-trained and coordinated team of census advisers. In brief, it takes an organization to support an organization.

SIDA's experience of using Statistics Sweden as the technical agent in the above-mentioned censuses is indeed very positive, but promotion of the agency is not my point. My conclusion is that in technical support to census-taking, NSIs have, in many cases, been poorly designed and too fragile. Flaws in data collection, processing, analysis and, maybe most of all, poor dissemination, will affect the donors' willingness to invest in future censuses, leading to under-funded censuses and inferior results, in a vicious cycle.

Although SIDA's view on population census support will remain generally positive, Sweden's high profile in the field of technical support to PHCs may come to an end in the near future. Our own censuses have been register-based for many years and the Swedish "field census" knowledge-base is rapidly vanishing. UNFPA should therefore encourage countries who take traditional censuses to involve their NSIs as technical agents, supporting the PHC in developing countries.

Dissemination, an area needing more attention

Needless to say, it's all about dissemination. If census results are not efficiently disseminated, the entire exercise is highly questionable and, as the saying goes, "statistics not used are useless."

The Internet is extremely useful and downloading of publications as well as accessing databases online, gives users a range of information unheard of before the late nineties. This is the theory; in practice, we must ask ourselves if users are better off without hard-copy publications, even assuming that they do have access to computers and Internet connectivity.

The production of statistics is, at least in developing countries, still driven by supply rather than demand. The ability to interpret statistical information is very limited, and this applies to most

"developed" countries as well. Most statistical projects tend to have small components focusing on user/producer issues, but they are normally quite modest. When the supply-side is reasonably up to par, UNFPA and bilateral donors should focus more on publication of census (and other statistical programme) results from a user's perspective in their programmes and stimulate understanding among various user-groups. Intermediaries, like journalists and NGOs, are key players in bringing the results to the people. I refrain from giving more examples here; my simple conclusion is that the more visible and tangible results that come out of a census, the easier it will be to convince national governments and donors that the exercise is worthwhile.

High tech vs. low tech solutions

Finally, I would like to touch upon the level of technology applied to censuses. There seems to be a general notion among donor agencies that census technology should be low-tech. It should be obvious that very advanced technologies, for example mobile telephone systems, have been successfully established in most developing countries. I believe this proves that technological leaps should be possible in census-taking. Again referring to census cartography and geographic information systems (GISs), it is obvious that a census with GIS applications will be superior from a donor's perspective. The resultant digital maps will be available for use for many purposes outside the statistical realm.

Thus, my point is that donors' willingness to supply census funds should increase if it is made clear that a) investments in a given census are also technological and/or methodological investments in future censuses, and b) census funding has positive benefits in areas beyond statistics.

Colombia-Innovación Conceptual y Tecnológica en el Censo 2005

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Colombia podría ser considerado como el primer país en hacer el censo de la ronda 2010, porque inicia el próximo 22 de mayo el censo que debió haber realizado en el año 2000. Las dificultades fiscales y las condiciones de seguridad fueron las razones principales para justificar los reiterados aplazamientos. Recientemente, cuando el gobierno se disponía a revisar nuevamente la fecha, decidió hacer algunos ajustes conceptuales y de metodología, obteniendo con ello apreciables reducciones en costos suficientes para poder ejecutar el censo de población y vivienda, y además levantar en la misma operación de campo, el marco para las investigaciones por muestra en industria, comercio, agropecuario y servicios.

La experiencia que se vive actualmente en Colombia respecto a los censos, bien podría ser observada, para evaluar los buenos resultados y los riesgos posibles de adoptar nuevas formas para ejecutar esas grandes operaciones de recolección de información que son los censos, cuando no se dispone de los recursos económicos suficientes.

La primera dificultad con que se enfrentó el país, como en muchos otros, ha el alto costo de la inversión. Difícilmente se puede atribuir prelación dentro del gasto público al censo sobre la de darle atención a las urgencias del hambre o a la de preservar la vida amenazada por la enfermedad o por los violentos. Reducir los costos de los censos sin mermar la calidad de la información, debiera ser, en consecuencia, el propósito común de los organismos nacionales e internacionales de estadística. Sin embargo, a ello se opone la no siempre sabia inercia de las concepciones tradicionales, y los no siempre sanos temores al cambio. Sin duda, a todos parece más seguro y más presentable, proponer el censo como algo que es necesario repetir periódicamente y de idéntica manera.

Por este camino se puede llegar al error de convertir al censo en un objetivo en sí mismo, sin considerarlo como parte del sistema de información básica de la nación. Existe el peligro de soslayar la importancia de otras fuentes de información como las muestras nacionales continuas y los registros administrativos de personas, habitaciones y establecimientos económicos. Con igual empeño debe promover el Censo, como la realización de grandes muestras continuas, y la modernización del registro civil de las personas, y demás registros hechos por oficinas de servicio al público. Si se lograra tal concepción integral, resultaría más comprensible y menos costosa la promoción entre los diferentes patrocinadores de la información básica.

Dentro de este pensamiento conceptualmente ampliado, es más entendible la necesidad de aceptar como convenientes, dos prácticas que aun son materia de grandes controversias: La aplicación censal de un formulario largo y otro formulario corto, y la de la no preservar el principio de la simultaneidad.

Colombia decidió aplicar un cuestionario corto a toda la población y un formulario ampliado a todos los hogares de pequeños centros poblados, mas aquellos seleccionados en los poblados mayores siguiendo una muestra de poco menos del diez por ciento de ellos. El diseño de la muestra la hace representativa para la mayoría de los aspectos a escala municipal y para otros, menos necesarios, a escala regional o provincial. La selección de la muestra se programa en el computador de mano que lleva el encuestador, tal como se lo permite la cartografía de precisión de la zona alojada en su memoria.

La otra decisión fue la de usar un periodo extendido para hacer el levantamiento de la información. En cada municipio los encuestadores actúan durante un mínimo de dos semanas y un máximo de seis. El operativo se realiza por el método de barrido de regiones homogéneas, sin que exista plena simultaneidad. Esto significa que entre el momento censal de un municipio incluido en la primera fase y otro en la última, puede llegar a existir una diferencia no superior a seis meses. Para minimizar los efectos de la movilidad migratoria, el avance de las tareas censales dentro de cada región y cada fase, se hace en el mismo sentido de los flujos migratorios tradicionales, de los pequeños centros poblados a los centros urbanos de atracción. Para evitar el doble registro de personas se construye, en la medida en que avanza el censo, un directorio de personas que contiene el nombre y la fecha de nacimiento como

archivo de referencia, y el sistema to consulta antes de ingresar una nueva persona.

Rechaza la doble presencia en el censo. Finalmente, se haría un ajuste por proyección a una fecha futura de la población observada en los diferentes momentos censales del semestre.

Al ampliar el periodo del censo, se pudo disminuir apreciablemente el número de encuestadores necesarios en cada día. De un millón y medio de personas exigidas por el censo clásico de simultaneidad, se redujo a menos diez mil y esto permitió introducir los dos cambios metodológicos que mejorarán notablemente la calidad y la oportunidad de los datos censales. El primero, capturar los datos directamente, *in situ*, mediante computadoras de mano PDA, ingresan de inmediato a los medios electrónicos, sin necesidad de esperar los varios meses que toma la lectura, así sea automatizada, de millones de páginas de papel. El segundo cambio, el de profesionalizar a los encuestadores mediante un entrenamiento más prologado cuya capacidad de desarrollar destreza se hace cierta en la medida que repite la acción día tras día, durante varias semanas.

La computadora de mano aloja el cuestionario electrónico que muestra las preguntas, una tras de otra, en una pantalla a color que facilita usar frases más completas y alternativas de respuestas más explicativas. Los filtros o pases de la secuencia se hacen transparentes para el encuestador quien puede así concentrar su atención en la entrevista. La gran capacidad de memoria de estos pequeños aparatos permite hacer la validación interna de la información que va incorporando, disminuyendo al mínimo la necesidad de posteriores correcciones o ajustes.

Los equipos, una vez concluido el censo, se destinan a la captura de las informaciones estadísticas por encuesta y a la automatización de los registros administrativos. A partir de entonces, los resultados del censo en cuanto a personas y habitaciones, tales como matrimonios, nacimientos, muertes y causas de muerte, o nuevas habitaciones, se actualizarán prácticamente en línea desde los despachos de los notarios, encargados de registrar los hechos vitales y las transacciones y mutaciones de predios. El aumento aparente de costos por el uso de captura de datos censales, se compensa ampliamente con el uso posterior de los equipos en el mejoramiento de la información, sin contar con las grandes economías obtenidas al suprimir el papel, su impresión, su lectura automática y la posterior verificación.

Para consolidar el sistema de información resultara de esencial importancia adoptar normas para la asignación de códigos censales o de identificación uniformes para las personas, las propiedades y las unidades producti-

vas. Misión que se viene cumpliendo en Colombia desde años atrás.

Dadas las reducciones de costos obtenidas en el cambio metodológico de la recolección de información, fue posible invertir en otras mejoras del sistema de información. En efecto la cartografía que se utilizará será de precisión, esto es de escala 1:2000 en zonas pobladas. Fue tomada recientemente por el sistema de ortofotografía, que permite tener georeferenciados todos los predios, tanto para facilitar su ubicación durante la operación censal como para los casos de muestras posteriores. Además, la innovación permite difundir las informaciones estadísticas con referencia a unidades territoriales pequeñas y medianas, con mayor interés para nuevos usuarios como el vecino del barrio o la vereda, los funcionarios de planificación local, y las empresas de mercadeo al detal. En las zonas rurales se usarán imágenes remotas captadas por satélite y el encuestador usaría en su recorrido un GPS o sistema satelital de posicionamiento geográfico en cada uno de los predios visitados.

Los especialistas que han participado en el diseño del nuevo censo, en conjunto con otros académicos, constituyen ahora un centro de estudios denominado CAN-DANE donde se harán investigaciones monográficas de la información censal y de las encuestas. Sin embargo, su misión más importante es la de formar profesionales provenientes de otras agencias gubernamentales y privadas en el uso de la información estadística. Las nuevas generaciones no necesitarían ser motivados por campañas de promoción de los censos, ya sabrán de su enorme importancia.

Notas complementaria de la presentación del Director del DANE

1. Crecimiento de la demanda por información estratégica y sus implicaciones metodológicas, presupuestales, tecnológicas y de calidad de información censal.

- Emergencia y relevancia de un gran número de procesos sociales, económicos y territoriales cuyo registro demanda su inclusión en el censo con sus implicaciones metodológicas, de calidad y costos haciendo necesario ampliar los contenidos tradicionales y adoptar estrategias como las de los cuestionarios básicos y las encuestas comensales.
- La dinámica social que vuelven disfuncionales conceptos válidos en censos anteriores que obligan a su

redefinición a través de indicadores alternativos o complementarios, incidiendo tanto en la comparabilidad intercensal, como internacional, obligando a veces su sustitución o complementación to cual complejiza el aspecto temático.

- Debilidad de los sistemas estadísticos nacionales que no facilitan la utilización de otras fuentes alternativas, diferentes al censo para el registro continuo o periódico de procesos sustantivos para el diagnóstico, planeación y evaluación de planes, políticas y programas de desarrollo económico, social y territorial.
- Carencia u obsolescencia de marcos muestrales para el desarrollo de planes estadísticos integrales de largo plazo, to que obliga, por su carácter universal, a la utilización del censo para proveer dichos marcos; tal es el caso del Censo General 2005 que ha incluido el recuento de unidades económicas y agropecuarias para disponer de dichos marcos para el futuro desarrollo de los estudios en estos campos sustantivos de la economía, la sociedad y el medio ambiente.

2. Elevados costos, deficiente cobertura y calidad de la información.

- Los últimos censos realizados en el país se han caracterizado por la persistencia de estos problemas. El actual censo tenía una programación inicial de costos de USD \$1.72 por persona.
- Gracias al rediseño metodológico y operativo, utilizando cartografía de precisión, tecnología punta, mediante el use de computadores manuales para los encuestadores y la vinculación de personal debidamente calificado para su aplicación *in situ*, se ha logrado reducir sensiblemente los costos del componente de población y vivienda a (USD \$0.93 por persona), con ganancias en cuanto a mayor cobertura temática, calidad y oportunidad en la entrega de la información recolectada.

3. Disponibilidad de cartografía de precisión y actualizada.

- Deficiencias, insuficiencias y desactualización de la cartografía para la ubicación de las unidades geográficas de observación, con implicaciones de costos y problemas de cobertura y georeferenciación.

Estrategia adoptada:

- Uso de cartografía de precisión actualizada y digitalizada para su use directo en los procesos de recopilación de la información a los niveles de desagregación espacial requeridos.

4. Disponibilidad y movilización de ingentes recursos en el día censal.

- Con la aplicación del censo en el periodo de seis meses programado se minimizarán los riesgos propios del operativo censal en un único día. El esfuerzo presupuestal y logístico y la programación del operativo para ser realizado solo durante los periodos de mayor estabilidad de la población, otorgan una flexibilidad excepcional para la movilización de recursos, reduce los imponderables, asegura mayor cobertura y un control mayor de los procesos operativos.

5. Oportunidad en la captura, procesamiento, evaluación y difusión de los resultados.

- Uno de los mayores problemas en la experiencia censal nuestra ha sido el sensible retardo en el suministro de la información recolectada. Los resultados definitivos del censo de 1985 se entregaron con un retraso de 6 años y los de 1993 con 3 años de retardo.
- Como se mencionó anteriormente, la aplicación de tecnologías de punta para recolección y procesamiento permitirá disponer de la información de las localidades tan pronto como se termine la recolección, estando programada la entrega de resultados definitivos consolidados a nivel nacional y para todas y cada una de las entidades territoriales a inicios del 2006.
- Esta sucinta enumeración no excluye la persistencia de otros importantes problemas comunes en el levantamiento censal, tales como los de orden logístico en la movilización oportuna y eficaz de recursos, la organización territorial para los operativos de campo, la captura de la información, la capacitación, la movilización ciudadana en apoyo y participación en el censo, la escasez o inexistencia de recursos durante la fase intercensal, el manejo de los archivos censales o la pérdida de la memoria institucional y la evaluación objetiva y documentada de toda la operación estadística censal, aspectos

que por las limitaciones de tiempo nos obligan solo a mencionarlas.

A. Razones para la seria subutilización y pobre difusión de los resultados del censo tanto a nivel nacional y subnacional y las estrategias ideadas para revertirlas.

1. Ausencia de una cultura estadística, tanto en la producción, como en la difusión y utilización de la información censal.
2. Deficiencias en la planeación y programación censal que no incluye en sus planes y presupuestos los rubros correspondientes a la generación de los productos censales, su difusión y promoción de uso. En el mejor de los casos estos recursos cuando se programan, son decididamente insuficientes.
3. Desinformación por parte de los usuarios sobre la riqueza y utilidad de la información censal.
4. Inaccesibilidad física, económica y tecnológica a los resultados y productos censales.
5. Excesiva centralización de la información.
6. Políticas estatales que le conceden una importancia secundaria a la información y la investigación dentro de los planes de desarrollo, reflejada en una muy baja asignación de recursos para dicha actividad.
7. Ausencia en las entidades estadísticas de políticas, planes y programas de difusión y promoción de uso de la información censal.
8. Baja calificación de recursos humanos para el adecuado manejo y aplicación de los resultados censales en los diferentes niveles territoriales.

Estrategias para la solución:

1. Formación y calificación de recursos humanos en el sector estadístico—Escuela CAN–DANE—tanto para productores como usuarios de la información estadística en el país y en la Región Andina.

2. Diseño, concertación y adopción de un Plan Nacional de Investigaciones Censales, con la participación de las entidades estatales, sectoriales y territoriales, el sector privado, los centros académicos y de investigación y la cooperación internacional.

3. Fortalecimiento de las dependencias de ediciones, mercadeo, comunicación y banco de datos responsables de la difusión de los resultados y productos censales, tanto en medios impresos, como magnéticos, así como la realización de eventos en las diferentes Direcciones Regionales del DANE, existentes en el país para realizar las políticas institucionales en este campo.

4. Programar oportunamente en la planeación censal recursos del nivel estatal, de cooperación internacional y del sector privado para estos fines.

5. Definir y adoptar políticas de difusión y promoción de los productos estadísticos en las entidades responsables de esta actividad.

6. Crear en las oficinas de estadística las condiciones de accesibilidad física, económica y tecnológica de los resultados censales.

7. Promover y apoyar el desarrollo de los sistemas de información básica, dentro de los cuales los censos de población y vivienda constituyen su columna vertebral.

B. Disponibilidad de recursos y presupuestos tanto de origen interno como externo, identificando las estrategias apropiadas para un manejo más sostenible, tanto de las agencias de cooperación como de los países usuarios de los mismos, para la ronda de los censos del 2010.

Problemas de financiamiento, tanto interno, como externo:

- Para atender las recomendaciones de Naciones Unidas el DANE estaba preparando la realización del censo de población y vivienda para el año 2000. Razones de restricción de recursos obligaron su postergación hasta el presente año.

- Se adelantó un proceso de cofinanciación con los entes territoriales, poco satisfactorio, tanto en la respuesta de las administraciones locales, como en el monto de los recursos ofrecidos que aún no se han hecho efectivos.
- La cooperación de agencias internacionales ha sido decididamente parcial y limitada en su cuantía. Se han recibido algunos recursos del FNUAP y de la Organización Internacional para las Migraciones (OIM). Prácticamente otras agencias del Sistema de Naciones Unidas como PNUD, FAO, OMS-OPS, UNICEF, UNESCO, ACNUR y UNIFEM han permanecido al margen de la cooperación, aun cuando el Censo General contiene temas de su directa incumbencia.
- Se ha conseguido en principio un crédito con el BID cercano al 70 por ciento del costo del censo, cuyos desembolsos parciales se han programando para el último trimestre del presente año.
- El sector privado no ha efectuado aún aportes al proyecto.

Estrategias para la financiación suficiente y oportuna de los censos:

1. Reducción de costos mediante la aplicación de tecnologías innovativas de mayor eficiencia en cuanto a planeación, captura, procesamiento y control de cobertura y calidad.
2. Mayor desarrollo institucional en el campo de censos de población y vivienda para incrementar eficiencia y eficacia en todas las fases censales.
3. Programación y gestión activa de recursos para las fases precensal, censal y postcensal.
 - Identificación de los principales usuarios de la información censal y vinculación de los mismos al proyecto.
 - Promoción y gestión oportunas de apoyo financiero, incluyendo las entidades estatales del nivel central y de los diferentes órdenes territoriales, el sector privado y las agencias de cooperación internacional.

4. Mayor asistencia técnica horizontal e integración entre los países, particularmente a través de las organizaciones regionales y sub-regionales.

5. Un mayor liderazgo y acompañamiento por parte de las agencias de cooperación internacional para el aseguramiento de recursos, tanto internos como del orden internacional, para canalizar no solo un mayor monto de los mismos, sino su oportuna y eficiente asignación y aplicación.

C. Redefinir y enfatizar la contribución de los censos de población y vivienda en la medición de los avances en el logro de las Metas de Desarrollo de la ONU para el Milenio.

- El Censo General 2005 por su cobertura temática, poblacional y territorial se constituye en la herramienta por excelencia para la medición del avance de este gran propósito mundial.

- A continuación se relacionan los ocho grandes objetivos de la Agenda Mundial para el Milenio y la forma como cada uno de estos ha sido incorporado en el Censo General, bien sea en el cuestionario universal, en la encuesta concensal o en los recuentos económicos y agropecuarios:

1. Erradicación de la pobreza extrema y el hambre.

Se han incluido los temas de estratificación socioeconómica, calidad de vida, necesidades básicas insatisfechas (NBI), hambre, pobreza objetiva y subjetiva.

2. Lograr la enseñanza primaria universal.

Los temas aplicados a las personas mayores de 3 años sobre escolaridad, analfabetismo, nivel y grado de educación formal alcanzados, proveen los indicadores básicos en este campo, manteniendo su comparabilidad con los censos anteriores por lo que seguimiento de su comportamiento histórico está asegurado.

3. Igualdad entre los pequeños y la autonomía de la mujer.

Se ha incluido esta temática a través de una batería de preguntas sobre volumen, composición por sexo y edad, estructura, educación, participación económica, estado civil, jefatura de hogar, migración y fecundidad, entre otros incluidos en los censos anteriores; se han adicionado en el censo 2005 otros aspectos como el de ingresos, mortalidad, aportación económica en el hogar y participación social.

4. Reducir la mortalidad infantil.

Se ha mantenido este tema asegurando el seguimiento histórico de este fenómeno.

5. Mejorar la salud materna.

Se han incluido temas sobre fecundidad, discapacidad mortalidad adulta y afiliación a la seguridad social, estos últimos nuevos en el censo 2005.

6. Combatir el VIH/SIDA.

Se han incluido por primera vez este aspecto de salud en una pregunta relativa a enfermedades catastróficas con la cual se espera tener una aproximación a nivel nacional y en las diferentes entidades político—administrativas acerca de la incidencia en el país de este grave flagelo.

7. Garantizar la sostenibilidad del medio ambiente.

El recuento de unidades agropecuarias proveerá los marcos muestrales servirá para el diseño de estudios específicos en este campo. Por primera vez se tendrá información completa y unificada sobre el entorno urbanístico y rural a todos los niveles territoriales. Se han incluido también los temas de acceso de los hogares al agua potable, así como la población residente en tugurios.

Experiences Gained from the 2000 Round of Population and Housing Census and Plans for the 2010 Round of Censuses—the Caricom Region

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Introduction

The CARICOM region has had a rich history of conducting population and housing censuses on a regionally coordinated basis. Since the 1980 Round of Censuses, the Statistics sub-programme of the CARICOM Secretariat has been mandated to coordinate the conduct of the census among its fifteen (15) Member States and five (5) Associate Members. The following short paper highlights a few of the priority issues and problems of the CARICOM region, based on experiences in coordinating this very important activity.

Issues and Problems of Priority Concern for the CARICOM Region

Preliminary Preparations: Our experience in the region has shown that a much longer ‘lead time’ should be devoted to preparing the various Member States for the conduct of the census. Indeed, it has now become necessary that we develop a permanent census infrastructure that continues to function from one census decade to another. This will mean that as soon as the census is conducted for one period, the permanent census office immediately commences the preparations for the next round of censuses. In both of the past two (2) decades, several problems were experienced in many Member States because of a late start in planning for this mammoth task. Because of insufficient time to properly prepare, some essential steps that are crucial to the process of conducting a census were not carried out as thoroughly as required. The “Mapping” of enumeration districts was one activity that was affected. This resulted in rather poor maps for a few Member States. The effect that poor maps have on the enumeration process can be significant. It is therefore essential to ensure that detailed maps are prepared well in advance of the start of the enumeration phase of the census.

Training of census Personnel: Experience, from the last decade of censuses, has shown that we need to invest

much more effort and time, as well as resources, in the training of the personnel that are involved in carrying out the census. This means that much more appropriate and focused training must be done for all levels of census personnel. Training will start with the heads of the census operations or census officers and their deputies. Technical staff, including the Statisticians and Assistant Statisticians directly involved with the conduct of the census, will also have to be as thoroughly trained as feasible. Training here will take the form of specialized short courses at established institutions, as well as customized group training conducted in the region. In addition, training of trainers will be a priority activity in order to better cope with the pressures of training of the actual field staff. The latter will be engaged in the actual data collection during the fieldwork of the census, and will therefore need to be thoroughly trained.

Producing quick and reliable results from the census: During the 1995–2004 decade, a few Member States of the CARICOM region had a rather unfortunate experience related to the timely release of their census results. One of the major causes of this was the poor planning of the data processing phase of the census. A few Member States opted for the more modern scanning technology, whereas another few used optical mark recognition/reading, as in the previous decade. In both cases, there were mixed results. The problems were not so much due to the technology, but due more to data processing plans which were not sufficiently firm. In other words, both technologies would have yielded more timely results, given proper planning and budgeting.

Census Evaluation and Analysis: An even more serious problem occurred with respect to the analysis of the census results. Censuses should be thoroughly evaluated and analysed in order to maximize the usefulness of their results. Due to several reasons, however, the production of analytical reports based on the census findings for the most recent decade has been severely hampered. Hence,

three (3) to four (4) years after the censuses were conducted, most Member States have not been able to produce further analytical reports. It is hoped that by 2005 at least some of these reports will be done.

Planning for the 2010 Round

The CARICOM Community of nations will again conduct the upcoming 2010 Round of Population and Housing Censuses on a regionally coordinated basis. However, the modern approach will vary significantly from the traditional approach, specifically in terms of: (a) the planning and management of the total process; (b) a stronger emphasis on the overall development of our human resources that are necessary to successfully conduct the censuses; and (c) the recognition of the crucial role that information technology will have to play at all stages of the census process.

The Modern Approach

An Early Start—the Project Implementation Unit

The CARICOM Community will exert all efforts to avert the very late start, and its consequential negative effects, in the planning of the region's population censuses for the decade of 2010. These efforts have already commenced. We have successfully sought and received support to establish a Census Project Implementation Unit at the CARICOM Community Secretariat (CCS). Even if we can only start in 2005 with one member of the staff, the project manager who will be an experienced Demographer, this will greatly enhance the monumental task of the regionally coordinated approach. Other key staff members, a Statistician/Demographer and a Cartographer/GIS Expert, will be brought on board within the following three (3) years. It is essential that all professional staff be in place in the various Member States of the Community at least one full year before the actual start of the fieldwork for the census. This will ensure that all headquarters staff will be fully conversant with the entire approach by the start of the actual work and will thus be well poised to deliver the guidance, assistance and support that will be essential to the individual states.

The major challenge posed in establishing a viable Project Implementation Unit (PIU) is the funding of the unit in a sustainable manner. Member States of the Community have traditionally provided the necessary funds for the fieldwork, processing, etc. of their national censuses. In addition, Member States have always been asked to make contributions to the regionally

coordinated approach via the CCS. In this modern approach, these costs will again be met by the Member States, but in addition, they will be asked to contribute a little more to partially fund the PIU. However, the PIU will require additional funding and the donor community will have to be approached. This process has already commenced and we are broadening our search for funding for this very important activity. The response, thus far, is encouraging. We are hopeful that as we identify the relevant activities to successfully enhance the census process, other donors will find them sufficiently attractive to fund. An appeal for support is being made to all donors represented at this meeting and to the international community as a whole. We will await your positive response.

A Harmonised Approach

The modern approach to a regionally coordinated census programme will emphasize the harmonisation of all its activities, as far as is possible. Harmonisation is crucial as we move towards a single market and economy. Under the current CARICOM programme on Social and Gender statistics and indicators, the region has been making efforts to harmonise its methods as well as its metadata. A significant proportion of the census metadata database is already harmonised, but the approaches used to carry out some of its relevant activities continue to pose challenges. However, strategies to overcome these challenges will be identified and the upcoming round of population and housing censuses in the CARICOM region will emphasize harmonisation of methodologies as well as of concepts and definitions.

This will imply that, as far as is practical, all stages of the census process, including the planning, conduct, processing and analysis, will be approached in a harmonised manner. Of course, in areas like the contents of the questionnaire, there will be ample room for Member States to include questions that are peculiar to their circumstances. However, a core set of questions will be identified for the region. Harmonisation will ensure meaningful comparisons across Member States and facilitate economies of scale.

Early Results and the Analysis and Dissemination of them

The last decade of population and housing censuses in the CARICOM region was marred by very late results—a situation that is totally untenable. Tardy results defeat the very purpose of census-taking, which is to provide timely and accurate data to facilitate planning and decision-making. The modern approach will seek to avert all unnecessary delays in the feedback of

results to the public. At the same time however, the accuracy of results will be given the usual high priority.

An unfortunate problem, which has significantly affected the entire image of the conduct of population and housing censuses in the region, has been the fact that very little, in terms of analysis and dissemination of the results, accompanies the raw numbers. It is a fact that more in-depth analysis of the results can greatly augment the usefulness of the census exercise. Regrettably, for the last decade, this is only now being addressed. No analytical reports have been produced utilizing the available census data. The new approach will have built-in safeguards to ensure that this does not recur in the next round of population and housing censuses. An important hallmark of the modern approach will be to promote the use of data utilizing a variety of methods. More in-depth analysis of the data and the production of analytical reports will be one major method of promoting a user culture for statistical data. In addition, timely data dissemination through a variety of methods will also be strongly promoted.

Conclusion

The CARICOM region is already taking steps to properly plan for the current decade of population and housing censuses. The errors made and the problems encountered with the 1995–2004 Round of Censuses are carefully being analysed. Several lessons have been learned from this experience and these will be closely studied in order to avoid similar occurrences in the next decade. An underlying theme throughout the entire process will be the recognition that the use of the results of the census exercise must be maximized. Measures will be taken to ensure that whatever data are collected will be widely disseminated and used. For this reason, the modern approach will emphasize thoroughness in the entire process—from its planning stage to the production of analytical reports and maximum dissemination of the results.

Les Principales Caractéristiques Du Recensement Général de la Population et de l'habitat 2004 au Maroc

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Objectifs du RGPH 2004

Le recensement général de la population et de l'habitat (RGPH) de 2004 est un instrument de choix pour dresser une véritable radioscopie de la population du Maroc. Il s'inscrit parmi les priorités du Haut Commissariat au Plan qui œuvre à la mise en place d'une nouvelle vision de la planification afin de répondre aux orientations des pouvoirs publics visant l'édification d'une société démocratique et moderniste.

- Les objectifs assignés à cette opération d'intérêt national peuvent se résumer comme suit:
- la détermination de la population légale de toutes les unités administratives du pays;
- la connaissance des différentes structures démographiques et socio-économiques de la population à tous les niveaux géographiques;
- l'évaluation des niveaux et de la structure des phénomènes moteurs de l'accroissement démographique et les mécanismes sous-jacents: la fécondité, la mortalité infantile, juvénile et adulte et la migration interne;
- l'évaluation de l'effectif de la population handicapée selon le type de handicap;
- la détermination des caractéristiques du parc logement et la connaissance des conditions d'habitation des ménages;
- et enfin, la constitution de la documentation de base indispensable pour l'élaboration de l'échantillon-maître, essentiel pour la réalisation des enquêtes post-censitaires au niveau de l'ensemble des départements ministériels.

Population soumise au recensement

Il s'agit de l'ensemble de la population se trouvant, à la date de référence du recensement (1^{er} septembre 2004), sur le territoire national et que l'on peut répartir en deux catégories:

- la population faisant partie des ménages ordinaires ou des établissements de la population dite comptée à part,
 - et la population de passage dans les hôtels et assimilés.
- A. Les ménages ordinaires: rentrent dans cette catégorie l'ensemble des individus apparentés ou non, vivant d'une manière habituelle sous le même toit et ayant en commun des dépenses alimentaires, vestimentaires et autres. On y distingue les ménages sédentaires et les ménages nomades. Font partie également de la catégorie des ménages ordinaires, les personnes sans abris ou sans domicile fixe rattachées à un district créé à cet effet.
- B. La population comptée à part: est constituée de l'ensemble des personnes qui, pour des raisons de travail, de santé ou pour des besoins d'éducation et autres, sont obligées de vivre en communauté:
- militaires, gendarmes et forces auxiliaires logés dans les casernes, quartiers, camps ou assimilés.
 - personnes en traitement pour plus de 6 mois dans les établissements hospitaliers.
 - détenus dans les établissements pénitentiaires.
 - pensionnaires des maisons d'éducation surveillée.
 - personnes recueillies dans les maisons de bienfaisance, les hospices et les asiles.

- élèves et étudiants internes à la date de référence du recensement dans tout établissement d'enseignement public ou privé.
- ouvriers logés dans les baraquements de chantiers temporaires des travaux publics et n'ayant pas d'autres domiciles habituels.

C. La population de passage: regroupe l'ensemble des personnes dont la durée de résidence dans le ménage recensé ou dans les hôtels et assimilés est inférieure à 6 mois.

Méthodologie d'observation

Comme lors des précédents recensements, l'opération de collecte est étalée sur une période de 20 jours à partir du début du mois de septembre 2004. L'expérience a montré que cette période est la plus propice à la réalisation des recensements au Maroc, puisqu'elle réunit toutes les conditions opérationnelles requises: stabilité de la population, disponibilité du personnel enseignant pour la collecte, disponibilité des moyens de transport et conditions climatiques favorables. Cette période permet, en plus, d'assurer une meilleure comparabilité des données d'un recensement à l'autre.

L'individu constitue l'unité de base du recensement. Le ménage forme l'unité d'observation, lui-même identifié dans des unités résidentielles.

La méthode de recensement est celle de la tournée porte à porte. L'agent recenseur interroge directement le chef du ménage ou, à défaut, un autre membre du ménage capable de le renseigner sur l'ensemble des individus du ménage. Outre le fait qu'elle est la mieux indiquée dans les pays où la proportion des analphabètes est encore élevée, cette méthode permet d'assurer aux données collectées à la fois la qualité et la cohérence requises.

La population des ménages nomades: étant repérée à l'avance au moment des travaux cartographiques dans les cercles, et surtout dans les communes rurales, cette population sera recensée par des équipes spéciales formées d'agents recenseurs et d'un contrôleur et dotées d'un véhicule;

La population comptée à part et la population de passage dans les hôtels et assimilés: les établissements abritant ces deux catégories de populations sont identifiés exhaustivement par les travaux cartographiques et, aussi, à la fin du processus de mise en place du dispositif du recensement. Quant au remplissage des supports de collecte prévus pour le recensement de ces deux catégories de population, il

s'effectuera par les responsables de ces établissements aidés par l'agent recenseur réserviste affecté dans la zone de contrôle.

Cadre juridique

L'envergure et la particularité des résultats du RGPH impliquent la nécessité de disposer d'un fondement légal, notamment en ce qui concerne l'obligation pour la population de répondre et la garantie du secret statistique d'une part, et les différentes dispositions relatives à la préparation, l'exécution, l'exploitation et la publication des résultats du RGPH d'autre part.

Les textes réglementaires précisant ces aspects ont été préparés et seront soumis incessamment à l'examen du Conseil du Gouvernement. C'est ainsi que la loi relative au recensement, promulguée en 1971, qui ordonne la réalisation du recensement et oblige les citoyens à se soumettre à ses formalités, sera complétée par les décrets suivants:

- décret fixant les modalités d'application de la loi relative au recensement, définissant les personnes à recenser, le lieu du recensement, les personnes absentes temporairement, ou de longue durée, la population légale, la population comptée à part et la population municipale;
- décret fixant la date de référence du recensement;
- décret relatif à la rétribution du personnel du recensement; et
- décret authentifiant les chiffres de la population légale du Royaume.

Ancrage institutionnel

La responsabilité du recensement incombe au Ministère de l'Intérieur et au Haut Commissariat au Plan. Pour aider ces deux départements, plusieurs commissions ad hoc sont constituées pour accompagner cette opération dans ses phases de préparation et de réalisation.

Comité de veille

La réalisation du RGPH 2004 est partagée entre le Haut Commissariat au Plan et le Ministère de l'Intérieur. Ces deux départements formant le comité de veille, sont appelés à collaborer dans un cadre empreint de concertation et de coordination propices à une démarche synergique afin d'optimiser les conditions de réalisation de l'opération.

De par son implantation à tous les niveaux de la subdivision administrative du Royaume, le Ministère de l'Intérieur a toujours un rôle important dans la réalisation des recensements au Maroc, en assurant le soutien logistique et humain nécessaire à la mise en place du dispositif du recensement, et en veillant à la bonne marche de l'opération de collecte des données, grâce à la mobilisation des cadres et agents des autorités et des collectivités locales.

Commission interministérielle

La commission interministérielle constituée des Secrétaires Généraux de l'ensemble des Ministères a pour mission:

- d'étudier le dossier méthodologique préparé par le comité technique et, éventuellement, d'y apporter des modifications;
- de définir les modalités de participation de chaque département ministériel à l'exécution du RGPH.

En effet, vu la complexité et l'ampleur des travaux à réaliser dans le cadre de cette opération d'envergure nationale, la collaboration des départements ministériels, chacun dans son domaine de compétences, est vivement sollicitée.

Commissions préfectorales et provinciales

La constitution de ces commissions relève des attributions de Messieurs les Walis et Gouverneurs. La participation des élus, des représentants des collectivités locales et des services extérieurs des administrations est vivement sollicitée, compte tenu du soutien logistique et humain qu'ils peuvent apporter à cette opération d'intérêt national. Ces commissions veilleront à l'application de toutes les décisions prises par la commission interministérielle et prendront toutes les mesures qui s'imposent pour le bon déroulement de l'opération.

Sur le plan technique, les Walis et Gouverneurs sont assistés par les Directeurs Régionaux du Haut Commissariat au Plan et/ou par leurs collaborateurs désignés pour la mise en place du dispositif du recensement et son exécution dans les préfectures et provinces du Royaume.

Mise en place du dispositif du RGPH 2004

Les moyens humains et matériels nécessaires à la réalisation du RGPH 2004 sont considérables. Il s'agit notamment de:

Agents de soutien	:	2,219
Agents recenseurs	:	41,130
Auxiliaires des autorités locales	:	17,698
Chauffeurs	:	1,455
Contrôleurs	:	11,516
Documents de collecte (en tonnes)	:	300
Superviseurs	:	883
Véhicules	:	4,450

Pour la mobilisation de ces moyens dans les délais et conditions requises, des équipes techniques sont mises en place sous la responsabilité conjointe des Walis et Gouverneurs et des Directeurs Régionaux du Haut Commissariat au Plan. Ces équipes, constituées chacune d'un responsable provincial et d'un technicien, prennent en charge les tâches suivantes:

- identification et affectation du personnel d'exécution par unité administrative, secteur de contrôle et district de recensement;
- préparation des convocations de ce personnel pour la formation et l'exécution du RGPH;
- préparation des listes des auxiliaires des agents des Autorités Locales devant participer à la collecte des données;
- préparation des fiches pour l'indemnisation de l'ensemble des auxiliaires du recensement par catégorie;
- inventaire des salles et des lieux d'hébergement pour la formation du personnel de collecte;
- inventaire des locaux pour la réception, le stockage et la distribution des documents du recensement;
- inventaire des moyens de transport publics mobilisables pour l'opération. Le reliquat sera couvert par la location de véhicules privés;
- actualisation des listes établies lors des travaux cartographiques concernant les établissements abritant la population comptée à part, les établissements de population de passage dans les hôtels et assimilés, ainsi que leur capacité d'hébergement; et

- mise à exécution de la composante locale de la campagne de sensibilisation et d'information sur le recensement.

Ces équipes sont tenues de préparer un rapport hebdomadaire sur l'état d'avancement des travaux qui leur sont confiés et d'en informer les membres de la commission préfectorale ou provinciale. Pour l'accomplissement de sa mission, chaque équipe a besoin d'un local au siège de la province ou préfecture, équipé en matériels de bureau et de bureautique (micro-ordinateur et imprimante), et en moyens de communication.

Moyens humains

Selon les résultats issus des travaux cartographiques du recensement, l'effectif des ménages ordinaires dans le pays s'élèverait à environ 5.5 millions de foyers dont près de 3.5 millions résident en milieu urbain et 2.0 millions en milieu rural. Répartis par districts d'une taille moyenne de 165 ménages, cet effectif donne près de 36,600 districts: 23,200 en milieu urbain et 13,400 en milieu rural.

Ces estimations qui constituent les données de base pour la mise en place du dispositif du recensement impliquent une mobilisation massive du personnel pour la collecte des données, environ 70,000 participants au niveau de l'ensemble du Royaume. Hiérarchiquement, ce personnel est ventilé comme suit:

- Les superviseurs centraux et régionaux;
- Les superviseurs provinciaux;
- Les superviseurs communaux;
- Les contrôleurs et contrôleurs formateurs;
- Les agents recenseurs;
- Les agents auxiliaires des Autorités Locales; et
- Les chauffeurs.

Abstraction faite des deux dernières catégories, le recrutement de ce personnel s'est fait suite à l'appel à candidature lancé à l'adresse du corps enseignant, des cadres des administrations publiques, des collectivités locales et des établissements publics, des étudiants des écoles et instituts supérieurs et des retraités. Un formulaire établi par le Haut Commissariat au Plan est communiqué à plusieurs départements ministériels dans le but de sélectionner les superviseurs, les contrô-

leurs et les agents recenseurs aptes à participer à l'opération de collecte.

Une fois réceptionnées, les demandes de participation sont examinées au siège de la Direction Régionale du Haut Commissariat au Plan, mais la liste des participants retenus ne sera définitive qu'une fois avalisée par le Wali ou le Gouverneur de la préfecture ou de la province. Il en est de même en ce qui concerne leur lieu d'affectation.

Les candidats ainsi retenus seront appelés à s'engager par écrit à participer à la réalisation de l'opération selon des termes de références précis.

Les Walis et Gouverneurs veillent également sur la mobilisation du personnel enseignant et celui relevant des autres administrations sélectionnées pour l'exécution du recensement. Et ce, en adressant des convocations nominatives dûment signées aux personnes désignées pour cette tâche. Ces convocations sont élaborées par l'équipe chargée de la mise en place du dispositif à partir des listes arrêtées en accord avec les autorités locales.

Moyens de transport

Au cours de la phase d'exécution du recensement, les moyens de transport sont indispensables pour le déplacement du personnel de collecte en milieu rural. Ils revêtent une grande importance pour les contrôleurs dont la tâche est de s'assurer de l'exhaustivité des données collectées et du bon déroulement de l'opération.

Les besoins en moyens de transport sont importants à l'échelle nationale, en particulier en véhicules tout-terrain pour les équipes devant opérer en milieu rural. Afin d'y faire face, trois solutions complémentaires ont été envisagées:

- la mobilisation des moyens de transport des administrations publiques, des collectivités locales et des établissements publics;
- le recours aux véhicules particuliers du personnel participant au RGPH moyennant une indemnité journalière fixée par un texte réglementaire; et
- la location des moyens de transport de proximité (secteur privé) moyennant une indemnité journalière par véhicule couvrant les frais de carburant et le paiement des chauffeurs retenus.

Le recours aux moyens de transport particulier du personnel participant s'est fait moyennant un engagement par écrit de leur part auprès des autorités locales.

Recensement General de la Population et de l'habitat 2004 Planning des operations au Niveau Provincial et Prefectoral

	Début	Fin
I. MISE EN PLACE DU DISPOSITIF DU RGPH		
1.1. Réception par Monsieur le Wali ou Gouverneur de l'équipe chargée de la mise en place du dispositif	01/04/04	01/04/04
1.2. Constitution de la commission préfectorale ou provinciale	02/04/04	07/04/04
1.3. Recrutement et affectation du personnel d'exécution	05/04/04	20/05/04
1.4. Etablissement des listes des chioukh et mokadmine	08/04/04	30/04/04
1.5. Inventaire des moyens de transport et de communication	12/04/04	17/05/04
1.6. Inventaire des établissements de la population comptée à part	03/05/04	31/05/04
1.7. Inventaire des établissements de la population de passage	03/05/04	31/05/04
1.8. Préparation des convocations et réception des engagements écrits	25/05/04	14/06/04
1.9. Préparation des fiches d'indemnisation des auxiliaires	14/06/04	25/06/04
1.10. Identification des locaux de stockage des documents	24/05/04	30/06/04
1.11. Identification des salles et lieux d'hébergement pour la formation	24/05/04	30/06/04
1.12. Préparation du programme local de la campagne de sensibilisation	01/06/04	30/06/04
II. FORMATION		
2.1. Formation des superviseurs	12/07/04	23/07/04
2.2. Formation des contrôleurs-formateurs	02/08/04	13/08/04
2.3. Formation des contrôleurs et recenseurs	16/08/04	27/08/04
III. EXÉCUTION DU RGPH		
3.1. Exécution du programme local de la campagne de sensibilisation	01/07/04	20/09/04
3.2. Reconnaissance des limites des districts sur le terrain	30/08/04	31/08/04
3.3. Collecte des données auprès des ménages	01/09/04	20/09/04
3.4. Vérification, emballage et acheminement des dossiers à la DS	21/09/04	30/09/04

Il est également à préciser que, compte tenu de la particularité de certaines communes rurales, où des douars sont pratiquement inaccessibles aux véhicules, la mobilisation de bêtes de somme ou d'autres moyens sont d'une grande utilité pour le déplacement des équipes du recensement et où le concours de l'autorité locale est vivement recommandé.

Autres moyens

Les Walis et Gouverneurs sont également sollicités pour faciliter l'identification et la réquisition en

nombre suffisant des salles qui sont destinées à la formation. Il en est de même pour les lieux d'hébergement qui doivent abriter le personnel dont la résidence est hors de la ville où la formation est dispensée et les locaux qui doivent être réservés au stockage de l'ensemble des documents et fournitures du recensement et à la réception des questionnaires au terme de la collecte. Il en est de même pour les moyens de communication, comme le téléphone et le fax, qui devront être mis à la disposition des superviseurs au niveau régional, provincial et communal.

Formation

Concernant la formation, et eu égard à l'importance de l'effectif des auxiliaires du recensement qui est formé sur la méthodologie de collecte des données, elle se fait nécessairement en plusieurs étapes et d'une manière pyramidale. Les cycles de formation ont lieu au niveau:

- régional pour les superviseurs provinciaux,
- provincial et préfectoral pour les superviseurs communaux et les contrôleurs formateurs; et
- local pour les contrôleurs et les agents recenseurs.

Collecte des données et acheminement des documents

Les travaux de collecte des données se sont déroulés au mois de septembre 2004. Durant cette étape, l'encadrement technique des équipes sur le terrain est assuré par le personnel du Haut Commissariat au Plan. Le déroulement de l'opération et le suivi de l'état d'avancement des travaux sur le terrain relèvent de la responsabilité des Walis et Gouverneurs.

Une fois les documents contrôlés et finalisés, leur acheminement à la Direction de la Statistique est assuré par les autorités provinciales ou préfectorales. L'acheminement est confié au responsable provincial du RGPH.

Exploitation des données

Les travaux de collecte des données se sont déroulés au mois de septembre 2004. Durant cette étape, l'encadrement technique des équipes sur le terrain est assuré par le personnel du Haut Commissariat au Plan. Le déroulement de l'opération et le suivi de l'état d'avancement des travaux sur le terrain relèvent de la responsabilité des Walis et Gouverneurs.

L'exploitation du recensement 2004 s'effectue progressivement afin de répondre à l'ensemble des objectifs fixés. Par ordre de priorité, il s'agit de:

- déterminer la population légale du Royaume;
- dresser le portrait démographique et socio-économique de la population en publiant une série de rapports couvrant chacun un niveau de la subdivision administrative du Royaume: niveau national, niveau régional, niveau provincial et préfectoral et niveau communal et infra-communal; et

- ressortir toutes les caractéristiques du parc logement au Maroc.

Trois innovations majeures caractérisent le RGPH de 2004: un appel à candidature pour le choix des agents du recensement; la mise en place d'un système vocal interactif pour le suivi, en temps réel, de la collecte de l'information sur le terrain et enfin l'acquisition d'une technologie de pointe en matière d'exploitation des données, en l'occurrence la lecture automatique des documents (LAD).

La LAD est une technologie récente de dépouillement, basée sur le scanning des questionnaires, la reconnaissance automatique des caractères et leur traitement informatique pour la constitution du fichier des données statistiques et la production des résultats qui seront diffusées ultérieurement.

L'appropriation de la LAD par le Haut Commissariat au Plan va permettre d'assurer l'exploitation rapide et exhaustive de toutes les données du RGPH, ainsi que la production de ses résultats avec de meilleures garanties de sécurité et, ultérieurement, d'autres enquêtes dans les meilleures conditions de délai et de qualité. Le savoir-faire et l'expertise ainsi acquis pourront, en outre, être mis à la disposition d'autres pays en développement.

Analyse, publication et diffusion des résultats

L'objectif fondamental du Recensement Général de la Population et de l'Habitat de 2004 est de mettre à la disposition des utilisateurs de l'information statistique tous les indicateurs démographiques et socio-économiques au niveau national comme au niveau régional ou local.

L'analyse et la publication de ces résultats dans les meilleurs délais nécessitera le recours à des techniques d'impression et de reproduction performantes, mais aussi une mobilisation importante de cadres de spécialités différentes pour l'élaboration et la finalisation de l'ensemble des rapports, dont une partie serait à la charge des délégations régionales, notamment les documents devant présenter les résultats du recensement aux niveaux régional et préfectoral/provincial.

A ce titre, le comité scientifique du Recensement s'est penché sur la question de la mise en place d'une stratégie globale de communication relative aux résultats du recensement permettant à tous les utilisateurs et également à l'opinion publique de disposer de l'information qui sera produite.

Publications prioritaires

Les publications des données du recensement seront de deux types: celles dont la finalité est de présenter les résultats directs du recensement et celles que l'on produira dans le cadre d'une série thématique qui traitera de sujets précis.

Population légale du Maroc

Ce document comporte des données sur les chiffres de la population et des ménages du Maroc par circonscription administrative.

Caractéristiques démographiques et socio-économiques de la population marocaine

Ce document qui sera édité séparément au niveau national, au niveau régional, ainsi qu'au niveau préfectoral et provincial présentera les résultats du RGPH 2004 relatifs aux aspects démographiques et socio-économiques de la population de toutes ces unités administratives par milieu de résidence.

Série communale

Les résultats de cette série seront présentés sous forme de volumes, contenant l'ensemble des indicateurs démographiques et socio-économiques des populations et des ménages des communes urbaines et rurales, et sous forme de fiches commentant l'essentiel de ces indicateurs.

Atlas sur la répartition de la population

Ce document contiendra des cartes permettant une classification aisée de la population des différentes entités administratives du Royaume selon le niveau de certains indicateurs démographiques et socio-économiques.

Série thématique

Cette série englobera un ensemble de rapports traitant de sujets différents dictés par les besoins instantanés en information, telles que les études comparatives régionales et préfectorales/provinciales déjà publiées à l'issue du recensement de 1994, ou encore d'autres sujets ayant pour objectif d'approfondir la connaissance d'un phénomène démographique ou socio-économique.

Accès aux résultats

Vu le développement des technologies de l'information, il est envisagé de diversifier la diffusion des résultats du recensement notamment par le biais de CD-ROM et du site Internet, ce qui leur assurera une plus large diffusion, aussi bien au niveau national qu'international. Déjà les résultats de la population légale du Maroc existent sur le site Internet du Recensement.

www.recensement.hcp.ma

Projet Lad pour l'exploitation des donnes du RGPH 2004

مشروع LAD لاستغلال معطيات الإحصاء العام للسكان والسكنى 2004

L'un des changements majeurs du recensement 2004 réside dans l'introduction, pour la première fois, de la Lecture Automatique des Documents (LAD) dans l'exploitation des données de base, et ce afin de leur assurer un traitement exhaustif et rapide.

Le projet LAD/RGPH2004 consiste à fournir le fichier de base apuré des données du recensement en passant par la numérisation des questionnaires, la reconnaissance automatique des données collectées et leur traitement par vidéo-codage. Il vise également à assurer aux personnels du Haut Commissariat au Plan les prestations de formation et l'assistance technique y afférente.

من بين التجديدات الهامة التي أدخلت على الإحصاء العام للسكان والسكنى 2004، هناك استعمال لأول مرة القراءة الآلية للوثائق LAD كوسيلة لاستغلال المعطيات الأساسية للإحصاء استغلالاً سريعاً وشمولياً.

فإن مشروع LAD/RGPH 2004 يهدف إلى توفير جدارة بالمعطيات الأساسية للإحصاء وذلك بواسطة الترميز الآلي للاستمارات والتعرف الآلي على المعطيات المجمعة ومعالجتها عن طريق الترميز على الشاشة. كما يهدف إلى تكوين تقنيي المندوبية السامية للتخطيط حول هذا المهام وتمليكهم مهارتها.

Description du projet

1. Numérisation et traitement des questionnaires du RGPH2004 à, savoir:
 - la feuille du ménage et du logement (FML), 6 millions environ;
 - le cahier de la population légale (CPL), 38,000 environ;
 - la feuille de la population comptée à part (FPCP), 12,500 environ;
 - la feuille de la population nomade (FPN), 40,000 environ.
2. Formation de cadres et de techniciens du Haut Commissariat au Plan.
3. Assistance technique

Consistance des prestations

Les prestations objet du projet sont:

Phase 1: réaliser un test sur un échantillon de 2000 à 5000 ménages pour l'adaptation des questionnaires aux normes de la LAD, l'identification des éléments néces-

وصف المشروع

1 - الترميز والمعالجة الآلية لاستمارات الإحصاء العام للسكان والسكنى 2004 :

• ورقة الأسرة والمسكن (6 مليون ورقة)

• دفتر السكان القانونيين (38000 دفتر)

• ورقة السكان المحسوبين على حدة (12500 ورقة)

• ورقة السكان الرحل (40000 ورقة)

2 - تكوين أطر وتقنيي المندوبية السامية للتخطيط.

3 - المساعدة التقنية ونقل المهارة.

مكونات المشروع

المرحلة الأولى: إجراء تجرية على استمارة الإحصاء على أساس عينة مكونة من 2400 أسرة بغية تكييف هذه الاستمارة حسب معايير LAD. تكييف البرمجيات المعدة لهذا الغرض ثم تحديد العناصر الضرورية لترشيد وتنظيم ورشة الاستغلال.

saires à l'optimisation de l'organisation et au dimensionnement de la chaîne de production, et l'identification des éléments nécessaires à l'optimisation des logiciels de traitement LAD.

Phase 2: étudier et préparer la chaîne de production, assurer la formation et le transfert de compétence, et assurer la qualification du personnel, la recette et la réalisation d'un «tir à blanc».

Phase 3: exploitation des questionnaires du RGPH2004 et prestation de l'assistance technique.

المرحلة الثانية: دراسة وتهيئ ورشة الاستغلال. تكوين الأطر ونقل المهارة. وإجراء عملية استغلال "بيضاء"

المرحلة الثالثة: معالجة استمارات الإحصاء العام للسكان والسكنى 2004 وتقديم خدمات المساعدة الفنية.

1998 Population and Housing Census of Pakistan, Census Procedures

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The fifth Population and Housing Census of Pakistan was conducted in March 1998. It was initially planned to be undertaken in March 1991, but could not be held as scheduled mainly due to apprehension about its accuracy and lack of consensus among the provinces on dates, methodology, etc. The apprehension arose out of the linkage of census figures with political and economic rights of the provinces as laid down in the Constitution of Pakistan. The house listing operation, a pre-requisite to the census of March 1991, carried out in November–December 1990, showed inconsistent population trends in some areas which were not easily explainable in terms of normal demographic behaviour. Such inconsistencies, if repeated in the main census, could have caused imbalance in the population shares of certain areas at the cost of others. As such, categorical demands were made for ensuring a free, fair and transparent census operation to give credible results.

Pakistan is administratively divided into four provinces and special territories, like Federally Administrative Tribal Areas and the Islamabad Capital Territory. The provinces have distinct linguistic and ethnic features, firstly, within the provinces and secondly, with one another. The situation so formed, is sometimes exploited by certain vested population groups to serve their own vested interests. The census population figures serve as a basis for the determination of seats to the National Assembly and distribution of funds to Provinces under Articles 51(3) and 160(2) of the Constitution of Pakistan. Determination of recruitment quotas for all civil posts in the Federal Government is also made on the same basis. These linkages with the constitutional provisions and administrative arrangements become an overriding consideration for vested groups for exaggerating the census figures.

A firm assurance was thus required to be laid down to undertake a census which was credible, transparent and gave correct figures. This goal was achieved by involving the Armed Forces of the country in aid of

civil administration for 100 percent support at all levels, to ensure that the census is conducted in a fair, free and transparent manner. After assuring a system of built-in mechanisms of counter checks to avoid tendencies of erroneous inclusion of population in the census operation, the census was undertaken in March 1998.

For the census purpose, the entire country was divided into a four tier census areas, the smallest being the “Census Block,” which consisted of around 175 to 225 households. The next higher unit was the census circle (comprising 5–8 blocks), then the census charge (5–8 census circles) and the census district. These areas were delimited with a view to establishing manageable supervisory and enumeration units for successful conduct of the 1998 Census. Each census area was assigned a unique code. Maps were also prepared for all of these census areas separately to facilitate the field staff and ensure complete coverage of the area/population during enumeration.

The 1998 Population and Housing Census of Pakistan was conducted through door-to-door enumeration from 2–18 March 1998. The structure numbering and house listing were carried out from 2–4 March 1998, followed by the head count and housing census, from 5–17 March 1998 (5 March, being the reference date). The non-contact, homeless population, etc., was covered on the last day, i.e., 18 March 1998.

Two types of questionnaires were used in the census. A short questionnaire (Form-2) containing the basic questions of Population and Housing characteristics was canvassed in about 92 percent of the blocks/households, while the long questionnaire (Form 2-A), which included all questions of Form-2 and some additional questions on education, migration, economic activities, fertility and disability, was applied in the remaining 8 percent of the sample blocks/households. Both of these forms were canvassed simultaneously and information collected was recorded by the enumerators on OMR readable forms.

Various improvements/innovations were carried out in the 1998 Census over the previous census, which included:

- For the first time, rural area maps were prepared for better coverage. All settlements and number of households within rural areas were also shown/plotted on the maps.
- Detailed maps of urban areas showing physical features were prepared. Permanent census tabulation areas (census circles) were also developed.
- An independent house listing operation was undertaken in the fall of 1990, by engaging local school teachers and local staff.
- Training being an important area, was dealt with at length. The time for training was enhanced and audio-visual equipment introduced for uniform training procedures.
- Optical Mark Reading (OMR) technology was introduced for the accurate transfer of data from source documents to the computer and for the early processing of data.

For data dissemination, appropriate tabulation plans were prepared, keeping in view the demands of data users and traditional practice. Advance sample tabulation on important variables like age, sex, marital status, literacy and education, etc., were prepared/provided for immediate use by the users. The final results of the 1998 Census were published in the form of District, Provincial and National Census Reports. These reports contain a General Description and Broad Analysis of Population/Housing data followed by Statistical Tables of the respective areas. Besides publications, data is also supplied on diskette/CD to different national and other agencies, as requested. Special tabulations are also prepared to meet the needs of specific users.

To ensure accuracy and the timely release of census results, data entry was carried out on OMR Machines (OPSCAN-21) after appropriate manual editing and coding. The design of the questionnaires was specifically drawn on an OMR basis. The technology for printing of OMR forms was limited in the country, therefore, short OMR forms were printed from the United States of America, with the courtesy of UNFPA. The experiment of using OMR technology for data entry of the 1998 Census proved successful in spite of the fact that it was used for the first time in the census history of Pakistan. It

helped a lot in the quick release of census results/reports, as compared to earlier censuses. The time lag for release of conventional census reports was reduced by one-third from 3.7 years in the 1981 Census, to 2.5 years for the 1998 Census.

Accordingly, the Population Census Organization has published the final results of the 1998 Census in the form of District, Provincial and National Census Reports. These reports contain a General Description of the areas and a Broad Analysis of Population/Housing data, followed by Statistical Tables of the respective areas. These reports contain macro- and micro-level data which are used by national and international agencies, Government and private institutions and the general public, for socio-economic planning, their evaluation and various administrative purposes.

Apart from the regular census reports, a number of supplementary reports have been published to meet the requirement of data users, as follows:

- Main findings of the 1998 Population and Housing Census, a brief and consolidated report on important population and housing characteristics (1);
- Handbooks showing 1998 census data in condensed form, i.e., rates, ratios, percentages, etc., at National and Provincial levels (5);
- District Brochures containing basic population and housing data at the Tehsil/Taluka level, published for common data users to have a quick view of these areas (106);
- Basic Housing Statistics by Administrative Units at National and Provincial levels; and
- District-wide reports showing basic population and housing statistics by Union Councils.

Presently, the Population Census Organization is working on analytical reports on important topics such as Gender Statistics, Youth Population, Disabled Population, Housing Conditions and Population Profiles of Pakistan, covering important topics on socio-economic and demographic characteristics. These reports will include detailed analysis of 1998 Census data to measure the impact of socio-economic and demographic conditions in Pakistan. Special reports for specific areas like Cholistan and Thar are also being prepared. Besides, this Organization is publishing Big City Reports containing the census data of 1998 for planned development of the urban centres and to identify/solve civic problems.

In addition to the above, evaluation of census methodology is being undertaken by senior officers of this Organization on various subjects, like delimitation of census areas and their adequacy, need/importance of census maps, selection of topics for population and housing censuses, sample designs for sample censuses, training of field staff and data processing methods.

Publication of a Census Atlas at National and Provincial levels is also under execution. The updating of maps of large urban areas and large mauzas (villages) for the next census planning and delimitation according to the new local government system is under preparation. Mauza lists, according to the Union Council instead of the Patwar Circle, are also being prepared to cope with the need of devolution and decentralization.

During the next few years, while preparing plans for the next census, committees and groups will be formed to study the methodology of the previous census with respect to its merits or problems faced, and to recommend suggestions for the improvement of next census vis-à-vis consistency, comprehensiveness, coverage and transparency, etc. However, utmost endeavours will be made to bring census concepts and definitions on par with the international standards, keeping the local conditions for the next census in view. This exercise is made to maintain uniformity in topics of population and housing censuses, to ensure comparability of census results at national and international levels.

The data dissemination programme evolved the maximum use of census results by data users including

national and international agencies, government and private institutions and the general public, for socio-economic planning, their evaluation and other administration purposes. In this regard, census data in detail, through various census reports, have been released for the data users. Census data is also provided to these agencies on their request to meet their specific requirements. These census data are further available to the users on computer readable media, on payment.

Pakistan is in line with other developed countries for seeking new technologies to effectively conduct the next census. The use of the Optical Character Reader (OCR) or the Optical Intelligent Character Reader (OICR) for data entry, and timely processing and dissemination, would be the expected option. This change of technology will lead to ensure accuracy and timeliness in data processing. Further, more efficient software regarding data processing, mapping and geographic information systems with ever-increasing power, capacity and complexity, which at the same time, has become easier to use and cheaper to acquire, will be utilized for better dissemination of data.

Currently, the computing facilities and system are mainly used for routine official work and post-census activities. PCO has recently developed its website, i.e., **www.census.gov.pk**, which gives census data on important variables at national and provincial levels, and which is updated from time to time. This data is also available on the website of the Statistics Division: **www.statpak.govt.pk**.

The Experience of Switzerland, Conditions for the Successful Implementation of Censuses: Aspects from the Donor Perspective

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The experience of Switzerland

Switzerland has conducted decennial population censuses since 1850. Since the 2000 Round of Censuses, Switzerland has pursued **a strategy of change** in its census methodology, increase sustainability, improve relevance, timeliness and contain costs. Main elements of the strategy were the creation and updating of a housing and dwelling register on the basis of the 2000 Census, the harmonisation of local and national population registers, the use of new technologies (Internet, telephone, mail) for data collection, the implementation of sophisticated statistical methods of data imputation and editing, and finally, a programme of data dissemination and analysis implemented together with researchers from universities and the private sector.

The 2010 Population and Housing Census will use a mix of different methods. Housing data, for instance, will be collected entirely from the register. Population data will be partially collected from registers and partially from the population. The households will receive questionnaires for items that cannot be answered based on register data (education, economic activity, cultural characteristics, living conditions and commuting).

In the field of international cooperation for censuses, Switzerland has conducted important bilateral cooperation projects together with other partners (among them, UNFPA) in Central Asia (Kyrgyzstan) and in the West Balkans (Albania and the Former Yugoslav Republic of Macedonia). Strong points of the Swiss cooperation are cartography and data analysis, as well as data dissemination and capacity-building.

Conditions for the successful implementation of censuses

Based on this experience, we see five main conditions for **the successful implementation of censuses in developing countries**:

Gaining political support and creating a solid legal basis

In all of the countries of the world, the census is an expensive and politically sensitive operation. Its success depends on the full support of the political authorities at all levels (parliament, government on the national and regional levels). A solid legal basis for the census is of primary importance.

Creating links with the development process on the national and regional levels

Statistical arguments alone are not sufficient to get the necessary political support and funding. The results of the census have to be of relevance for the political process itself, namely for democracy and equity, the distribution of political power and funds, national and regional planning, the protection of minorities, etc. In other words, the census results need to be linked with the development process and development plans on the national, regional and local levels. Small area data, which are comparable across the country, as well as over time, are the most important values added by the census to the statistical information system of a country.

Discussing the relevance of data from the users perspective and designing programmes of data analysis

The range of data to be collected, the indicators to be calculated and their relevance for the development process have to be discussed with the users in advance. It has to be clear that no alternative data sources are available that fit the needs with less cost. A programme of policy-relevant data analysis and data dissemination, which goes beyond simple headcounts and tables, has to be designed and planned (including statistical tools, cartography, capacity-building, publications, etc.).

Using new technologies in a socially sensitive way

As much as possible, the data collection and dissemination methods should take advantage of new technologies (mobile phones, Internet, mail, GPS and GIS). At the same time, their use has to be adapted to the technological environment of the households and reflect the level of education of the population. Economic aspects (e.g., availability and the low cost of manpower for traditional data collection and data entry) should also be taken into account.

Contributing to the advancement and sustainability of the national statistical systems

Census operations are often stand-alone activities that consume large amounts of resources. They can even destabilize national statistical systems. Therefore, a census should be integrated as much as possible with the larger statistical system of a country and contribute to its development and sustainability from a methodological, conceptual and technological point of view. Respective horizontal activities and coordination efforts (e.g., building up of registers, investment in IT technology, development of classifications and sampling frames, introduction of statistical tools and capacity-building) should become an integrated part of census planning.

Aspects from the donor perspective

Resource mobilization with donors will depend very much on the degree to which the conditions for success (political and institutional support, relevance of census

data for national development, adapted methodology and technology, support of key processes of the national statistical system, cost efficiency and programmes for policy-relevant data analysis) materialize in different national contexts.

International mobilization efforts should contribute to:

- Making *policymakers and development aid agencies sensitive* to the complex conditions of success and the need for multilateral as well as bilateral technical cooperation, capacity-building and funding.
- Designing census strategies and funding plans that are *adapted to the specific national conditions* of individual countries.
- Fostering *partnerships (pilots, twining, etc.)* between individual donors and recipient countries or country groups in a coordinated international framework.

Switzerland is ready to contribute to the international efforts and welcomes the development of a framework of cooperation that can help mobilize the support of multilateral and bilateral development agencies and donors.

It is, however, essential to link census initiatives with other multilateral initiatives for the development of statistical systems in developing countries, namely the National Strategies for the Development of Statistics (NSDS), a follow-up of the Marrakech Plan of Action and implemented by PARIS21 (see item 7 (a) of the agenda of the 36th session of the Statistical Commission) and the monitoring for MDGs (item 7 (c) of the agenda). The 2010 World Programme on Population and Housing Censuses will only receive funds and succeed if it is planned and implemented as a fully coordinated and integrated activity.

A transparent delimitation of the respective roles and efficient cooperation between UNSD and UNFPA is also important.

Strategies for Resource Mobilization for Population and Housing Censuses—Case Studies in Some African Countries

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Introduction

It is increasingly difficult to mobilize the resources for population and housing censuses (PHCs) in Africa. Several countries of Central and Western Africa could not mobilize the necessary funds to carry out a census in the 2000 Round within a reasonable time frame. Because of the unavailability of national resources and the weakness of the national commitment, some countries were obliged to undertake the enumeration before seeking funds for data processing, analysis and dissemination, which are necessary if the census is to be useful.

The international assistance (multilateral or bilateral) supported to a significant degree the first Round (1970, 1980 and 1990) of censuses in Africa. Faced with the donor fatigue, it was extremely difficult for many countries to adhere to the decennial periodicity of the censuses. Several reasons contribute to the diminishing interest in financing PHCs,¹ These include:

- The high cost of the PHC process;
- The weakness of the national commitment, measured by the level of national resources mobilized for the PHC;
- The length of the whole process, particularly the long interval between the enumeration and the availability of the expected products;
 - Wrong design of the process: “Beyond data collection, analysis;”
 - Bad planning of the activities;
 - Unavailability of the entire budget at the beginning of the census;

- Under-exploitation of the data;
- Under-utilization of the products;
 - Delay of the diffusion of the products of the census;
 - Inadequate dissemination of the products;
 - Poor awareness of what products are available; and
- Difficulties in accessing data from the censuses.

The purpose of this paper is to present lessons learned from the experiences in Central and Western African countries in employing new strategies for involving census stakeholders and resource mobilization.

After a brief situation analysis, we will summarize some theories and strategies about advocacy strategies for the resource mobilization for censuses, and then we will show some practical examples in order to demonstrate what was achieved in a real life situation by implementing “PHCs advocacy document” for resource mobilization in some countries in Africa. To conclude, we will give some suggestions for improving resource mobilization strategies for censuses.

Situation analysis

The implementation of the PHC, in most of the countries in Africa, depends on the external contributions. The work plan in the PHCs project document was often delayed by the lack of the resources needed to achieve the activities, as scheduled. The final date of the enumeration depends on the availability of the external funds, irrespective of when the preparatory phase begins. The table below lists some countries that were

¹ R. Dackam-Ngatchou (2003): New Strategies to Improve the Cost-Effectiveness of Censuses in Africa, in “Counting the People: Constraining Census Costs and Assessing Alternative Approaches, Population and Development Strategies,” Number 7, UNFPA, New York.

The Status of the Most Recent Censuses in Selected African Countries

COUNTRY	FORMER CENSUS	2000 ROUND OF CENSUSES	
		ENUMERATION	STATUS IN JANUARY 2005
Cameroon	1987	No.	Enumeration Scheduled in 2005. Difficulties in mobilizing the needed financial resources.
Central African Republic	1988	Yes, 2003.	Data analysis in-progress. Search of complementary resources.
Chad	1993	No.	Difficulties in mobilizing the needed financial resources.
Comoros	1991	Yes, 2002.	Data analysis in-progress.
Congo	1984	No, 1996.	Never exploited due to the fact that preliminary results have never been validated.
Congo, Democratic, Republic of	1984	No ²	Security reasons.
Guinea- Bissau	1991	No. Project document available.	Search of financial/human resources.
Madagascar	1993	No. Project document completed in 2004.	Difficulties in mobilizing the needed financial resources.
Mali	1987	Yes, 1998.	Data analysis in-progress.
Niger	1988	Yes, 2001.	Data analysis in-progress.
Nigeria	1991	No. Project document available.	Difficulties in mobilizing the needed financial resources.
Senegal	1988	Yes, 2002.	Data processing in-progress. Search of complementary resources.
Togo	1981	No.	Search of financial resources. ³

unable to maintain the decennial periodicity of their censuses.

Many other countries in Africa have experienced difficulties in mobilizing enough resources to complete the process. That can be explained by the shortage in government financial contributions for data processing analysis, publication and dissemination of results (the Central African Republic, Ghana, Lesotho, Mali, Niger, Senegal, Uganda ...).

The difficulty of mobilizing resources in other countries can be explained by the crisis or conflict situations,

or institutional instability. That is the case for: Democratic Republic of Congo, Eritrea, Guinea-Bissau, Liberia and Sierra Leone.

At the 1996 UNECA/UNFPA Expert Group Meeting on Post-ICPD Needs in Basic Data Collection, Analysis, Dissemination and Research, recommendations were made to: adopt a global vision of the census from the beginning; recognize the interdependence of the census phases and its position in the integration of the national data collection system; advocate for a government

² Due to civil war.

³ Under European Union Embargo.

⁴ Israel Sembajwe, "Mobilizing resources for censuses: strategies for reducing census costs – perspective of partner countries and the Economic Commission for Africa" in UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26–29 November 2001, Pretoria, South Africa.

commitment to provide equipment and human resources through temporary reallocation; and advocate for a government commitment to provide financial resources.⁴

In 2002, for the Nigeria PHC, the UNFPA recommended “strong and persistent advocacy to win support of policy makers to allocate adequate resources to the population census project and to create enabling environment for successful conduct of Census 2004.”⁵

One of the lessons learned from the cost analysis of the censuses in Africa is that the difficulty of mobilizing funds was not always correlated with the cost per capita.

Countries which deferred the census for lack of financing do not necessarily have the most expensive censuses in relative terms. As the financial commitments of the government for the PHC are often insufficient in Africa, the development of an advocacy strategy for the mobilization of the national and international resources becomes a priority.

For the 2000 Round of Censuses, UNFPA/CST-Dakar has developed a strategy for resource mobilization. This strategy is summarized in a document entitled “Advocacy Document for Resource Mobilization of the PHC.” The objective of the advocacy document for the PHC is to convince governments to mobilize internal resources and to convince the partners to take responsibility for at least one component of the chain of activities. The advocacy document aims to:

- Highlight socio-demographic data needed for national development programmes;
- Show indicators that would be useful for the planning, monitoring and evaluation of the national programmes, if the draft questionnaire were used;
- Present topics for analysis likely to interest the key stakeholders, based on the variables in the draft questionnaire;
- Demonstrate that the planned analytical topics, as well as the expected products of the census, meet the needs expressed by the government’s partners, including the NGO and the private sector;
- Show how the strategies adopted for the census

process will make the census less expensive, carried out quickly and on schedule, better analyzed and disseminated and more useful;

- Show that the approach for capacities-building in data collection, data analysis, data processing, publication and dissemination is cost-effective;
- Develop a specific, targeted message for each key stakeholder in order to mobilize the national resources (public, private and community) and the international resources (multilateral and bilateral); and
- Create a table that summarizes the indicators that will be available from the census at lower levels of disaggregation.

In the advocacy documents, emphasis is put on the linkages between the national and regional development strategies adopted, and their impact on information demand and on the national statistical systems which have to supply the data. The linkages with the PHC, the main component of the national statistic system, need to be established when “programming exercises” are conducted and Country Strategy Papers and Indicative Programmes are prepared. There is a need to demonstrate that at each stage of census preparation, enumeration and post-enumeration, it is necessary to adopt a cost-effective approach.

The prerequisites before sending a request for support to donors are:

- Proof of the national commitment;
- Amount of the whole budget support by the government;
- The strategy for reducing census costs;
- The place of the census in the national decennial plan of data collection, analysis and dissemination;
- A statement linking census outputs with PME processes between national programmes and MDGs;
- A work plan which highlights the shortening of the lag between enumeration and availability of the final products; and

⁵ UNFPA: “Compendium of Census Activities in Sub-Saharan Africa: 2000 Round of Censuses.” Compiled by the Africa Division, UNFPA New York, October 2002.

- A strategy of using the census for strengthening national capacity in statistics in general, and censuses in particular.

Step-by-step approach for involving partners in the PHC process:

- Identify organizations, agencies or individuals that can bring the resources, expertise or credibility to the PHC;
- Consider which roles key stakeholders might play to best support the PHC;
- Involve the partners who want to work in the PHC planning as early as appropriate;
- Give key stakeholders the PHC rationale “Advocacy documents for PHC;” and
- Give key stakeholders the PHC project document so that they can include some activities into their own programme.

Robert D. Bush proposed a checklist⁶ which should be used to anticipate in the advocacy documents, the main issues raised by donors:

- 1. Establish Relationships with Donors before the Census**—Donors should be viewed as valued customers with valid data needs that you can and should help serve;
- 2. Local Donor Representatives Key**—For most donors, the decision to support the census is made at the local level, in competition with other demands for resources;
- 3. Start Census Preparations Early**—Population and housing census planning and implementation should begin at least two years in advance of the census. Early planning and implementation activities, and a realistic census schedule instil confidence in donors, gives you an opportunity to begin discussions of census support with donors well in advance of the census and (it can take one to two years to mobilize donor support) make the development of local capabilities more likely.

4. Country Commitment—Donors expect the country to fund most or all local census costs. Late and/or uncertain country commitment of funds for local costs has been the most important factors in discouraging donor support.

5. Key Role of the United Nations Population Fund (UNFPA)—Early contact with the local UNFPA Representative is recommended, as the Representative can be of great help in encouraging other donor support.

6. Joint Assessments—For most donors, the first step in the census support process is an assessment. One strategy for encouraging early and broader census-funding commitments is to involve all donors that are likely to support the census in a single assessment. This will: save your staff time; lower the cost of the assessment for individual donors and increase likelihood of donor support.

7. Donor Programme Focus—Donors focus on broad programme areas. The more closely you can tie your requests for assistance to these programme areas, the more likely are you to receive a positive response.

8. Donor Preferences—Virtually all donors are willing to provide training and technical assistance, while most are willing to assist with computer hardware, most too, are also reluctant to support other commodities (i.e., vehicles) and local costs. Further, budgets that are too high (or too low) will raise questions and often delay the funding process.

9. Serving Donors Needs—Once the census is completed, it becomes even more important to be responsive to the information needs of the donors that have supported the census.

10. Other Factors—The rapid release and wide dissemination of census results are important to donors.

11. While most donors must focus on broader programme goals, once the importance of a census in achieving those goals is established, donors want exactly the same outcome as partner countries, a well planned, cost-effective, accurate, timely and widely used census. A mutual appreciation of this common

⁶ Robert D. Bush, “Mobilizing resources for censuses: strategies for reducing census costs, perspective of donor countries” in UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26–29 November 2001, Pretoria, South Africa.

interest is a solid basis for a strong working relationship between you and your census donors.

Relevance of the PHC⁷ is another important aspect to be emphasized in the advocacy documents. There is a need to demonstrate that a PHC has relevance to user needs. Ensuring that the needs of this group of stakeholders are carefully considered is an essential element of census advocacy for resource mobilization. Consulting with users of census data is a positive public relations undertaking and an efficient, transparent means of determining the demand for potential census topics. At the preliminary stage, while designing the specific objectives of the census, care should be taken to ensure that the products have relevance to overall national strategies and relevance to the other elements of national statistical systems. When analyzing the relevance to users needs, the following broad criteria can be used as a guide.

- Is the topic of major national importance?
- Is there a need for data on the topic for small groups in the population or for small geographic areas?
- Is the topic suitable for inclusion in the census?
- Are there sufficient resources available to collect and process the data for that topic?
- Does it allow for international comparability?

There are three main components of the budget which could be beyond the internal capacities of the least developed countries: the mapping, the enumeration and the data processing phases.

“The cyclical nature of census costs requires that the census budgets are planned well in advance and cover all known activities. Agreement by the government on the level of funding for the census is needed early in the cycle so that other aspects of census planning can proceed. Census managers will need to manage census funds and closely monitor the government commitment to the census to ensure that the agreed funds are actually available when needed. There have been many cases of governments initially agreeing to a certain level of

funding, but are eventually unable to meet those commitments due to other fiscal pressures. This can have disastrous effects on census planning.”⁸

Advocacy documents for resource mobilization were developed at the beginning of the census process in many countries, including: Benin (2002), Cape Verde (2000), Côte d’Ivoire (1998) and Madagascar (2004). For other countries, advocacy documents requesting complementary resources were prepared after the enumeration in Benin (2002), Central African Republic (1994) and Senegal (2002).

Gabon included the requirement for a PHC every ten years in its constitution. Out of respect for the constitution, the Gabonese Government always finds the funds necessary for the census. Thus, the financial contribution of Gabon to the PHC accounts for 83 percent of the total cost of the operation as opposed to 10 percent or less, for several other countries in Africa.

The advocacy for the inclusion of censuses in the constitution of countries, to improve the management of development according to the principles of equity, good governance and human rights, should be a significant objective. The target group of advocacy activities, in this case, could be the government, legislative bodies and society.⁹

The new Strategies for resource mobilization: Practical examples in Africa

Benin experiences in resource mobilization

Benin carried out its third PHC in February 2002. Resource mobilization was a significant activity in the preparatory stage of this census. This activity benefited from the support of UNFPA, which started an early dialogue with the bilateral and multilateral partners, nearly two years before the enumeration.

The supporting documentation used for the first contacts included the Census Project Document and a notice presenting the third PHC. This strategy gave partners advance notice so that they could include census activities in their schedule, and negotiate, two years before enumeration, what would be expected of them. This notice was organized around these keys points:

⁸ Department of Economic and Social Affairs, Statistics Division, Studies in Methods, “*Handbook on Population and Housing Censuses*,” Series F, No. 83/Rev. 1, United Nations, New York, 2001.

⁹ Richard Dackam-Ngatchou, Soulimane Baro: «*Guide d’orientation pour la communication et le plaidoyer dans les recensements généraux de la population et de l’habitation en Afrique*», Document de travail, UNFPA, CST Dakar, 2005.

- Legal basis for the census (Official reference to the law: promulgated);
- The objectives of the census;
- The expected results and their level of desegregation (sex, urban/rural, administrative/geographic, socio-economic, etc.); and
- An indicative plan of the whole operation, from the preliminary work to the dissemination of the results, which emphasized the reduction of delays in producing the results after the enumeration.

A first Round Table of Donors was held with the Government partners (bilateral and multilateral), national NGOs and the private sector attending. The meeting created the opportunity for key stakeholders to learn about the various phases of the operation, the questionnaire and the expected results. Additional information on the census budgeting was provided. No announcements of contributions were made during this first meeting.

Following this first Round Table of Donors, the National Statistics Office expanded the background information on the census and included it in a booklet to support advocacy for resource mobilization. UNFPA/CST Dakar helped improve this booklet, thanks to the availability of the analysis plan of the third PHC, elaborated in 2000. The purpose of the booklet was to give partners the census rationale, strategies and proposed outreach messages (in a ready-to-use form). The outline of this booklet for resource mobilization was as follows:

- I. *Title:* Third Population and Housing Census 2002: Which products can we retrieve from the census process?
- II. *Census Objectives*
- III. *Expected Products*
 - A. Socio-economic and demographic data disaggregated up to the smallest administrative units
 - B. State of population
 - C. Economy and population
 - D. Marital status and marriage rate Nuptiality
 - E. Status of women
 - F. Status of children
 - G. Ageing
 - H. Handicapped people
 - I. Dynamics of population:

- (i) Fertility
- (ii) Mortality
- (iii) Migration (internal and international)
- J. Poverty of households and Poverty of regions
- K. Demographic atlas

IV. *Other products*

- A. Website of the third PHC
- B. Interactive CD-ROM on the third PHC including metadata
- C. Cartographic database
- D. Households database
- E. Updated database including both the current and past censuses

V. *Indicators called for by the great international conferences*

- A. Millennium Development Goals Indicators
- B. The indicators of the New Partnership for Africa Development (NEPAD)
- C. The indicators of the Programme of Action of the International Conference on Population and Development (ICPD) and ICPD+5
- D. The indicators of the Benin's Common Country Assessment and of the United Nations Development Assistance Framework (CCA/UNDAF)

VI. *Calendar of post-enumeration operations*

- A. Tabulation
- B. In-depth analysis workshop
- C. Presentation of the final results
- D. National dissemination

The indicators, called for by the great international conferences and MDG indicators, aim to provide United Nations partners with new census outputs. NSO expected that the UN system would perceive the census as valuable for their ongoing activities, such as situation analysis through CCA, and the planning and evaluation of the UNDAF. UNICEF was impressed by the availability of the Multiple Indicators Cluster Survey (MICS) indicators for all administrative units.

The advocacy booklet divided the detailed third PHC budget into two components: the cost of work already completed and the cost of the remaining activities. These documents were provided to the various partners and they were contacted individually. Communications were also established with the public and private companies. Four partners agreed to support the financing of the RGPH3.

Apart from the Government and the World Bank through the Health and Population Project, one notes the contributions of UNFPA, the Swiss Co-operation, UNICEF and the Port authority of Cotonou/Benin.

Census project documents for Madagascar (reviewed in 2004), are comprehensive, include key products and two additional documents to support the advocacy (an analysis and tabulation plan and strong arguments in favour of the census summarized in an advocacy document). The budgets for the censuses in all of the countries in West and Central Africa went beyond the tabulation stage and made adequate provision for analysis and dissemination. Apart from formal analysis, the key indicators provided in response to national or international conferences and resolutions were very useful (Benin, Central African Republic, Madagascar and Senegal).

Poverty maps, spatial descriptions of the distribution of poverty in Benin, represent small geographic units, such as cities, towns or villages. Almost all of the household surveys are too small to be representative at such levels of disaggregation. Actually, most census questionnaires contain the information needed to calculate non-monetary poverty. This approach had been applied with some success in two countries (Benin (2002), Guinea (1996), etc.). The Benin experiences have been shared with other countries in the region. All ongoing data processing and analysis included poverty

maps in the list of the final products (the Central African Republic, Madagascar, Niger, Senegal, etc.).

Mapping stage—The costs were shared between two operations, the agriculture census and population and housing census, in Togo (1997)

Enumeration stage—Government transportation was used in Burkina Faso in 1996, expanding the proportion of internal resources in census funding and demonstrating national commitment.

In some countries, other government ministries may provide funding for particular topics. For example, a ministry responsible for empowering women might provide funding for gender statistics or local governments might fund regional monographs). This strategy involves line ministries in promoting the census and setting of priorities in the census-taking process.

The relevance of censuses and statistical systems should be defined within the framework of larger development goals:

- Poverty Reduction Strategy Papers (PRSPs) have become increasingly important to donors. It is important to show that population and housing censuses are an important tool for planning and evaluating poverty reduction strategies (Benin (2002), Central African Republic (1994) and Senegal (2002)). A good census

MOZAMBIQUE CENSUS '97 DATA HELPED SAVE LIVES¹⁰

Results from Mozambique's 1997 Population and Housing Census, the second post-independence census in the country, were released in late 1999. A few months later, in February 2000, severe flooding occurred in the south of the country and put thousands of lives at risk. Local government and international relief agencies looked to Census '97 for data on the impact of the flooding and the number of people at risk in the affected zones.

The INE, in conjunction with the U.S. Census Bureau, the WFP and other agencies, mobilized an operation to build a GIS system for the relief effort, incorporating census data at the village level and satellite imagery showing the extent of the flood zones. Part of this operation involved determining spatial coordinates for Mozambique's approximately 10,000 rural villages. The census results proved to be of tremendous assistance to the disaster relief efforts.

National Statistic Office's quick response to the disaster had several important ramifications. First and foremost, Census '97 data helped save lives. Visibility of the census in this operation had a political impact, since people realized how important and valuable the census is. Work done on the GIS system later contributed to other projects, such as land-mine eradication, poverty mapping and a national thematic atlas.

It is fully expected that future censuses in Africa or Asia will build on the successful experience of Mozambique's Census '97.

¹⁰ Christopher Corlett and Joao Dias Loureiro, *Using Census Data in Emergency Situations: Mozambique's Experience with Census 1997*, in Population and Development Strategies, Population and Housing Censuses: Strategies for Reducing Costs, Number 4, October 2002, UNFPA, Population and Development Branch, New York, 2002.

can guide more effective government expenditure by targeting resources to where they are most needed. This pro-poor approach, which aims to increase the allocative efficiency of the PRSP, had been emphasized in the advocacy documents;

- The evidence-based advocacy on using the PHC to monitor MDGs, Benin (2002) and Madagascar (1994); and
- The strategy of involving some ministries had promoted advocacy and influence priority of the setting of priorities in the census-taking process (Guinea (1995), Madagascar (2004), etc.).

The areas such as poverty reduction, human resource development, health, education and good governance receive much attention from donors. The census advocacy document highlighted the direct use of census products for planning, monitoring and evaluation these areas (Benin (2002), Central African Republic (1994), Côte d'Ivoire (1998), Madagascar (1994) and Senegal (2002)).

Conclusion

1. More systematic advocacy activities for resource mobilization can give good results when well applied, as in the case of the Benin PHC 2002.
2. The donor fatigue and donor frustration arise over the apparent level of local commitment, as reflected by the lack of internal funding.
3. Because the census planning and dissemination phases are relatively low cost, governments should make an effort to mobilize national resources for these phases. This includes all designing and planning phases up to the project analysis plan: Project Documents, draft questionnaire, draft analysis plan and expected outputs/products.
4. The fact that censuses are somewhat donor-driven, inhibits mobilization of local political support.
5. Concern was also expressed that several Central and West African countries were unable to analyze census results after data had been collected.

6. Comprehensive census planning and budgeting, providing for appropriate census procedures, should be done at the preparatory stage as tools for advocacy. This is effective as the examples in West Africa have demonstrated.
7. Effective cost-reduction practices developed in each country should be compiled and shared.
8. Censuses can encourage and assist governments to mobilize and allocate local resources and budget for population, reproductive health, gender and related programmes, including, in some countries, counterpart contributions to UNFPA-supported programmes.
9. Censuses can strengthen capacities of governments and NGOs for resource mobilization and for costing relevant interventions.
10. National Statistical Offices and census agencies need to convince their own governments of the importance of increased investment in the development and implementation of a national statistical plan of “data for development,” with the censuses as its cornerstone.
11. Censuses can make poverty maps easily accessible to policymakers as a tool to target government allocations to local administrative units. They can stimulate information-based policymaking and increase the demand for the related information that statistical institutes can provide. If cash-strapped governments are made aware of such diverse uses of census data, they will be more likely to allocate funds for them in the future. Hence, poverty maps can also be used as advocacy tools for the census efforts in developing countries. Finally, poverty maps can help statistical institutes to reconcile information from various data sources, and encourage researchers to demand and utilize census data.¹¹
12. Advocacy should push to have censuses included in the constitution of all countries, as an instrument for managing development according to the principles of equity, good governance and human rights.

¹¹ Berk Ozle, “Using census and household survey data for poverty mapping: Mobilizing resources for censuses: strategies for reducing census costs, perspective of donor countries” in UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26–29 November 2001, Pretoria, South Africa.

REFERENCES

1. Richard Dackam-Ngatchou (2003): New strategies to improve the cost-effectiveness of censuses in Africa, in *Counting the People: Constraining Census Costs and Assessing Alternative Approaches*, Population and Development Strategies, No. 7, UNFPA, New York.
2. UNECA/UNFPA Expert Group Meeting on Post-ICPD Needs in Basic Data Collection, Analysis, Dissemination and Research, Addis Ababa, 1996.
3. Israel Sembajwe, “*Mobilizing resources for censuses: strategies for reducing census costs—perspective of partner countries and the Economic Commission for Africa*” in UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26–29 November 2001, Pretoria, South Africa.
4. UNFPA: “Compendium of Census Activities in Sub-Saharan Africa: 2000 Round of Censuses. Compiled by Africa Division, UNFPA New York, October 2002.
5. Department of Economic and Social Affairs, Statistics Division, Studies in Methods, “*Handbook on Population and Housing Censuses*,” Series F, No. 83/Rev. 1, United Nations, New York, 2001.
6. Department of Economic and Social Affairs, Statistics Division, Studies in Methods, “*Handbook on Population and Housing Censuses*,” Series F, No. 83/Rev. 1, United Nations, New York, 2001.
7. Christopher Corlett and Joao Dias Loureiro, *Using Census Data in Emergency Situations: Mozambique’s Experience with Census 1997*, in *Population and Development Strategies, Population and Housing Censuses: Strategies for Reducing Costs*, October 2002, UNFPA, Population and Development Branch, New York, 2002.
8. Robert D. Bush, “*Mobilizing resources for censuses: strategies for reducing census costs, perspective of donor countries*” in UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26–29 November 2001, Pretoria, South Africa.
9. Berk Ozle, “*Using census and household survey data for poverty mapping: Mobilizing resources for censuses: strategies for reducing census costs, perspective of donor countries*” in UNFPA/PARIS21 International Expert Group Meeting on Mechanisms for Ensuring Continuity of 10-Year Population Censuses: Strategies for Reducing Census Costs, 26–29 November 2001, Pretoria, South Africa.
10. Richard Dackam-Ngatchou “*Role of census data in monitoring national poverty reduction targets and tracking the millennium development goals*,” in *Population Census: New Directions and Cost-Saving Strategies In-House Capacity Building Meeting (21–23 October 2002)*, Chauncey Conference Center, Princeton, New Jersey.
11. Richard Dackam-Ngatchou, Soulimane Baro: «*Guide d’orientation pour la communication et le plaidoyer dans les recensements généraux de la population et de l’habitation en Afrique*», Document de travail, UNFPA, CST Dakar, 2005.

Annex 1

Use of census data in monitoring national poverty reduction targets and tracking the millennium development goals

The best way of illustrating the importance of a data source in an information system for monitoring and evaluation of a programme is to count its frequency of appearance in the list of the means of verification or sources of data for the indicators.¹

Poverty Monitoring Indicators and Data from Surveys & Censuses: PRSP indicators (Tanzania 2002)

TYPE OF POVERTY/INDICATORS	SOURCE OF DATA
Income poverty <ol style="list-style-type: none"> 1. Headcount ratio 2. food poverty line 3. Proportion of working age population not currently employed 	<ol style="list-style-type: none"> 1. LFS 2. Household Budget Survey 3. Population census
Human capabilities <ol style="list-style-type: none"> 1. Girl/boy ratio in primary education 2. Girl/boy ratio in secondary education 3. Literacy rate of population aged 15+ 4. Net primary enrolment 5. Gross primary enrolment 6. Prevalence of ARI in under-fives 7. Prevalence of diarrhoea in under-fives 8. Population with access to safe water 9. Infant mortality rate 10. Under-five mortality rate 11. Life expectancy 12. Children under 2 years immunized against both measles and DPT 13. Births attended by a skilled health worker 	<ol style="list-style-type: none"> 1. Population census 2. Population census 3. Population census 4. Population census 5. Population census 6. MOH statistic 7. MOH statistic or DHS 8. Population census 9. Population census 10. Population census 11. Population census 12. MOH statistic 13. MOH statistic or DHS
Extreme vulnerability <ol style="list-style-type: none"> 1. Proportion of orphaned children 2. Proportion of child-headed households 3. Proportion of children in the labour force 4. Proportion of children in the labour force and not going to school 5. Proportion of elderly living in a household where no one is economically active 	<ol style="list-style-type: none"> 1. Population census 2. Population census 3. Population census 4. Population census 5. Population census

¹ Richard Dackam-Ngatchou "Role of census data in monitoring national poverty reduction targets and tracking the millennium development goals," in Population Census: New Directions and Cost-Saving Strategies In-House Capacity Building Meeting (21–23 October 2002), Chauncey Conference Center, Princeton, New Jersey.

Annex 1

MDG indicators which can be provided directly by the PHC

GOAL	INDICATORS
Goal 1 Eradicate extreme poverty and hunger	
Goal 2 Achieve universal primary education	Number 8 Literacy rate of 15-24 year olds
Goal 3 Promote gender equality and empower women	Number 9 Ratio of girls to boys in primary, secondary and tertiary education Number 10 Ratio of literate women to men of 15-24 year olds Number 11 Share of women in wage employment in the non-agricultural sector
Goal 4 Reduce child mortality	Number 13 Under 5 mortality rate Number 14 Infant mortality rate
Goal 5 Improve maternal health	Number 16 Maternal mortality ratio
Goal 6 Combat HIV/AIDS, malaria and other diseases	Number 29 Proportion of population using solid fuels Number 31 Proportion of population with access to improved sanitation
Goal 7 Ensure environmental sustainability	
Goal 8 Develop a global partnership for development	

Annex 3

The outline of Cape Verde's document on the resource mobilization

1. Priority statistics tables
 - 1.1 Detailed tables
 - 1.2 Topics tables
 - 1.3 Thematic tables
 - 1.4 Key results
2. Demographic atlas
3. Linguistic atlas
4. Settlement directory
5. Core statistics tables for any administrative units
6. Thematic analytical reports (14 to 17 themes)
7. Tables of the principal indicators
8. Posters of national and subnational information
9. Database data on the households
10. Cartographic database
11. Databank
 - 11.1 CD-ROM of the principal results
 - 11.2 Interactive methodological CD-ROM (model ACAP)
12. In-depth analysis/research using census data
13. The website of the data of the census
14. The population projections
15. Revision of the mother survey sample
16. Indicators of the PRSP and the sectoral programmes provided by the census
17. Indicators of the subnational decentralized programmes provided by the census
18. Population-based Indicators of the CCA/UNDAF and other country programmes supported by donors
19. Population-based Indicators for the development frameworks: MDGs, CIPD/POA, Children's Summit 2000, Education 2000, Beijing+5, etc.
20. Dakar/Ngor Indicators
21. The GIS of Education system (updated)
22. The GIS of Health information system (updated)
23. Actualization of the demographic data in the textbooks
24. Etc.

The 2010 Round of Population and Housing Censuses—Implications for the Millennium Development Goals: New Research Findings Make Good Demographic Information More Important than Before

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During the last ten years, new research findings within the field of population economics have made good demographic data even more important for our ability to understand and track the social and economic trends of developing countries. Although the question of how demographic change affects social and economic development has been discussed and analyzed by economists for more than 200 years, it is only in the last decade that a new consensus has started to emerge. The new consensus is based on two main findings:

- In order to track the effects of demographic change, looking at population size and population growth is not enough. Instead, it is necessary to analyze the changing size of different age groups. When changes in the different age groups are considered, very clear-cut patterns emerge. (1) Increases in the child population dependency rates tend to have a number of negative economic consequences: Increased risk of poverty, low or even negative growth rates in per capita income, pressure on systems of governance and the public sector. (2) An expanding young adult population leads to high rates of mobility, rapid urbanization, high rates of emigration, increasing labour supply, housing shortages, often rapid institutional change and sometimes, increased social tensions. (3) The expansion of the middle-aged group tends to increase national saving, the financial sector becomes better organized, social stability increases and per capita income growth accelerates. (4) Increases in the old-age population, on the other hand, leads to lower national savings, a relative decline in labour supply, often an expansion of the public sector and a decline in per capita income growth rate.
- Improvements in life expectancy are not only a result of economic development but also an important trigger of increased productivity. Four mechanisms have

been identified behind the positive effect of health on wealth. (1) Lower mortality gives individuals stronger incentives for education. (2) Increased longevity stimulates saving. (3) Lower mortality, in general, leads to lower fertility and, thus leads to lower dependency rates and improved prospects for economic growth. (4) Improved health also has a direct effect on productivity.

These new findings have five important implications for the role played by good demographic data:

1. The robust statistical relationship between population age structure and per capita income growth makes it possible to predict income growth for countries and regions for which there are reliable demographic data.
2. Good population data makes it possible to track fertility trends in different parts of a country. Such information will enable better predictions of future changes in fertility and can also provide guidance to efforts that can influence fertility such as education, public health measures, etc.
3. Local census returns provide information on the progress of urbanization, an important factor in the economic development process.
4. Censuses, in combination with vital statistics, provide important information about mortality risks. Such information can help to direct health investments in a cost-effective way.
5. The efficiency of different forms of development assistance is dependent on the local and regional demographic situations. In areas where many young adults are concentrated, support for infrastructure

investment can both provide employment and increase an area's economic potential. In regions where the child dependency burden is very high, direct support for health, primary education and better nutrition can be of greater importance. It may also be the case that health services should be adapted to

the composition of the local population, with an emphasis on sexually transmitted diseases (STDs) in young adult areas and primary care in areas with large child populations. Both information on age structure and the sex ratio, thus, can be of importance.

REFERENCES

- Bloom, D. E. and D. Canning (2000). "The health and wealth of Nations." *Science* **287**: 1207–1209.
- Bloom, D. E., D. Canning, et al. (2003). "Longevity and life-cycle savings." **105**(3): 319–338.
- Bloom, D. E., D. Canning, et al. (2000). "Population Dynamics and Economic Growth in Asia." *Population and Development Review* **26** (Supplement: Population and Economic Change in East Asia): 257–290.
- Bloom, D. E., D. Canning, et al. (2003). *The demographic dividend: a new perspective on the economic consequences of population change*. Santa Monica, CA, Rand.
- Bloom, D. E., J. D. Sachs, et al. (1998). "Geography, Demography, and Economic Growth in Africa." *Brookings Papers on Economic Activity* **1998** (2): 207–295.
- Bloom, D. E. and J. G. Williamson (1997). Demographic transitions and economic miracles in emerging asia, National Bureau of Economic Research.
- Boucekkine, R., D. de la Croix, et al. (2002). "Vintage human capital, demographic trends, and endogenous growth." *Journal of Economic Theory* **104** (2): 340–375.
- Boucekkine, R., D. de la Croix, et al. (2003). "Early mortality declines at the dawn of modern growth." *Scandinavian Journal of Economics* **105** (3): 401–418.
- Echevarria, C. A. (2004). "Life expectancy, schooling time, retirement, and growth." *Economic Inquiry* **42** (4): 602–617.
- Hamoudi, A. and N. Birdsall (2004). "AIDS and the accumulation and utilisation of human capital in Africa." *Journal of African Economies* **13**: 96–136.
- Hebertsson, T. T. and G. Zoega (1999). "Trade Surpluses and Life-Cycle Saving Behaviour." *Economics Letters* **65** (2): 227–37.
- Higgins, M. (1998). "Demography, National Savings, and International Capital Flows." *International Economic Review* **39** (2): 343–369.
- Kalemli-Ozcan, S. (2003). "A stochastic model of mortality, fertility, and human capital investment." *Journal of Development Economics* **70** (1): 103–118.
- Kalemli-Ozcan, S., H. E. Ryder, et al. (2000). "Mortality decline, human capital investment, and economic growth." *Journal of Development Economics* **62** (1): 1–23.
- Kelley, A. C. and R. M. Schmidt (1996). "Saving, Dependency and Development." *Journal of Population Economics* **9** (4): 365–86.
- Lagerlof, N. P. (2003). "Mortality and early growth in England, France and Sweden." *Scandinavian Journal of Economics* **105** (3): 419–439.
- Lee, R., A. Mason, et al. (2000). "Life Cycle Saving and the Demographic Transition: The Case of Taiwan." *Population and Development Review* **26** (Supplement: Population and Economic Change in East Asia): 194–219.
- Lindh, T. and B. Malmberg (1999). "Age structure effects and growth in the OECD, 1950–1990." *Journal of Population Economics* **12**: 431–449.
- Lindh, T. and B. Malmberg (2004). Forecasting global growth by age structure projections. *Arbetsrapport, Institutet för Framtidsstudier*. Stockholm, Institute for Futures Studies.

- Malmberg, B. and L. Sommestad (2000). "The Hidden Pulse of History: Population and Economic Change in Sweden, 1820–2000." Scandinavian journal of history.
- Mason, A. (1988). "Saving, Economic Growth, and Demographic Change." Population and Development Review **14** (1): 113–144.
- Taylor, A. M. and J. G. Williamson (1994). "Capital Flows to the New World as an Intergenerational Transfer." Journal of Political Economy **102** (2): 348–71.
- Zhang, H., J. S. Zhang, et al. (2003). "Rising longevity, education, savings, and growth." Journal of Development Economics **70** (1): 83–101.
- Zhang, J. S., J. Zhang, et al. (2001). "Mortality decline and long-run economic growth." Journal of Public Economics **80** (3): 485–507.

Issues For Consideration In Developing Advocacy Strategies For Mobilizing Resources In Support Of The 2010 Round Of Population And Housing Censuses In The Sub-Sahara Africa Region¹

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Introduction

The period for the 2000 Round of Population and Housing Censuses (1995–2004) has just ended and plans are already advanced on how to make the next round more successful than the previous one. In Africa, a large number of countries were able to conduct censuses during the 2000 Round. However, there were a significant number that could not do so for various reasons, such that, there is now a continuing decrease in the number of countries in the region that are able to carry out decennial censuses when due.² This has consequently led to very long intervals between censuses in several countries. This interval was as long as twenty years for a few countries. An important reason why some countries could not undertake censuses during the 2000 Round was due to the lack of sufficient and/or adequate resources, sometimes in addition to, and/or compounded by, civil wars and political instability.

The conduct of a national population and housing census is a very expensive exercise, one that is often beyond the resources the governments of many developing countries can (or are expected to) provide. Further, not only has the cost of censuses been escalating over time, but these governments are expected to provide an increasing proportion of the total cost of census operations. This is often in the context of continuously declining national resources for development, declining overseas development assistance, especially assistance provided for census operations, and in spite of the adoption of several cost-saving strategies and approaches developed by UNFPA and/or partners. Current indications are that the lack of adequate resources, compounded by rapid population growth that will increase the total cost of censuses, will remain a fundamental constraining factor in the ability

of countries in the region to undertake censuses during the 2010 Round. Consequently, the extent to which the issue of resource mobilization is effectively addressed at the beginning of the 2010 Round, will greatly affect the ability of countries in the region to conduct censuses. It is therefore important to address the issue of mobilizing resources for population and housing censuses in the region, and to think of innovative advocacy approaches for doing so at the global, regional and national levels.

This paper highlights the key issues that will need to be addressed in developing these innovative advocacy approaches, such as: estimation of resource requirements; resource gaps; the sudden surge in the magnitude of resources needed and its effects on national budgets; policy environments; factors influencing the mobilization of resources; and mechanisms typically adopted for resource mobilization. Information for the paper is drawn largely from responses to a survey of advocacy strategies adopted by Sub-Sahara African countries to support the dissemination and use of the census data emanating from the 2000 Round. Information from the survey is complemented with information on resource mobilization for censuses in the region from other sources.

Key issues for consideration

Estimation of the totality of resources required for censuses

An important constraint during the 2000 Round of Censuses in Africa (especially during the initial years), was the under-estimation of the various types and magnitude of resources required for all aspects of the exercise: administrative, managerial, technical

¹ Discussion paper presented at the International Meeting on Advocacy and Resource Mobilization for the 2010 Round of Population and Housing Censuses, New York, 24–25 February 2005.

² CST Addis Ababa conducted a survey in 2004 on advocacy strategies adopted by Sub-Sahara African countries to support the dissemination and use of the census data emanating from the 2000 Round. Out of the six countries that responded to the survey (Eritrea, Kenya, Liberia, Nigeria, Sierra Leone and Zimbabwe), three were unable to carry out any census during this period.

and others. Consequently, for countries that actually embarked on the exercise, there were serious cost over-runs as the actual costs of the censuses escalated, as the process proceeded.

In addition, there were no estimates of the financial, material, human and other resources needed for the 2000 Round of Censuses at the global (or regional) level at the start of the census round, as was the case for the MDGs in 2002 and the ICPD Programme of Action in 1994. Consequently, there was no clear resource framework that would constitute the basis for advocacy efforts on resource mobilization and/or serve as a guide for developing countries with the multilateral and bilateral agencies assisting them. There was no indication of how much of the estimated cost should be generated from the domestic resources of the developing countries and how much donors would be expected to provide. The lesson learned is that without a well defined and comprehensive budget that clearly shows resource requirements at the international, regional and national levels, it will be very difficult to mobilize adequate resources for the 2010 Round.

This implies that making universally available adequate cost estimates (broken down by year if possible) of the totality of resources required for the 2010 Round of Censuses at the national, regional and global levels is absolutely necessary to guide advocacy for domestic and external resource mobilization by both the international community and national governments. Ideally, this needs to be done now, at the start of the 2010 Round of Censuses, to provide figures that would constitute the fundamental basis for advocacy for resource mobilization efforts.

Huge gaps between resources needed and what can be afforded by governments

There were considerable gaps between the resources needed for the censuses during the 2000 Round and what the Governments of most Sub-Saharan African countries could afford. Donor assistance was sought to fill this resource gap, which often was almost the entire cost of the census operations. For example, in four of the six countries responding to the survey by CST Addis Ababa, this gap was as much as 92 percent for Eritrea, 90 percent for Sierra Leone, 88 percent for Liberia and 52 percent for Nigeria. These governments indicated they could only cover 8, 10, 12 and 48 percent, respectively, of the costs for their censuses. Many other countries in the region were confronted with such huge resource gaps. They had to devise ad hoc strategies for getting their development partners to provide most or all of the additional resources required, and/or to adopt other cost-saving measures.

The above situation calls for the development and adoption/implementation of effective resource mobilization strategies to bridge such huge resource gaps and thereby guarantee the participation of poor countries in the 2010 Round of Censuses. Past experience, supplemented by the preliminary findings of the survey by CST Addis Ababa, showed that advocacy for resource mobilization during the 2000 Round was directed mainly at national governments and their traditional external donors. Consequently, these two groups provided almost all of the resources needed. However, this situation is not expected to be the same or to be sustainable during the 2010 Round of Censuses, in light of the increasing cost of modern censuses. There is therefore a need to identify and/or develop creative strategies and partnerships aimed at improving resource mobilization from both traditional and non-traditional sources (such as local communities, domestic and international data users, the commercial private sector, civil society organizations, etc.). Advocacy has a critical role to play in this process. In addition, the implementation of the suggested "Census Trust Fund" could go a long way towards bridging the large anticipated resource gap during the 2010 Round.

The 'sudden surge' effect on national budgets

As per UN recommendation, national population and housing censuses should be carried out decennially.³ However, this ten-year periodicity itself poses problems for yearly budgeting by governments of developing countries in that it typically creates what could be called a 'sudden surge' in the magnitude of resources needed around census years, as compared with the years immediately preceding or immediately following census operations. This 'sudden surge' has to be accommodated within yearly budgets of governments of developing countries, justifiable as it is, to meet the huge demands for resources required by a census. This requirement is often concentrated within a relatively short period of 2–3 years and typically distorts allocation of resources required for medium- to long-term development efforts. Many governments in Africa had, and continue to have, problems dealing with such 'surges', especially in the context of dwindling resources.

To help cushion the effects of such 'sudden surges' during the period of the 2010 Round, it might be necessary for: (a) the UN to advocate and encourage countries to deliberately allocate resources for census activities over a longer period of time (this, of course, should be in addition to allocating resources required for marketing and using products from the 2000 Round

until new products from the 2010 Round become available); and (b) the UN, especially UNFPA, to support the proposed establishment of a global trust fund for the 2010 Round of Censuses which developing countries, especially those from Africa, can then access, as and when necessary.

Policy environment for resource mobilization

The policy frameworks, under which censuses are undertaken, typically provide national census or statistical offices with the legal environment for estimating and mobilizing resources needed for any census operation. Such a legal framework exists in five of the six countries surveyed by UNFPA CST Addis Ababa in 2004. The only country that had no such law (Eritrea) had not conducted a national population and housing census up to the time of the survey.⁴ Three of such countries, (Kenya, Nigeria and Sierra Leone) updated their relevant laws during the 2000 Round of Censuses. However, the process of getting these laws approved was very protracted, with the result that the commencement of resource mobilization for the censuses was delayed. Consequently, ad hoc approaches to advocating, for adequate budgetary allocations by the governments and for additional resources from donors, had to be adopted. The two key issues that emerged from such experiences were that it is very important to get the policy and/or legal framework in place well in advance of the census and to ensure that adequate legal provisions are made for resource mobilization in the census act or statistical acts/laws. These would also contribute to ensuring transparency and accountability for the resources mobilized.

To avoid such problems during the 2010 Round, it may be necessary to consider establishing a high-level international group or project (similar to the Millennium Project) to, among other things, undertake relevant advocacy work aimed at ensuring that countries establish the necessary enabling policy environments and to do so in time. Such a group could also have additional responsibilities for resource mobilization at the global level.

Other factors affecting resource mobilization for censuses

Several other factors affected resource mobilization for censuses undertaken during the 2000 Round in the African region. These factors included the following:

- The huge debt burden [mostly foreign debt, but also very sizable domestic debts] which constituted a huge drain on limited available resources. This contributed to the low priority being assigned to such aspects of national development and poverty reduction endeavours, as large-scale data collection exercises, like censuses.
- Competing and often small scale, less expensive and therefore more attractive, statistical projects tended to divert resources that could have been channelled to census operations.
- Delays experienced in releasing results from the 1990 Round, in addition to the poor packaging of many census products, contributed to the lack of appreciation of policymakers of the value of censuses.
- The availability of advocacy materials to assist countries to design and implement effective advocacy strategies for resource mobilization in support of censuses was very limited.
- Only a limited number of personnel in statistical or census offices were trained in advocacy for resource mobilization for census operations.

It is absolutely essential that the above factors be addressed now or in the near future so as to improve the ability of countries to effectively mobilize resources for the 2010 Round of Censuses. Furthermore, countries have to be encouraged to design census programmes as integral components of national programmes aimed at poverty reduction and for achieving the MDGs. After all, censuses are still the most important source of data for more targeted and pro-poor programming, as well as for monitoring progress towards the attainment of MDG targets.

Conclusion

This paper has highlighted a few issues that some African countries had to address during the 2000 Round of Censuses and offered suggestions as to how they can be addressed within the context of the 2010 Round. It also demonstrated that advocacy has an important contribution to make in mobilizing needed resources. However, the paper also has shown that more innovative ways for resource mobilization need

³ During the interval between the censuses, surveys (such as demographic and health surveys) and other forms of data collection exercises are encouraged.

⁴ However, it was not very clear if any of the pertinent laws or acts contained clear and specific legal provisions for resource mobilization.

to be developed and utilized. In addition, it is further suggested that: a separate chapter on advocacy for resource mobilization be included in the UN “Principles and Recommendations for Population and Housing Censuses” that is currently being revised/updated; a UN agency be identified to lead support for resource mobilization efforts at global and national levels; specific advocacy materials, including manuals and guidelines on resource mobilization, be provided (especially by relevant agencies of the United Nations) to guide countries; and that some mechanism be established for sharing knowledge on censuses among countries, relevant organizations and related research institutions.

Population Censuses in the Arab Region: An Overview of the Past and Potentials for the Future

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A quick review of the history of population and housing censuses in the countries of the Arab region indicates that most of the countries of this region have increasingly recognized the importance of population censuses as the primary source of population and housing data. This is primarily because censuses are the only sources of complete coverage data, which can be aggregated for small areas (such as villages or block/s within a town or city), in addition to all levels of geography and all administrative divisions. Equally important, population censuses provide the statistical frame for designing and conducting representative sample surveys. These interests and recognitions are reflected in the observed growing tendency of several countries to conduct (somewhat) timely population and housing censuses, especially since the early 1980s. Annex 1 shows the years that censuses were conducted in the countries of the Arab region. This table does not cover all censuses conducted, nor are the dates precise; however, it is not intended to cover all censuses. Rather, it is meant to demonstrate the growing trend of conducting timely censuses.

As evident from the table, Egypt was systematically conducting population censuses every ten years over the past century. In fact, Egypt started the first formal census in 1882. Most of the other countries of the region started paying attention to censuses after the establishment of UNFPA. Since then, UNFPA fully supported censuses, both financially and technically in programme countries, to meet the most important demographic and socio-economic population data needs in these countries. These censuses were viewed as the most important vehicles for building national statistical infrastructure and developing national capacities in undertaking population censuses and other data collection activities.

In the next phase, the second round of censuses, UNFPA continued to support population and housing censuses in countries of the region financially and technically throughout the various stages of the census

implementation. However, this support was much less than during the first phase. This support was focused on specific inputs and activities such as: procurement of computers, other equipment, and limited vehicles; training; and the promotion of the utilization of census data through in-depth analysis, dissemination of results and other quality activities. The development of national capacities in the area of census data analysis received considerable attention and support from UNFPA during this phase. The UNFPA did not cover local costs such as salaries of field workers, but it supported training of trainers, who largely contributed to improvement in the quality of the data collected. The success of censuses of this round was largely facilitated by the established infrastructure and the experience accumulated by nationals through participating in earlier censuses. In addition, national governments allocated resources to cover local costs. Technical assistance from UNFPA in this stage focused on demographic and in-depth analysis by working closely with the nationals, supervising their work and through training of various forms. In line with this, national capabilities in computer programming and use of software packages were also greatly enhanced through UNFPA's technical assistance. This was significantly enhanced by the remarkable developments in computer software in support of data processing and analysis.

During the 2000 Round of Population Censuses, UNFPA's support to population censuses in the region continued to shrink. Dwindling resources, the secondary priorities given to population censuses and the willingness of some of the countries to take responsibility and secure national resources were primary reasons for this change. As an outcome of UNFPA's initiatives and support to earlier censuses, national governments in several countries of the region became more aware of the importance of censuses as the primary and irreplaceable source of data for development, for identifying vulnerable groups and development gaps, and to meet other specific needs for data. Now countries are

using census results to report on a number of MDG indicators. The advantage of the census with regard to the MDG indicators is that it provides regional and sub-regional differentials in such indicators so that national plans can focus on most disadvantaged areas as a priority with respect to the alleviation of poverty, bridge gender gaps in school enrolment, child immunization, infant and child mortality, etc.

Moreover, some countries started to view censuses, not only as a tool for developmental planning, but also for reviewing power- and wealth-sharing in the country. Sudan is a good example, where a population census was called for as part of the peace process between the North and South of Sudan. As agreed by both and stated in the peace treaty, findings from this census will be used for reviewing power- and wealth-sharing between the North and the South of Sudan. This may be viewed as a first step towards distributing oil revenues among all regions proportionately to population distribution.

In the context of the population census of Sudan, UNFPA has played, so far, a leading role among UN organizations and other donors in preparing plans, methodologies and strategies for this national exercise. This was conducted in collaboration with the Government of Sudan and the Sudan People's Liberation Movement (SPLM). The comparative advantage of UNFPA in supporting the population censuses, and the past experience and collaboration with Sudan in the previous censuses, were the primary reasons for having UNFPA in the forefront. UNFPA is expected to continue with this leading role based on the initiative it made to assist in mobilizing the needed resources for the census and providing assistance.

Other programme countries in the region, including Jordan, Morocco, Syria, Tunisia and Yemen, were able to mobilize their own resources to conduct censuses in 2004. UNFPA's contribution to these censuses was limited to specific inputs and activities, including: limited equipment, training, data analysis, promotion and dissemination of findings; and technical support for overall policy, planning and follow-up. Countries of the Arab Gulf have already conducted censuses (Oman in 1993, Saudi Arabia in 2004 and Kuwait in 2005) with their own resources, and very little technical support from UNFPA.

In the next round, support should focus more on specific issues, mainly in the processing of census data, especially in data entry and cleaning. With the exception of Morocco and Oman, data entry was done manually. Oman used hand-held devices in one governorate for data collection, which automatically transferred collected data from the field into electronic data files.

Necessary tests were conducted before adopting this approach for partial processing of the Oman Census and nationals were satisfied with the results of the experiment. However, the experience was not thoroughly and extensively evaluated before it was recommended for adoption in other countries. On the other hand, the Omanis decided that this device was not cost-effective, because only a limited number of such devices will be used in post-census sample surveys. Moreover, this technology is evolving rapidly, which might quickly render these devices obsolete.

Morocco, on the other hand, is using scanners, which translate data collected using paper questionnaires into electronic files. The plans are to use this approach for the data entry of the basic census questionnaire, which contained only pre-coded questions and was applied to all households. The expanded questionnaire, which incorporated descriptive (not pre-coded entries) and was also applied to all households, is being edited and coded, and will be entered through the scanners after proper coding.

The six Arab Gulf countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates), which form the Gulf Cooperation Council (GCC), are planning to conduct a unified and simultaneous Gulf Census in 2010. This coordinated and harmonised exercise is seen as a potential opportunity for UNFPA to initiate early dialogue with these countries collectively and individually, for possible collaboration in introducing new approaches and methodologies to help conduct high quality censuses. Data on mobility across these countries, for example, will be one of the major outputs of these censuses. This can only be achieved if UNFPA, perhaps in collaboration with other UN divisions and agencies, starts developing, updating and modernizing the approaches and techniques for a census-based measurement of mobility. Success in this dialogue depends on convincing these countries of the viability of the approaches developed. It is worth mentioning at this point, that in a way, UNFPA collaborated with these countries in two major regional data-collection activities. The so-called Pan Arab Project for Child Development (PAPCHILD), followed by the Pan Arab Family Health (PAPFAM) surveys, were two major successful examples of such collaboration. Based on the success, experience and momentum generated by these two examples, which both started in the Gulf countries, the project was extended to other countries in the region. Resources were generated primarily from UNFPA and AGFUND, as the two major donors in this exercise. The data generated by these two surveys, were and will continue to be, used as the primary, if not the

only, source of highly needed statistics. Because of its wide coverage, in many countries (Djibouti, for example), such data represents the only source of reliable information.

In countries like Djibouti, Somalia and Sudan, there is a great potential for UNFPA, to mobilize resources from the Gulf and other donors, to support conducting censuses in these countries. In the absence of reliable information on the population of these countries, UNFPA should give high priority to mobilizing resources to conduct censuses in these three countries. The World Bank, for example, due to the lack of any reliable information, is very supportive of such an exercise in Somalia, to obtain basic reliable information.

Along with the population and housing census, some of the countries take the opportunity to conduct other censuses, including agriculture and/or establishment censuses. Conducting more than one census at a time is a useful opportunity, which potentially adds value to the investment in the population censuses. These experiences should be closely reviewed, analyzed and evaluated to find out if this approach overburdens the field work of the population census and reflects negatively on the quality of data collected, due to the extended period of data collection and/or the increased field manpower requirements affecting the quality and level of knowledge of the enumerators.

Annex 1

Population censuses conducted in countries of the Arab region

COUNTRY	UPCOMING CENSUS	2000+	1990+	1980+	1970+	1960+	1950+	FIRST CENSUS
Algeria			1998	1987				
Bahrain	2010	2001	1991					
Comoros		2003	1991	1980				
Djibouti	?	2001		1983				
Egypt	2006	1996	1986	1976	1966			1882
Iraq	?	1997	1987					
Jordan	2014	2004	1994	-	1979	1961	1952	1952
Kuwait ¹	2010	2005	1995					1957
Lebanon	-	-	-	-	-			1926
Libya			1995	1984	1973			
Mauritania		2000		1988	1976			
Morocco	2014	2004	1994	1982	1971	1960		1921
Oman	2010	2003	1993					1993
OPT	2007		1997	-	-			1997
Qatar	2010		1997?	1986				
Saudi Arabia	2010	2004	1994			1964		1964
Somalia	?	1993			1975			
Sudan	2006	1993	1983	1973				1956
Syria	2014	2004	1994	1981	1970			1885
Tunisia		2004	1994					
UAE	2010	2005	1995					
Yemen	2014	2004	1994	1986, 1988	1975, 1973			1975 1973

¹ Kuwait used to conduct population censuses every five years, but changed the interval to ten years in the 1990s' decade.

Annex 2

Examples of substantive coverage of population censuses

The two examples of Syria and Jordan reflect the continuous interest of countries in labour force and migration topics. While the labour force and internal migration questions require additional time and resources for data processing including editing, coding and data entry, unavoidable delays are expected in the release of census results. These issues should be closely reviewed with an objective of finding alternatives. Collecting such data from a sample of households from

all census enumeration areas would retain census criteria, especially in providing full geographical coverage, while providing needed data. This approach should be extended to other topics that involve special training of field manpower such as information on the handicapped, fertility and mortality (including maternal mortality). Along with this, field work processes can be modified to cope with the data needs and increase the efficiency.

SYRIA

1. Basic demographic data.
2. Migration.
3. Education.
4. Labour force:
 - a) if had a job: working hours, place of work, industry, occupation, employment status;
 - b) if not had a job: availability for a job, seeking employment; and
 - c) categories of inactive population.
5. Marriage, marital status, age at first marriage.
6. Cohort fertility, current fertility.
7. Deaths (12 months).
8. Handicapped.
9. Syrians abroad.
10. Housing characteristics.
11. Agricultural holdings.
12. Agricultural census.
13. Listing of establishments.

JORDAN

The household and population questionnaire covered the following topics:

1. The background information including name, relation to the head of household, sex, date of birth, age, religion.
2. Health insurance and type.
3. Nationality, national identification code.
4. Reason for Jordanians staying abroad.
5. Migration: place of birth, place of current residence, duration of stay, place of previous residence.
6. Education, including enrolment status, grade enrolled, educational level and specialization.
7. Marital status.
8. Employment:
 - a) if had a job: working hours, place of work, industry, occupation, employment status;
 - b) if not had a job: availability for a job, seeking employment; and
 - c) categories of inactive population.
9. The handicapped household members by type of disability.
10. Availability of household durable goods.

CST Bangkok's Assistance to Population and Housing Censuses: Experience of the 2000 Round and Plans for the 2010 Round

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Background

CST Bangkok covers twelve countries in the East and South-East Asia (ESEA) sub-region: Cambodia, China, Indonesia, Korea (DPR), Laos PDR, Malaysia, Mongolia, Myanmar, Philippines, Thailand, Timor-Leste and Viet Nam. From information summarized below, it can be seen that most of the countries conducted a census during the 2000 Round:

COUNTRY	LATEST CENSUS	PREVIOUS CENSUS
Cambodia	03/1998	1962
China	11/2000	1990
Indonesia	06/2000	1990
Korea, DPR	12/1993	None
Laos PDR	03/1995	1985
Malaysia	07/2000	1991
Mongolia	01/2000	1989
Myanmar	1983	1973
Philippines	05/2000	1995
Thailand	04/2000	1990
Timor-Leste	07/2004	1990 (part of Indonesia)
Viet Nam	04/1999	1989

The Democratic People's Republic (DPR) of Korea, Myanmar and Timor-Leste were the only exceptions. Of these, Korea (DPR) has not conducted a census after its 1993 Census while Myanmar's last census was in 1983. Due to civil strife and its movement for independence, Timor-Leste was not able to conduct a census until 2004. As can be seen from the information given above relating to the last two censuses, the overall record in terms of regularity has been quite satisfactory in the sub-region.

CST Bangkok's role in the 2000 Round

The CST has provided technical assistance (TA) in the census exercise to five countries: Cambodia, Korea (DPR), Mongolia, Timor-Leste and Viet Nam. Assistance was provided at various stages in different countries.

- Overall technical assistance was provided in:
- cartography and computerised mapping;
- development of a coding manual and editing specifications;
- designing a census communication campaign prior to the actual census enumeration;
- processing of census data including publication of preliminary results;
- training of national staff in demographic statistics and data processing;
- analysis of census data including population projections;
- preparation of subject reports based on Census data;
- conducting workshops on PopMap and data dissemination;
- formulation of a data dissemination programme; and
- finalising plans for further analysis and dissemination of data following the release of preliminary results.

Most of the assistance was provided by two advisors: the Advisor on Population Data Processing and

Database Management and the Advisor on Population Census and Survey Data Analysis. The Advisor on Advocacy assisted in the development of the communication campaign while other advisors contributed to the preparation of relevant subject reports. The Advisor from CST Harare provided assistance in mapping as CST Bangkok had no expertise in the area of cartography and mapping. In addition, the ESCAP TSS Specialist also contributed to the TA.

Experiences and lessons learned from involvement in the 2000 Round have been documented in the following three papers (attached to this note):

1. *Census and Survey Data Processing in East and South-East Asia in the 1990s: Issues and Lessons Learned*
2. *Pre-Census Communication Campaign: Guidelines for Census Planners*
3. *Strategies for Census Data Analysis, Dissemination and Utilisation: Lessons Learned from the East and South-East Asian Experience*

It should be noted that the above summarises technical assistance provided by CST Bangkok. UNFPA's support to the census exercise covered additional countries and funding for activities such as the printing of questionnaires, purchase of vehicles and data processing equipment, and payment of salaries for enumerators, data entry personnel, etc. Details of UNFPA's total assistance to censuses in different countries would have been received by TSD in response to the questionnaire it sent out to the Country Offices.

Foreseeable role in the 2010 Round

As can be seen from information presented in section 1, the most common pattern has been a census every ten years. As such, all twelve countries are likely to carry out a census between 2005 and 2010. The Laos People's Democratic Republic (PDR) has finalised plans for a 2005 Census and enumeration is scheduled to start on 1 March. The Philippines, which planned to conduct a census every five years, has now adopted the decennial cycle and will hold its next census in 2010. In Timor-Leste, where the 2004 Census was the first after independence and was designed to quickly collect basic information, both the Government and its development partners feel the need for another census after five years, in 2009. It is difficult to foresee developments in (DPR)

Korea and Myanmar, where the censuses are overdue, more so, in the latter. The efforts of UNFPA as well as other development partners to see that the governments agree and are able to go ahead with a census may well succeed.

What role does CST Bangkok expect to have in the census exercise? At the regional level, it is a member of the UN-ESCAP Expert Group on Population and Housing Census. The Group held its first meeting last December to discuss priorities for PHCs in light of critical and emerging issues. The CST will continue to participate in relevant regional fora. At the country level, it is expected that some countries will request assistance similar to what the CST provided during the 2000 Round. Some countries still do not have sufficient technical capacity for the processing, analysis and dissemination of data.

Moreover, following the "transition," CSTs are expected to play a more pro-active role. As such, CST Bangkok would seek to be involved in the development of census questionnaires. The questionnaire is the most crucial instrument—data collected and available depend on what is asked. The CST advisors know about data gaps and needs, as well as how these have changed in light of emerging issues and the requirements of the Millennium Development Goals (MDGs). Moreover, to ensure a degree of uniformity across countries in the data collected, there is a need to ensure that certain key questions addressing UNFPA concerns are included in the census questionnaire in every country. This can best be done by the CSTs, consulting amongst themselves and TSD. TSD could provide a checklist to ensure that a census questionnaire meets essential ICPD requirements.

Does CST Bangkok have the technical capacity to meet the expected needs? With the current size of the Team, there is expertise on questionnaire feedback and also on data analysis and interpretation. However, it is not adequate when it comes to areas such as mapping, coding and data processing, for which TA was provided previously and may again be needed. CST Bangkok had an Advisor on Population Data Processing and Database Management (January 1993–March 2003) and an Advisor on Population Census and Survey Data Analysis (September 1998–August 2003). Both these posts were abolished at the time of streamlining the CSTs in December 2002 and the incumbents continued for part of 2003, under short-term arrangements to meet pressing needs. CST Bangkok has established a network of consultants on which it can draw to meet some of the needs, but the availability of consultants cannot always be guaranteed. A census is an important time-bound

exercise and it would therefore be necessary for CST Bangkok to have a Population Census and Survey Data Analysis Advisor to meet demands for technical assistance expected to arise as a result of countries conducting population censuses.

Also, UNFPA should consider establishing a 2–3 member team of experts to assist the CSTs in providing TA to countries. In fact, if UNFPA is not able to provide adequate technical assistance, it might lose out on this front. It needs to be emphasised that there should be no denying of the importance of UNFPA having a role in the 2010 Round of Censuses. Being the main source of basic population data, the census falls directly within

UNFPA's mandate. The most recent experience in Timor-Leste, where UNFPA led the census exercise has brought out the value added of UNFPA playing the key role. Apart from ensuring that relevant information is collected, analysed and disseminated in a form that helps all sectors in integrating population into development, it enhances UNFPA's image and standing in government circles, and among development partners and civil society. As such, UNFPA must establish its stamp on this activity in a way that others recognise our comparative advantage in this area. We should be distinguished as much by our work as by our mandate.

UNFPA Sub-regional Past Experience and Future Plans in Connection with Population and Housing Censuses (PHCS)

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Since their inception, the United Nations Population Fund Country Technical Services Teams (UNFPA CSTs) in Africa have assisted countries in data collection and analysis, particularly in censuses, surveys and vital statistics, as well as enhanced national capacities in the use of population data in the formulation of population and development policies, and in the design and evaluation of population programmes. In Southern Africa, UNFPA CST covers the following fifteen countries: Angola, Botswana, Comoros, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, São Tome and Príncipe, South Africa, Swaziland, Zambia and Zimbabwe. From 1985 to 1994, thirteen countries, among the fifteen in the sub-region, carried out censuses. Similarly, for the 2000 Round, thirteen countries completed censuses. In Madagascar, the census did not take place as scheduled in 2003 because of political unrest and was postponed until 2006. Angola is still the only country that did not conduct a census during the last two decades due to the war and internal conflict. The Angola census is now planned for 2008.

In most of the countries in the sub-region, UNFPA CST has provided specific technical support for different stages of the census operation, such as census planning, design, mapping, fieldwork, processing, evaluation and data analysis, dissemination and utilization. As the primary source of data, population censuses have provided countries with a foundation for good governance, decentralization and development. The data collected and related population-based information have been crucial for national, sub-national and sectoral policies and plans, including national poverty reduction strategies, and for other development frameworks such as the Common Country Assessment/United Nations Development Assistance Framework (CCA/UNDAF), as well as for tracking progress towards the Millennium Development Goals (MDGs) and International Conference on Population and Development (ICPD) goals.

Constraints, Lessons Learned and New Directions

The constraints and lessons learned from these statistical operations are mainly related to resource mobilization. For the 2000 Round of Censuses, these included the lack of skilled human resources to conduct the censuses without at least some assistance, the long delays in the availability of the census results and thematic analysis reports and its corollary, the underutilization of census results and products.

Capacity-Building

Census capacity-building is often impeded by the long interval between censuses, with the result that planning for a forthcoming census is often not based on previous experiences because of the high turnover of experienced staff. This has required expanded CST efforts in the continuous provision of formal and informal training in data collection, processing, analysis and utilization, both within and outside national census/statistics organizations. The high turnover of experienced staff remains however a problematic and tricky issue that probably needs policy decisions at the highest ministerial level in order to find more permanent solutions. In fact, the institutional changes that have occurred in a few countries, including increasing the status of employment and improving the working environment in the national census/statistics organization, are probably the best way for those institutions to be more competitive in the labour market and keep skilled and experienced technicians.

In addition, facing both the weakness of national commitment and the decline in donor commitment in funding censuses in developing countries in general, there is a need in strengthening national capacity in census advocacy for resource mobilization, including census strategic planning and management.

Promoting Resource Mobilization Process

The inability to obtain adequate funding, both internally and externally, is the greatest threat to a census operation. In promoting the resource mobilization process, the CST has always helped the national census/statistics organizations in generating awareness of the importance and utility of the census. The census is first designed to meet national needs. It seems to be obvious that a population of a given country is the primary beneficiary of that country's census. However, experience from the recent censuses has shown that there is a need of a full commitment from all the stakeholders, and it is especially important that the country itself demonstrate initiative and leadership. Governments must give a high priority to the census to ensure enhanced cooperation of national and regional authorities, general population, and to mobilize the support from multilateral and bilateral partners. This is true in countries that are currently planning (Madagascar and Mozambique, for example) or have recently conducted a census (Comoros and São Tome & Príncipe, for example).

The census must be marketable *lato sensu*, since the data and information obtained are the most reliable means of monitoring many of the goals adopted by international conferences and resolutions, and the national poverty reduction strategies. This assertion must be a guiding principle when planning a census in the context of scarcity of resources. The CST approach has been based on this during the strategic planning process for the censuses in Comoros, Madagascar and Mozambique. In these countries, first the government and then the potential donors expressed their specific information needs (birth registration, maternal mortality, "filarirose" (elephantiasis and "hydrocèle") disability, agro-pastoral activity at the household level, etc.). These were incorporated in the census expected results, which stimulated donor interest. Government officials at the highest level, as well as multilateral and bilateral partners, were consulted and sensitized in order to develop a common understanding of the importance of the census and a recognition that good decision-making requires updated, accurate and disaggregated data or information. In this approach, leaders at the lower levels (district, for instance) must be aware of the availability and utility of such information, which needs to be disseminated widely to sensitize people. In Comoros and Madagascar, it was with the full support of government officials, notably the line minister and other key

ministers, that the director of the national census/statistics organization took a lead in resource mobilization. In Madagascar in particular, an advocacy document for resource mobilization that proactively addresses the census contribution to the information needs of various users at all relevant levels, has been elaborated for the forthcoming census with the support of the CST. Relevant points from this type of document should be reflected or integrated in any new census project document, where the objectives were traditionally more focused on the census phases of planning, enumeration, data processing and analysis, and less on utilization.

In Comoros, Madagascar and Mozambique, and São Tome and Príncipe, UNFPA has been requested, as the leading agency in population data production, to coordinate the mobilization of funds from external sources, but in close coordination with the director of the national census/statistics organization.

To facilitate resource mobilization, a census should be considered a fundamental activity that must be planned strategically and budgeted as an integral part of the decennial plan of activities for data collection within the national statistical system, especially as an essential instrument for the monitoring and evaluation of the National Poverty Reduction Strategy with a rational budgeting.

Utilization of the census data and information

Financial resources were particularly scarce during the implementation of the 2000 Round of Censuses. However, this period coincided with the adoption of the MDGs¹ that grew out of the agreements and resolutions of a dozen of world conferences organized by the United Nations in the past decade, among which was the ICPD, held in Cairo in 1994. Since then, it has become more and more crucial to meet statistical information requirements for monitoring the MDGs, as well as other similar frameworks, at both the national and sub-national levels (see Annex 1). As the unique source to close the data and information gaps at the lower levels for the purpose of good governance and effective decentralization, the census must play the key role in localizing the MDGs and making their use an engine for comprehensive local development. In fact, the rights-based approach to the MDGs (the right for local people to education, good health, maternal health, gender equality, etc.) is fundamental. Data and information broken down to the local level are indispensable for an understanding of local

¹ The MDGs are a framework of 8 goals, 18 targets and 48 indicators; an ambitious agenda for reducing poverty and improving lives that world leaders agreed on at the Millennium Summit in September 2000. For each goal one or more targets have been set, most for 2015, using 1990 as a benchmark.

solutions, are a critical planning lever, and are a necessary tool for dialogue about local development priorities. If adequate data are not gathered, development frameworks cannot be effectively monitored.

However, this perspective was not reflected in the standard statistical products made available during the first period (1995–1999) of the 2000 Round of Censuses. Census information was generally published and widely used, but limited to the national, provincial and regional levels. Presently, there is a pressing demand not only for improving such data, but also for giving priority to and providing data, indicators and information at lower levels (the district, for example) where most of the targeted interventions for poverty reduction take place.

When they exist, census results are underutilized within countries if: they don't respond to the specific needs; they are not consistent and accurate; they are not available on a timely basis (they are already obsolete when available); potential users are not aware of their existence (poor sensitization and dissemination); they are available but not presented in a manner that is easily understandable to the common user. To avoid this, the global strategy is to produce censuses that are timely,

cost-effective, reliable, well processed, fully disseminated and more widely used. A census must meet the information requirements for the management of development programmes, and its range of products must be tailored to the specific needs of users.

The CST has been very active in helping country statistical offices in this area, as well as in improving institutional capacities for the inclusion of emerging issues such as women, youth and human poverty in census thematic analysis, and in implementing new approaches for completing the census process within eighteen to twenty-four months after data collection (Comoros and São Tome & Príncipe). The development of cost-effective census methodologies, with the assistance of the CST, is the goal of the national census/statistics organizations of Angola, Lesotho, Madagascar, Malawi, Mozambique and Swaziland (see Annex 2). To increase census cost-effectiveness, the sharing of experiences and best practices among neighbouring countries must be strengthened; especially those related to the adoption of common practices at sub-regional levels, such as the development of census questionnaires, manuals, training programmes, data processing, analysis and dissemination tools.

Meeting data and information requirements for Planning, Monitoring and Evaluation Indicators of the National Poverty Reduction Strategy and the MDGs in Mozambique

Poverty Monitoring Indicators

As part of the planning and implementation of the national poverty reduction strategy, a set of demographic and socio-economic indicators has been selected by sector. As shown below, most of the indicators will be *directly* provided by the 2007 Census in Mozambique, not only at the national and provincial levels but also at the lower levels (district and administrative post).

Education

- Literacy rate of population aged 15+
- Gross primary enrolment
- Net primary enrolment
- Girl/boy ratio in primary education
- Girl/boy ratio in secondary education

Health

- Infant mortality rate
- Under-five mortality rate
- Maternal mortality rate
- Life expectancy

Energy

- Proportion of population with electricity in the dwelling unit

Water and Sanitation

- Population with access to safe water
- Proportion of population with access to improved sanitation

Housing

- Proportion of households with access to secure tenure (owned or rented)

Employment

- Employment to population of working-age ratio
- Unemployment rate

Agriculture and Rural Development

- Heads of livestock per household

Income poverty

- Proportion of working-age population not currently employed

Extreme vulnerability

- Proportion of orphaned children
- Proportion of child-headed households
- Proportion of children in the labour force
- Proportion of children in the labour force and not going to school
- Proportion of elderly living in a household where no one is economically active

Indicators of the Millennium Development Goals (MDGs)

As an example, most of the indicators of the MDGs will be *directly* provided by the forthcoming census in Mozambique and at all levels (national, provincial, district and administrative post).

Goal 2

Achieve universal primary education

- Net enrolment ratio in primary education
- Proportion of pupils starting grade 1 who reach grade 5
- Literacy rate of 15–24 year-olds

Goal 3

Promote gender equality and empower women

- Ratio of girls to boys in primary, secondary and tertiary education
- Ratio of literate females to males 15 to 24 year-olds
- Adult literacy rate by sex
- Share of women in wage employment in the non-agricultural sector

Goal 4***Reduce child mortality (and child labour)***

- Under-five mortality rate
- Infant mortality rate
- Proportion of children under age 15 who are working

Goal 5***Improve maternal health***

- Maternal mortality ratio

Goal 6***Combat HIV/AIDS, malaria and other diseases***

- Ratio of school attendance of orphans to school attendance of non-orphans aged 10–14

Goal 7***Ensure environmental sustainability***

- Proportion of population with sustainable access to an improved water source, urban and rural
- Proportion of urban population with access to improved sanitation
- Proportion of households with access to secure tenure (owned or rented)
- Number of persons per room

Goal 8***Develop a global partnership for development***

- Unemployment rate of 15 to 24 year-olds, each sex and total
- Employment to population of working-age ratio
- Unemployment rate
- Telephone lines for 1,000 people

Annex 1

Plan for the 2010 Round of Censuses in the Southern Africa Sub-region of Intervention of UNFPA CST

2010 ROUND OF CENSUSES

PERIOD 2005-2009		PERIOD 2010-2014	
Year	Countries	Year	Countries
2006	Lesotho, Madagascar	2010	Mauritius, Zambia
2007	Mozambique, Swaziland	2011	Botswana, Lesotho, Namibia, São Tome & Príncipe, South Africa
2008	Angola, Malawi	2012	Seychelles, Zimbabwe
		2013	Comoros

Census Activities

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Introduction

Significant new demands are being placed on the data processing operations of the census. Users are justifiably demanding census results shortly after the census has been taken. Techniques that were used in previous census rounds are no longer suitable. Fortunately, new data processing technologies provide opportunities to improve the quality of census results and to produce them more efficiently. This paper reviews topics in census data processing, focusing especially on those which are related to the new technologies. It begins by considering the decisions related to data processing which need to be made in the planning stage. It also covers the use of microcomputer software as a tool in census management and control. The major part of the paper is a review of options for various data processing operations.

Census Planning—Data Processing Operations

At an early stage in census planning, issues relating to the census data processing operation must be addressed by the national census office. Consider the following:

- Census managers should decide at an early stage of census planning whether data processing activities will be decentralized or centralized. It is simpler when coding, data entry, data cleaning and tabulation are performed at a single location. Delaying this essential decision is expensive, counter-productive and time-consuming.
- Since the design and contents of the census questionnaire have implications for the office processing, computer processing and analysis, specialists should be consulted in their development.
- Supporting census documentation (coder's manuals, data entry operator's manuals, etc.) should be developed as early as possible. In this regard, special attention should be given to the census editing rules to be used during the census.
- The data entry method to be used (keyboard or optical) must be selected. A comprehensive evaluation should be carried out by census managers. Special consideration should be given to the availability of local facilities to provide maintenance for the new equipment.
- Based on the previous choices, the census questionnaire should be developed and pre-tested in the field and in the office for data capture. A questionnaire may be an excellent theoretical field tool but prove to be a poor practical instrument for data capture.
- Once the type of equipment to be used is known, arrangements to start recruiting census data processing staff should be made. It is important to provide adequate training to data processing personnel if good census data are expected. At the same time, a choice of software packages for data capture, editing and tabulation should be made. Accordingly, procedures to deal with missing data and items without response should be developed.
- A clear organizational link among demographers, field operations' personnel and data processing staff should be established.
- In order to avoid loss of census questionnaires and to prove smooth passage between storage and processing sites, location of adequate facilities for all census activities (questionnaire storage, coding, data entry, etc.) is needed.
- Procedures to track the flow of census materials to and from the field should be established, and storage arrangements and documentation of flow control to

facilitate information retrieval should be developed. It is preferred that this task be automated.

- A good quality control system for all data processing activities needs to be developed.
- A back-up plan for eventual contingencies is needed. Never take for granted that tasks will be achieved as planned.

Management and Control

During census planning activities, special attention should be given to putting in place adequate quality control mechanisms. Computer-assisted tools could be used to achieve this goal. A chronological diagram should be prepared for each census task, describing the resources required and indicating linkages where one activity depends on output delivered by a prior one. This information should be used to identify a critical path whereby any delay occurring would affect the length of the whole operation. Most census managers prepare an activities' timetable, but unfortunately not many managers are taking full advantage of this tool, creating unnecessary risks for the census.

New microcomputer software can help census managers keep track of all tasks, optimizing human resources and reducing overall cost. Examples include Microsoft Project, Timeline, Primavera, etc.

Bar codes could be used to identify each census form. They may also be included at the side of the enumeration area map, which should be attached to the enumerator's folder. The bar codes may also be useful when receiving the folders from the field. Hand-held scanners may easily be used on arrival of the forms and folders at the storage centre to detect any missing information. In this regard, the bar code should appear on the outside cover of the folder. Countries could develop a database containing enumeration area maps, geographical identifications and other characteristics. In this case, to avoid any misplacement, it would be better that the enumeration area map and the corresponding bar code be printed at the same time on the same page.

In order to have continuous feedback from the offices to census managers, the same database could be used to keep track of the status of each enumeration area. This database could include the census cartographic work and the population and housing figures, including results of household listing. Previous census data could also be included for better accuracy and for comparison with the final census results. Information on the status of each enumeration area should include the total number

of questionnaires sent to the field; how many came back to the office; name or code of the office which has the questionnaires and how long they were there; and the status of the related computer file (e.g. edited, ready for tabulation). The database might also include the name of the data entry operator, to keep him/her responsible for quality. Feedback from the several offices involved is essential to keep the information updated. This tracking mechanism should be established from the very beginning of the census activities, to make it possible to account for the status of each enumeration area. This is particularly relevant in ensuring that all data has been received, captured and tabulated as desired.

Managers have several alternatives for creating this tracking system. One would be to use any commercial database software, such as DBASE, Access, Paradox, FoxPro, etc. Another would use specially developed software programmes. It is also recommended that this tracking system be kept at the enumeration area level. A good system will rapidly detect erroneous or duplicated geographical identification in questionnaires, point out enumeration areas not received or misplaced and help to detect out-of-range population figures compared to previous data (e.g. cartographic count, etc.).

It will be much simpler to implement this kind of tracking system if a microcomputer network is available at the statistical office. In this case, the updates to the status of each enumeration area will be recorded on site by the responsible officer. Again, the bar code and the use of scanners could speed up (and increase accuracy of) the captured information.

Coding

Manual coding of at least two questions is normally performed in almost all census operations. Coding procedures (and itemizing precisely what should, or should not, be coded) may be reviewed with the aim of speeding up census information processing. Determination of what will be manually coded after enumeration should be done in the early design stages of the census questionnaire.

It is advisable to use pre-coded questions as much as possible. This makes a significant reduction in the number of coders/editors needed later on. As in every field operation, enumerators should be properly trained. In order to be consistent in the course content, it would be preferable to use audio-visual teaching techniques.

The more extensive the manual coding/editing, the longer the data entry tasks will be. It is also true that the longer the data entry operation, the more delayed the results will be.

Computer-Assisted Coding

Since the introduction of microcomputers in data entry, several new techniques have been available to help in the coding process. During census processing, capturing numeric data (pre-coded or not) is not a problem. However, in cases where a code is typed incorrectly (e.g., out of the variable range) or when open variables should be coded; the computer may assist the operator in finding the appropriate value.

In particular, computer-assisted coding proved to be quite effective when processing occupation, industry and place-of-birth data. In these cases, the operator will type the first few characters of the written text as it appears in the questionnaire. Then the coding programme will search in an internal code book that contains, for example, the list of occupations and their respective codes. All of the code book entries that match the initial few characters typed by the operator will be displayed on the operator's screen. The operator will select from the available possibilities. In case the computer cannot find any code book entry, the operator should request the help of a knowledgeable supervisor (or coder) to assign a code to this variable. This process can be time-consuming and slows down the data entry procedure. The record in question could be sent to a special file to be processed by a special team of real coders so as not to delay the normal flow in the main data entry station. Please note that the new version of CSPro system has this computer-assisted coding capability.

Automatic Coding

It is possible to use automatic coding when the information is captured previously by an optical scanner or when the full text of the variable description was typed in during the data capture stage. In both cases, "alpha" characters defining the variable are already contained in the census records. In a second phase, a computer programme may be used to assign codes to those character descriptions pertaining to each variable. As in the case of computer-assisted coding, there will be specialized dictionaries (i.e., for the occupation variable, all occupations will be listed but not nationalities or industries). If a match between the variable content and a dictionary entry occurs, the code will be automatically assigned without human intervention.

The effectiveness of this method depends on the characteristics of the variable to be coded. Simple variables such as Nationality and Place of Birth have a high rate of success. However, Occupation and Industry variables are more problematic. In both cases, there will be situations where it is impossible to assign an appropriate code. In those cases, human intervention is

needed and probably the computer-assisted coding method will be the next step in the coding process.

The use of an automatic coding process greatly reduces human intervention and thus census costs. Additionally, it may reduce the need for extra coders and operators, speeding up the census data capture/coding time.

The implementation of automatic coding techniques requires additional effort from the data processing staff. Developing computer programmes for such an application are not simple. Many of the methods rely on artificial intelligence and expert systems. Census projects that would like to develop this method should carefully evaluate their technical personnel capabilities before embarking on such a complex application.

Census Data Entry

Statistical processing in the 1990s has placed new demands on computer systems. Technological changes have modified the way countries process large-scale projects like population and housing censuses. Owing to high maintenance costs and easy-to-use software, national statistical offices around the world are using a mainframe approach less and less, and increasingly turning to local area microcomputer networks. An emerging trend is Client/Server architecture, which offers a flexible integration of different systems and provides a smooth upgrade path. The recent increases of processing power of the personal computer (PC) permit more cost-effective computing, with the PC integrated into statistical processing tasks as their centrepiece. Census questionnaires and internal forms can now be prepared in the same office with the help of almost standard tools. Word processing software such as WORD and WordPerfect could be used for this purpose. There are other inexpensive dedicated software packages, such as Perform, that will take in-house forms design to an even higher level.

Countries would like to reduce the time needed to capture census data and, as well, increase data quality. There is still room for improvement in these areas. With the introduction of new technologies and better attention to the key factor of management, among other measures, the data entry task can be significantly reduced in time and, therefore, cost. Let's consider options for doing so.

A key task is to accurately, yet cost-effectively, capture the information from the questionnaires. In this regard, microcomputer technology has been increasingly used since 1980 to achieve this goal. Better data entry programmes were widely used during population

TABLE 1: MICROCOMPUTERS

	STAND-ALONE	NETWORK	TERMINAL TO MAINFRAME	OCR/OMR
Africa	27	12	9	0
America, N.	5	5	12	12
America, S.	2	2	3	4
Asia	7	4	18	13
Europe	7	5	27	15
Oceania	4	4	8	3
TOTAL	52	32	77	47

data capture. However, human errors during this phase remain a concern. Some countries either used, or were considering using, other techniques to avoid keyboard data capture. Table 1 shows countries of the six regions of the world and the method they selected to capture their data during the 1990 Round of Censuses.

Opportunities for using optical character recognition (OCR), to capture information from large quantities of paper forms, have greatly increased during the 1990s. Making a machine process paper documents, as is done with magnetic media, opens a new world of possibilities in a highly efficient manner for computer applications. The use of optical mark readers (OMR) was one of the first attempts to optically process population information. During the 1970s Round of the Census, this technology was introduced to expedite data capture in long applications. The method is based on retrieval of a mark precisely positioned on the response questionnaire. The advantages of processing speed and accuracy in retrieve marks convinced several countries to use these devices to capture large volumes of data for population and housing censuses. However, precise questionnaire printing, good quality paper, as well as proper paper humidity at reading time, were—and are—critical for success. Moreover, OMR is particularly useful when only marks, no digits or characters, are to be retrieved.

In particular, countries with relatively small populations, around six million inhabitants or less, will probably find it easier to use a team of data entry operators since this does not require any special device to capture the data, standard microcomputers being entirely adequate. Medium- and large-size countries, however, may wish to evaluate the possible use of scanners and imaging techniques to speed up and, at the same time, increase data quality. The use of traditional keyboard

data entry and imaging is further discussed in the following paragraphs.

Keyboard

Keyboard data entry, using standard computer keyboards, is the traditional labour-intensive method to capture data and is used by several of our census projects in one variation or another. IMPS/CSPPro software, through its CENTRY (or CSEntry) module, BLAISE (from CBS, The Netherlands), ISSA (Integrated System for Survey Analysis, developed by the Institute for Resource Development/Macro International Demographic and Health Surveys Program) and Epi Info (from CDC—WHO) are frequent choices to carry out data entry. Still, other countries prefer to develop their own data entry programme using tools like a computer language, such as visual basic, or a database like FoxPro.

If we assume that there is a suitable data entry programme available, the first challenge will be how to split the data among the operators. It is a reasonable approach to give each operator a full segment (or section). This procedure makes it easier to identify the person who is in charge of capturing the data, therefore, squarely responsible for it, and at the same time, reduces the number of files being created to a more manageable quantity.

Once the information contained in a segment has been captured and edited, it must be consolidated with the information generated by other operators. When the application is not too large, diskettes or other simple computer connections can be used to concentrate the files in one microcomputer. Depending on the size of the country, however, this option may or may not be feasible. In any event, it is convenient to have all workstations linked to a main computer via a microcomputer network. This procedure avoids misplacing files and diskettes, and increases security. At the same time, it makes it easier to update the data entry file of any look-up table that may exist.

For the first two or three months of keyboard data entry, it is advisable to conduct 100 percent data verification by means of a double entry process. In order to assure consistent data entry quality, close monitoring should be exercised during the entire process. Inefficient operators, such as those with high error rates or low production, should be identified and redeployed. Depending on the error rates obtained, data verification can be gradually reduced to 10 percent or 15 percent of the total records and, as a result, the data entry process is accelerated.

Data capture programmes **should not perform too many editing checks** in order not to disturb the data

entry operations. In particular, the most important errors to detect at this time are those of wrong geographical identification of the enumeration area. At the same time, a valid range check could be conducted for each of the entered variables. Inter-record verification and even inter-questionnaire consistency checks, while tempting, should be avoided. An editing computer programme repairs this kind of error in a more effective and consistent manner.

Even after conducting 100 percent double entry verification, the information should be processed by an editing programme. It is wise to run the editing programme at the census segment level (even at the enumeration area level, if possible) since it is easier to repair a systematic error committed by the enumerator, the coder, the keypunch operator, the editing rule, etc. After carefully preparing a **comprehensive** editing rules manual, an editing programme should be developed.

Mark/Image Data Capture

An evolutionary variation of the OMR is the optical character recognition (OCR) technique. The use of scanners to capture survey or census data is simpler than using OCR methods in general applications. The basic reason is that the information is submitted to the scanner in a pre-designed form. Most of the information will be retrieved as “marks” in a pre-coded questionnaire. Only a few fields, such as Occupation, Industry and Place of Birth, may have handwritten information. The new devices used to capture the “image” of the questionnaires (known as scanners) are less sensitive to paper thickness (however, 100g/m² paper quality is still recommended), printing accuracy and even paper humidity, a remarkable improvement from the older technology. In particular, marks (or “ticks”) are retrieved with great accuracy. Handwritten numbers and characters are more difficult to decipher. However, the higher processing speed of current computers facilitates development of new techniques in the field of intelligent character recognition (ICR), which includes evaluation of character context, use of specialized dictionaries for each variable, all in an effort to more properly identify the character.

Data are available from countries that used OCR (one of them even used ICR) to process their last population censuses. While their software and hardware were different, the results reported below are encouraging.

The Central Bureau of Statistics (CBS) of Croatia (1991 census¹) concluded that based on initial estimates, data capture using OCR techniques produced better quality data than obtained through traditional data entry. They report that only 0.25 percent of numerical characters were read incorrectly, as against the usual 0.5 percent in classical data entry, used in their Bureau.

During the 1996 Uruguayan Census, a total number of 1.2 million questionnaires, with eight pages each, covering a population of 3.2 million, were processed. The recognition rates were as follows: marks (99.7 percent); handwritten alpha-numeric characters (97.4 percent); handwritten numeric characters (98.9 percent); and pre-printed numeric characters (99.98 percent). To reach such high recognition rates, however, it was necessary to verify and/or repair 9.4 percent of the handwritten numeric/alpha-numeric fields. A very limited percentage of questionnaires were damaged or written in lightly and consequently, entered through keying operators. Reportedly, 99.9 percent of the questionnaires were successfully captured using scanners.²

In the Census of New Zealand (1996), marks were retrieved almost with 100 percent accuracy according to informal reports. Regarding written letters and numbers, the error rate depended on the type of question. With the use of dedicated dictionaries and context techniques, error rates and retrieval rates significantly improved. Using a contextual technique, some commercial companies claim to have an effective success rate of 95 percent at character level and 98 percent at word level. These figures apply only to machine-printed information. Rates are lower for handwritten text, which is not in-line with the computer (or batch) processed. In such cases, current recognition rates for handwritten data produced by untrained writers are about 96.5 percent for digits (0-9), 95 percent for uppercase letters only, and 86.5 percent for lowercase letters.³

A combination of OCR and human intervention is easily accommodated in census data processing. It is common practice for questionnaires to be scanned, their images stored and optical character recognition performed as a batch task. In this case, as an example, if OCR software can recognize 40 percent (or 50 percent) of occupational descriptions, it means that there is only 60 percent (or 50 percent) of the work is left to

¹ Srdan Dumičić and Ksenija Dumičić. ‘Quality of Optical Reading the Census 1991 in Croatia’, technical paper presented at the Conference of European Statisticians, Athens, Greece, November 1995.

² Information provided by ‘Ingenieros Consultores Asociados’ (ICA), Montevideo, Uruguay.

³ U.S. Bureau of the Census. “The First Census Optical Character Recognition Systems Conference,” Technical Report NIST 4912, Washington, D.C., 1992.

manual intervention. There will inevitably be a win-win situation as recognition rates increase.

The use of imaging techniques requires thoughtful planning on which equipment to procure for each of the processing phases. It also implies planning to prepare a comprehensive management information system for coping with the new approach, to develop a new questionnaire that takes into consideration new requirements and to choose how to store captured data.

As a safety measure, in case the questionnaire cannot be processed by the scanner and must be keyed, it is advisable during the questionnaire design process, to print the codes in proximity to the box for ticks, even if superfluous to the scanner. By using this procedure, there will be no need to recode the entire questionnaire in case of an emergency and subsequent manual processing. It is advisable to maintain a consistent pattern of where the information to be collected is located. It is also advisable not to disturb the visibility of the ticks and marks with titles, labels or questionnaire instructions. This working method will also help the staff in charge of manually editing the census material.

Data Entry Cost Considerations

Census managers must consider several issues before selecting the data entry method to be used to capture census data. Standard data entry uses computer keyboards to type in the information. At present, each microcomputer used in this task is relatively inexpensive (about USD \$1,300) and, after the census, it can also be used for other types of work. However, there is a strong relationship between the number of characters per record to capture and the resources needed, to accomplish the data capture in a limited time. Each additional character has a cost. For example, what resources will be needed to include the question: “*is your mother still alive?*” Considering a country with a population of 10 million, the additional entry (only one character long) will require 10 million keystrokes. In case the data entry operators speed is six thousand characters per hour, she/he will need 1,667 working hours (278 working days or 14 months) to accomplish the task. Remember, however, that it is only one additional question.

On the other hand, scanner devices are more expensive and sensitive to local conditions such as humidity or dust. Technical service should be available locally to quickly repair a faulty unit. The cost of a medium-size scanner able to capture double-sided questionnaires is around USD \$20,000. In this case, adding an additional question will not significantly increase the overall processing time. In particular, if it is only a “mark” that

must be captured. Imaging techniques permit more flexibility in questionnaire content, but at the same time, require special techniques to design the questionnaire and probably, additional paper, due to the space required between characters to retrieve.

Using the “traditional” keyboard method, enumerator training is not as critical as when imaging techniques are utilized. Therefore, character recognition methods will require a more comprehensive training on how to complete the questionnaire, even how to write each character. It will be more expensive. However, with scanners, there will be no (or almost no) data entry operators which, in turn, will then reduce project expenses.

Census Editing

In earlier censuses, the manual editing process had a very important role. Due to advances in technology and editing techniques, however, this situation has changed. It is essential to verify geographical codes for purposes of accuracy. It is also necessary to code and verify open-question answers. But it would be better not to manually modify questionnaire contents. If changes are introduced manually, modifications will be permanent since it will be difficult to determine the original information. Even when making use of the same editing manual, different coders and supervisors may have different interpretations, and thus correct their data in different ways. The most dangerous problem arises when, after a particular rule has been in use for some time, it is proved wrong and needs to be modified. If it has been physically modified in the questionnaires, they need to be reprocessed manually and the damage repaired. This could be an expensive procedure, with census results delayed significantly. It helps if corrections were made using a different colour pencil. There are usually no statistics (or “count”) of errors corrected manually.

Keeping in mind that users press for a timely dissemination of statistical data, it is wise to keep manual editing to a minimum. It is desirable to capture the information from the questionnaire as it has been written by the enumerator. Later, editing and verification can be carried out by computer programmes in a faster and more consistent manner. Manual editing (and coding) should be used only when it is not feasible by computer, and a visual inspection of the questionnaire is needed.

In case manual editing is needed, efforts should be made to keep track of all manual corrections that have been made. This information, together with those obtained during the computer editing phase, will be valuable for demographers to determine, at the variable level, if they are reliable.

Manual verification within the household/housing unit or even at the individual level is too expensive and time-consuming and should be avoided. For example, verifying age against the date of birth, or age and the instruction level, will be much faster and more accurately done by computer than in a manual process. At the same time, assigning consistent values according to specific rules will be done in a much more effective manner through the same computer programme.

Some countries are, alas, paying insufficient attention to the preparation of editing rules to be applied through a computer programme. Often, when preparing a calendar of activities (if any), this task is not considered important, and it is scheduled to start late in the census process. The benefit of doing it early in the cycle is that the editing programme may be tested along with the pilot census data. This *modus operandi* allows use of generated statistics of errors detected to improve census questionnaire design, the editing programme and even question, content. The rules must be prepared by census demographers, or subject matter specialists, **and implemented in collaboration with data processing experts.**

The editing specifications should contain detailed information on how to detect any inconsistency and how to repair it. If a hot deck table is used in the process, it should give the name, dimension and detailed information on which variables are going to be used and how. Data processing staff may not have the background to make such a decision themselves, like building hot deck tables or deciding which codes to impute. Therefore, it is important that **demographers be included in the working team.** Adjusting and implementing editing rules is not a simple task. Without appropriate two-way communication, the editing process is in trouble. Programmers should not be left to make substantive decisions on their own, and demographers (without training), should not be allowed to develop computer programmes.

The production of statistics of errors should be circulated among the subject matter specialists and discussions held periodically to evaluate the quality of tasks being undertaken. In case a rule must be modified, making a difference in the output variables, all census files already processed must be reprocessed, using input data from the original files (not from those with the inconsistencies corrected). This procedure assures that all census files (meaning, all regions and departments), are processed with the same set of editing rules and that their data is consistent within and among them. It is essential to avoid applying different editing rules to the files within the same census. Otherwise, it would be like playing a soccer match using more than one set of rules.

Some countries do not process the “blank” characters properly since they could be the cause of a large number of errors, especially, with questions regarding fertility. In several cases, questions were raised to find out if it was possible to replace a blank with a “0.” In cases where the woman declares male children but leaves empty the female box, what should be done? This is the reason why demographers should be integrated in the development team. Actions here could range from inputting a “99,” a “0” (for none), some other code indicating the refusal to declare a female child, declaring the woman’s fertility void and using a hot deck method to replace the entry or some other imaginative solution.

The fertility questions usually show a high rate of errors. Efforts should be made to improve the quality of the interview, the way the questions are asked and their contents. From the data processing point of view, efforts should also be made to find a common approach on how to proceed with the editing of such variables. Every country has its own rules and cultural activities, and yet this could jeopardize the feasibility of international comparison and thus the value of the census to a particular country.

Tabulation

To produce census tables, census projects may use the following software packages: IMPS/CSPPro, Blaise, etc. There are also some acceptable commercial packages such as “Beyond 20/20,” Supercross, etc., to carry out this task. However, their cost varies from country to country. There is also a special statistical database package developed by Statistics Sweden (PC-AXIS) that is suitable for producing high quality tables.

Some countries made extensive use of ISSA (Integrated System for Survey Analysis). The software version available has some limitations when the census is not processed entirely in one programme execution. It is more survey- than census-oriented. The ISSA package has the capability to deal with several record types rather easily. The company producing ISSA informed us that a new feature to consolidate intermediate results will be available in the future.

The use of statistical packages, such as SPSS or SAS, to obtain tables from **large** population censuses, is discouraged. These packages require additional initial processing time and hard disk space to create working files. In a census application, it may be impossible to make use of them. However, with the increasing capacity of newer hard disk and faster computers, this situation may change.

“REDATAM” (REtrieval of DATa for small Areas by Microcomputer) from UN/ECLAC-CELADE, is another powerful tool to produce tables for a census or very small areas. REDATAM is an interactive software system designed to make it convenient for planners, researchers and other users to obtain information on small areas down to city blocks, from very large files containing statistical micro data. There is now a Windows version available that is easier for standard users. During the generation of the REDATAM database, the census ASCII files are reduced to about 15 percent of their original size. This software package is widely used in South America.

Census Files and Back-up Procedures

It is important to establish a file back-up policy for all census files. The original census data, as it came out of the data entry phase, should be kept, without any editing or any modification. This file will provide a safety feature in case an editing rule was not inadequate and the data should be processed one more time.

Census back-up files may be recorded on magnetic tapes, hard disks and on recordable DVD-Rs. To avoid file reading errors, magnetic tapes should be copied again within a three- or four-year period. Files on hard disks do not suffer from degradation because the magnetic surfaces do not touch each other. It is also advisable, however, to follow the same strategy. At present, the most reliable ways to store census files are on CD-ROMs and DVD-Rs. The data on optical disks have a much longer life expectancy and could easily be readable for the next fifty years. Eventually, the CD-ROM and DVD should be copied onto the next generation of optical media to assure availability of compatible reading devices in future years.

Census files are usually simple sequential hierarchical files. They contain two or three record types with a different size for each of them. There will be a population record, a household record and a housing record. To obtain census tables and to publish them, there is no need to have any database structure, where the presence of indexes will also increase the need for larger disks and delay access time. After census tables are published, other tools like REDATAM or PC-AXIS could be used for further demographic analysis. Then, a conversion to a special file structure will take place.

Data Dissemination

Magnetic and Optical Media

Technological developments in recent years have brought a wide variety of new ways to disseminate data, including census results and simple raw information. At present, the degree of detail and sophistication in which statistical and demographic information can be obtained is only limited by the capabilities and the means available to the originating source.

Early changes were introduced when information was disseminated on half-inch computer magnetic tapes. At that time, the released data came in a format of working files, and it was up to the user to process and obtain desirable results. Nevertheless, it did promote a thriving information market.

Dissemination of elaborated data received a major boost with the introduction of microcomputers. Early programmes, like Lotus 1-2-3, allowed the possibility of sharing data along with some degree of graphic presentation. It was a widespread software programme which made information exchange much easier than previously.

Information dissemination in magnetic media came at a time when data for smaller areas were being requested more and more frequently. This type of information, detailed census tables, for example, was potentially available but never published in printed form at such a level of disaggregation due to considerations of cost. With the introduction of microcomputers, data started to circulate on simple computer diskettes. Several software packages took advantage of magnetic technology and in so doing, brought data closer to end users.

TABLE 2: COUNTRY BY ECONOMY

	DEVELOPING	TRANSITION	DEVELOPED	TOTAL
CD-ROM	15	2	9	26
Diskettes and Magnetic Tapes	60	16	21	97
On-Line	13	3	12	28
Printed Publication	126	28	24	178
Thematic Maps	63	23	15	101

To disseminate census data in simple computer diskettes, the module TRS, of IMPS/CSPPro, is the most advantageous. It is particularly useful for retrieving tables already produced, but not printed, due to cost limitations. TRS-IMPS/CSPPro should be extremely useful in providing census data results to other government offices in a timely, cost-effective manner.

More than ever, new technology was used by many countries to disseminate their 1990 Round of Censuses. Table 2 shows the trend to use newer methods to reach end users, reduce publication costs without long delays and make better use of available data.

Optical technology created new possibilities in data dissemination. The first Write One Read Many (WORM) disks had limited acceptance among end users. Frequently, internal formatting among different manufacturers had no standard. To be able to properly retrieve data, the end user (or the receiving entity) was forced to have the same device as the one used to record the information. The CD-ROM/DVD, despite less storage capacity than some WORM disks, succeeded in establishing a worldwide standard and making data exchange easier.

Affordable CD-ROM/DVD recorder devices and the wide availability of CD-ROM/DVD readers are reshaping the way data dissemination has evolved. Governmental statistical offices in developing countries are now able to produce CD-ROMs/DVD-Rs without resorting to a private company. A current example is the Bolivian statistical office, which has already issued five volumes containing such data as national accounts, a demographic yearbook, trade statistics, etc. This environmentally friendly trend in data dissemination means that many otherwise doomed trees are going to be spared, thanks to the reduced demand for paper and printed matter.

At present, a single DVD disk is able to hold more than 4 gigabytes of information; there are also dual layer DVD disks that can hold twice as much information. The introduction of the DVD was delayed for some time due to a lack of agreement on standards among manufacturers. The recording method of the new disk also includes techniques to prevent duplication of video data. Thanks to its high storage capacity and decreasing cost, this device is expected to prevail over presently available media in future years. In view of the number of units already being used, however, old and existing CD-ROMs should remain on the market for a long period of time.

On-line Dissemination

Microcomputers have also figured prominently in the development of on-line dissemination of population data. The use of modems to communicate among computers and computer networks has become more common since the introduction of the personal computer. A first major application in this category was the bulletin board system (BBS). For the personal computer operator, the only requirements to use a BBS were a modem and a telephone line. Originally, the BBS was used by private companies to market and distribute their products. The end user was supposed to have a way to pay for the information received. Of course, there were and are also BBS belonging to statistical, non-profit and governmental organizations providing services free-of-charge to their users.

The latest on-line data dissemination method is the INTERNET. These days, it is difficult to find a national statistical organization that does not have, or is planning to have in a very near future, an INTERNET site, commonly known as a website. The impressive success of this communication network is based on how easy it is to enter, how user friendly, and simple yet powerful, are the browsers used to surf the INTERNET, as well as the variety and quantity of information available on the Web. This incredible success could not have been achieved without a graphical interface such as Windows. The tools to create websites are also being improved, getting easier to use and, with each new release, more powerful.

Other promising possibilities for on-line data dissemination are "Intranets" and wide Intranets using special tunnels to provide access to remote users. In this context, population information can be rather easily shared, in web-page format, by internal users on the same network. Gathering data and producing quality results was, is and probably always will be, expensive. Though, for computer hardware and software, the historical price trend has been not up but down. Increase the use of already available data and extracting further results will not really reduce the cost of basic data collection. The difference is that information will be more readily available to end users which increase their potential for wider and better use.

The creation of websites containing population information requires deciding what kind of data the visitor to the website gets. For example, it is possible to provide statistical tables, consumer price indexes, etc., but there also is the option of allowing the user to download data files. In this case, careful evaluation should be given to the use of FTP (File Transfer Protocol) in a

particular website. Internal users may want to be able to “import” data files from outside places, and external users may want to “export” files from the website. In this regard, it should be noted that, despite some limitations and using standard e-mail, it is technically feasible to “attach” a file to a message and then forward it to another interested party.

When developing a website, several issues should be considered; among them:

- what is the set of internal standards regarding procedures, equipment and software packages to be used (FrontPage, etc.);
- considerations of the thematic issues to be covered in the web pages;
- which population indicators should be included;
- the relative costs of population information dissemination (traditional means versus web);
- the procurement of computer equipment (server, UPS, routers, etc.); and
- the choice of an operating system platform to be used (UNIX, LINUS, Windows, etc.).

It is necessary to provide human resources needed to maintain and update the web-page, and to provide user support. At the same time, it should be clear who is responsible for the development and the administration of the website. Independently, there should be someone in charge of quality control for the information provided through the website.

Geographic Information System (GIS)

While a geographic information system is a rather complex and resource consuming technology, it is now being used by several countries to disseminate population information and data. A GIS utilizes different specialized hardware, software and procedures to capture, manage, manipulate and display spatially referenced data for analysis, modelling and planning purposes. The ability to use two- or even three-dimensional space to link and manipulate population data makes it a relevant tool to assist in formulating population policies. The basis of GIS, a population database associated with a computerized mapping

system, which in turn allows production of thematic maps according to specific conditions. A collection of maps in the form of computer readable files is called an electronic census atlas.

Governmental census offices provide vital information on current demographic conditions and future trends for policymakers in population-related topics. To facilitate the use of demographic data in fields like economic and social programming, spatially-referenced census databases are an essential component for integrated analysis and planning. In this regard, according to a 1993 United Nations Statistics Division survey, only twelve out of seventy-four countries (16.2 percent) employed computer mapping for their pre-census cartographic work and none for subsequent population information dissemination. In fact, the use of computerized mapping is quite recent: among forty-three statistical offices around the world, only five started before 1986, three in the period 1986–1987, four in 1988–1989, four in 1990, six in 1991, five in 1992, fourteen in 1993 and two in 1994. It is important to note that thirty national statistical offices (seventeen in developing countries) reported that they use high-end GIS software packages such as ARC/INFO and InterGraph. However, only six offices were actually conducting population analysis and planning using these systems.

Simple desktop cartographic systems can also generate thematic maps from a database of maps and indicators. In many cases, this information suffices for statistical or demographic dissemination purposes. More advanced GIS, including multiple map layers (e.g., road, hydrology and land use), seem to be a low priority for typical population information dissemination, especially where budgetary constraints prevail. Nevertheless, it is technically possible to develop detailed GIS which include population and other geo-referenced data from various sources and thereby produce more sophisticated, though costly, forms of spatial analysis.

We are aware that the number of countries working in this field as of late 2004 is growing rapidly. Several of these countries have obtained elegant results in expanding the use of available population information. Successful applications may be found in a UNFPA pilot project in Honduras as well as the National Statistical Office in Uganda. The use of GIS will increase with the emerging availability of new tools reducing the time to convert printed maps into digital form. New software coming onto the market can automatically vectorize a suitably scanned map image and speed up the process of digitizing the cartography for an entire country,

whether the size of Canada or Luxembourg. In future years, as costs moderate, geographic information systems are expected to become one of the major players in population information dissemination.

Several statistical offices are already using Oracle databases to keep statistical data. MapInfo Corp. integrated both the server and object components and is allowing users to manage, analyze and visualize spatial representation of existing information in database formats (Oracle and Informix).

Future Development

Imaging processing is likely to play an important role in future years. Promising results have been obtained during the imaging processing of some censuses in the 1990 Round. The technical quality of new optical devices is improving every day. Better handling of low quality paper and humidity will make these machines more suitable to a large number of countries, especially those in the tropics. Intelligent character recognition techniques will continue to evolve and, with them, their accuracy.

Population information dissemination will also benefit from recent computer equipment technological improvements and falling prices. The availability of larger and better computer hard disks as well as faster

and cheaper CPUs will encourage countries to develop national (and more detailed regional and sectoral) population databases that can be easily accessed by a large number of users. GIS will also take advantage of computer hardware improvements. Since it is an emerging application field, significant refinements in the availability and capability of GIS software are expected.

Population information applications are anticipated to take full advantage of optical technology. High capacity DVD optical discs will provide the ideal media for large population database distribution. Standard database software packages will eventually better handle statistical data and demographic tables.

The most important development in population data dissemination may well be in on-line information availability. The use of the Internet is expected to grow in every country. Several national statistical offices opened their own websites during the last twelve months. Inferring from early feedback, this trend is expected to intensify in coming years. In light of all these new developments, population information dissemination is likely to achieve a new dimension soon in the coming millennium, especially for those countries which now adopt a thoughtful and dynamic approach designed to capture prospective economic and social benefits on behalf of their concerned citizens.

Glossary of Acronyms and Software References

Access	Database software Address: Microsoft Company Corporate headquarters: One Microsoft Way Redmond, WA 98052-6399 Telephone: (206) 882-8080 http://www.microsoft.com	DVD	Digital Video Device
ARC/INFO	Cartographic information system Address: ESRI 380 New York Street Redlands, CA 92373-8100, USA Fax: (909)307-3070 http://www.esri.com	Epi Info	Complete microcomputer system including Wordprocessor, data entry, editing, tabulation and statistics Address: The Division of Surveillance and Epidemiology, Epidemiology Program Office, Centers for Disease Control and Prevention (CDC) (in collaboration with World Health Organization (WHO) Atlanta, Georgia 30333 FAX (404) 315-6440 E-mail: EpiInfo@CDC1.CDC.GOV
BBS	Bulletin Board System	FrontPage	Web page generator Address: Microsoft Company Corporate headquarters: One Microsoft Way Redmond, WA 98052-6399 Telephone: (206) 882-8080 http://www.microsoft.com
Beyond 20/20	Tabulations, Graphics, Maps Address: IVATION Data Systems Inc. 265 Carling Avenue, Suite 502 Ottawa, Ontario - Canada K1S 2E1 Fax: (613)563-7233 http://www.ivation.com	FoxPro	Database software Address: Microsoft Company As above http://www.microsoft.com
Blaise	A Survey Processing System Address: Central Bureau of Statistics Research and Development Division Statistical Informatics Department 2270 JM Voorburg, The Netherlands Fax: (31-70)387-7429 E-mail: blaise@cbs.nl	FTP	File Transfer Protocol
DBASE	Database software Address: Borland International, Inc. World Wide Headquarters 100 Borland Way Scotts Valley, CA 95066 Phone/fax: (408) 431-1000 http://www.borland.com	GIS	Geographic Information Systems
		ICR	Intelligent Character Recognition
		Informix	Database software Address: Informix Software 4100 Bohannon Dr. Menlo Park, CA, 94025 USA Fax: (650) 926 6300 http://www.informix.com

IMPS/CSPro Integrated Microcomputer Processing System
 Modules: **CENTRACK** for census management
DATADICT wide purpose data dictionary
CENTRY manual data capture
CONCOR error scrutiny and data editing
CENTS tabulation (publication ready printouts)
QUICKTAB tabulation (quick and easy)
TRS table storage and Retrieval
 Address: International Systems Team
 Bureau of the Census
 Washington, D.C. 20233-3102
 U.S.A.
 Fax: (1-301)763-7589
 E-mail: imps@census.gov
<http://www.census.gov/ipc/www/imps.html>

InterGraph Cartographic information system
 Address: InterGraph Corporation
 Huntsville, AL 35894 USA.
 South Pacific contact (there are several)
 71 Symonds Street
 Auckland, New Zealand
 Fax: (64)9366-171-5
<http://www.intergraph.com>

ISSA Integrated System for Survey Analysis
 Address: Institute for Resource Development/Macro International Demographic and Health Survey Program
 8850 Stanford Boulevard
 Columbia, MD 21045, USA
 Fax:(1-410)290-2999

KeyEntry III Data entry software (and OCR/ICR)
 Address: Southern Computers Systems, Inc.
 2732 Seventh Avenue South
 Birmingham, AL 35233
 Fax 205-322-4851
 E-mail: webmaster@scsinc.com
<http://www.scsinc.com>

MapInfo Mapping software
 Address: MapInfo Corporation
 One Global View
 Troy, NY 12180
 Fax: (518) 285-6070
 E-mail: sales@mapinfo.com
<http://www.mapinfo.com>

Microsoft Project Project management tools
 Address: Microsoft Company
 Corporate headquarters:
 One Microsoft Way Redmond, WA 98052-6399
 Telephone: (206) 882-8080
<http://www.microsoft.com>

OCR Optical Character Recognition

OMR Optical Mark Reader

ORACLE Data base software
 Address: Oracle Corporation
 Redwood Shores, California
 500 Oracle Parkway
 Redwood Shores, California 94065
 Fax: (415)506-7200
<http://www.oracle.com>

PCAXIS TableOriented Database with graphing capabilities.
 Address: Statistics Sweden
 Statistical Database Program
 S115 81 Stockholm, Sweden
 Fax: (46-8)783-4105
 E-mail: lars.nordback@scb.se

Paradox Database software
 Address: Borland International, Inc.
 World Wide Headquarters100
 Borland Way Scotts Valley, CA 95066
 Phone/fax: (408) 431-1000
<http://www.borland.com>

Primavera Project management software
 Address: Primavera Systems, Inc.
 Two Bala Plaza
 Bala Cynwyd, PA 19004 USA
 Fax: (610) 667-7894
<http://www.primavera.com>

REDATAM Plus Retrieval of Data for Small Areas by
Microcomputer
Database and tabulation system for
census microdata
Address: United Nations ECLAC
Latin American Demographic Centre
(CELADE)
Santiago, Chile
Fax: (562)2080252
<http://www.eclac.cl>

SAS Statistical software package
Address: SAS Institute Inc.
<http://www.sas.com>

SPSS Statistical software package
Address: SPSS Inc
<http://www.spss.com>

SuperCross Cross-tabulation software for data
aggregation and segmentation
Address: Space Time Research
668 Burwood Rd Hawthorn East
Victoria 3123 Australia
Fax: (61-3)9882-4029
E-mail: str@iaccess.com.au
<http://www.str.com.au>

TAU Tabulation System
Address: United Nations Economic
Commission for Europe
Statistical Computing Projects
Palais des nations
CH-1211 Geneva 10, Switzerland
Fax: (41-22)917-0123

Time Line Project management software
Address: Time Line Solutions Corporation
7200 Redwood Blvd.
Suite 300
Novato, CA 94945 USA
Fax: (415)898-0177
<http://www.tlsolutions.com>

UNESCO IDAMS Statistical Software - Validation,
manipulation and data analysis
Address: UNESCO - CII/PGI
IDAMS Development Group
1, Rue Miollis
75732 Paris CEDEX 15, France
Fax: (33-1)4306-1640
E-mail: scida@frunes21.bitnet

UPS Uninterruptible Power System

WinR+ SP Retrieval of Data for Small Areas by
Microcomputer
Database and tabulation system for
census microdata
Address: United Nations ECLAC
Latin American Demographic Center
(CELADE)
Santiago, Chile
Fax: (562)2080252
<http://www.eclac.cl>

Word Word processor
Address: Microsoft Company
Corporate headquarters:
One Microsoft Way Redmond, WA
98052-6399
Telephone: (206) 882-8080
<http://www.microsoft.com>

WordPerfect Word processor
Address: Corel Company
<http://www.wordperfect.com>

WORM Optical disk, Write One Read Many

Role of Censuses in Monitoring the Millennium Development Goals in Sub-Saharan Africa

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Introduction

The monitoring of the Millennium Development Goals (MDGs) is taking place globally and nationally. For global reporting, use is made of internationally compiled indicators, based on standard concepts, definitions and methodologies. For country reporting, use is generally made of national compiled indicators from national sources, generally censuses and household surveys. It is, however, suitable that the data source for each indicator and the quantitative value of the indicator be decided by consensus among the key stakeholders, especially the national statistical system.

This background paper consists of a review of the role of censuses in monitoring progress towards the MDGs in sub-Saharan Africa. It also examines the linkages between national capacity and MDG monitoring in African countries. It is divided into two sections. The first section presents the potential role of census data in the monitoring of the MDGs, while the second outlines the underutilization of census data in the monitoring of the MDGs.

Potential role of census in monitoring MDG targets

As shown in Table 1, census information is the pillar of MDGs monitoring. Censuses can directly provide indicators to monitor education, gender, mortality and environmental targets. Through household surveys, it indirectly provides indicators to monitor poverty and HIV/AIDS.

Direct monitoring of MDGs through censuses

Goal 2—Achieve universal primary education and Goal 3—Promote gender equality and empower women

Census data can be used to prepare all of Goal 2—*Achieve universal primary education*—indicators: net enrolment ratio in primary education; proportion of

pupils starting grade 1 who reach grade 5; primary completion rate; and literacy rate of 15–24 year-olds. These indicators can be also presented by sex and partially satisfy Goal 3—*Promote gender equality and empower women*—indicators. The indicator *Share of women in wage employment in the non-agricultural sector* can be also derived from a census through its information on active population, labour force and employment. In total, seven indicators of Goals 2 and 3 can be obtained from a census, only the indicator of Goal 3—*Proportion of seats held by women in national parliament*—cannot be obtained from censuses.

Goal 4—Reduce child mortality and Goal 5—Improve maternal health

A census often collects information related to deaths and births in the last twelve months, that can be used to estimate infant and under-five mortality (indicators of Goal 4). Information on maternal deaths collected through the census can be also used to estimate maternal mortality ratios (indicator of Goal 5). The census does not usually collect information on child and maternal care. However, this information can be obtained through specialized surveys based on census frames such as the Demographic and Health Surveys (DHS) and Multiple Indicators Cluster Surveys (MICSs). Measles coverage and delivery of care are covered in these surveys.

Goal 7—Ensure environmental sustainability

Goal 7 covers various environmental aspects including water, sanitation and security of tenure that can be monitored through census data. Information on drinking water source and toilet facilities is usually covered in censuses. However, a census collects information only on tenure type and cannot measure the security of tenure, which requires additional information documenting each type of tenure, as well as the perception of the household regarding eviction.

TABLE 1. CENSUS INFORMATION TO MONITOR THE MILLENNIUM DEVELOPMENT GOALS (MDGS)

USING CENSUS	USING SURVEY	GOALS AND TARGETS	INDICATORS FOR MONITORING PROGRESS
DIRECT	INDIRECT		
		Goal 1: Eradicate extreme poverty and hunger	
	X	Target 1: Halve, between 1990 and 2015, the proportion of People whose income is less than less than one dollar a day	1a. Proportion of population below \$1 (PPP) per day ^a 1b. Poverty headcount ratio (% of population below the national poverty line)
	X		2. Poverty gap ratio [incidence x depth of poverty]
	X		3. Share of poorest quintile in national consumption
	X	Target 2: Halve, between 1990 and 2015, the proportion of People who suffer from hunger	4. Prevalence of underweight children under-five years of age 5. Proportion of population below minimum level of dietary energy consumption
	X		
		Goal 2: Achieve universal primary education	
X		Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrolment ratio in primary education 7a. Proportion of pupils starting grade 1 who reach grade 5 7b. Primary completion rate 8. Literacy rate of 15-24 year-olds
X			
X			
X			
		Goal 3: Promote gender equality and empower women	
X		Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015	9. Ratios of girls to boys in primary, secondary and tertiary education 10. Ratio of literate women to men 15-24 years old 11. Share of women in wage employment in the non-agricultural sector 12. Proportion of seats held by women in national parliament
X			
X			
X			

^a Information provided by 'Ingenieros Consultores Asociados' (ICA), Montevideo, Uruguay.

TABLE 1. CENSUS INFORMATION TO MONITOR THE MILLENNIUM DEVELOPMENT GOALS (MDGS) — continued

USING CENSUS	USING SURVEY	GOALS AND TARGETS	INDICATORS FOR MONITORING PROGRESS
DIRECT	INDIRECT		
		Goal 4: Reduce child mortality	
X		Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	13. Under-five mortality rate
X			14. Infant mortality rate
	X		15. Proportion of 1 year-old children immunized against measles
		Goal 5: Improve maternal health	
X		Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio
	X		17. Proportion of births attended by skilled health personnel
		Goal 6: Combat HIV/AIDS, malaria and other diseases	
	X	Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	18. HIV prevalence among 15-24 year old pregnant women
	X		19. Condom use rate of the contraceptive prevalence rate ^b
	X		20. Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14
	X	Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria
	X		22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures
		Goal 7: Ensure environmental sustainability	
X		Target 9: Reverse loss of environmental resources	29. Proportion of population using solid fuels
X		Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	30. Proportion of population with sustainable access to an improved water source, urban and rural
X			31. Proportion of urban and rural population with access to improved sanitation
X		Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	32. Proportion of households with access to secure tenure

^b U.S. Bureau of the Census. "The First Census Optical Character Recognition Systems Conference," Technical Report NIST 4912, Washington, D.C., 1992.

TABLE 2. SOURCES USED TO COMPUTE MDG INDICATORS BY COUNTRY

	Benin	Cameroon	Côte d'Ivoire	Kenya	Malawi	Namibia	Senegal	Togo	Uganda	Zambia
EDUCATION AND GENDER										
6. Net enrolment ratio in primary education	DHS 96/01	DHS 98	DHS 98/99	DHS 93/98	DHS 00	DHS 92	DHS 92/99	DHS 88/98	DHS 00/01	DHS 92/01
7. Proportion of pupils starting grade 1 who reach grade 5	DHS 96/01	MICS 00	DHS 98/99	MICS 00	DHS 00	Census 01	ESIS 99	DHS 88/98	DHS 00/01	DHS 92/01
8. Literacy rate of 15-24 year-olds	DHS 96/01	DHS 98	DHS 98/99		DHS 00	HS/DHS 92	DHS/HS	DHS 88/98	DHS 00/01	
9. Ratios of girls to boys in primary, secondary and tertiary education	DHS 96/01	MICS 00	DHS 98/99	MICS 00	DHS 00	Census 01	ESIS 99	DHS 88/98	DHS 00/01	DHS 92/01
10. Ratio of literate women to men 15-24 years old	DHS 96/01	MICS 00	DHS 98/99	MICS 00	DHS 00	Census 01	ESIS 99	DHS 88/98	DHS 00/01	DHS 92/01
MORTALITY										
13. Under-five mortality rate	DHS 96/01	DHS 98	DHS 98/99	DHS 93/98	DHS 00	DHS 92	DHS 92/99	DHS 88/98	DHS 00/01	DHS 92/01
14. Infant mortality rate	DHS 96/01	MICS 00	DHS 98/99	MICS 00	DHS 00	Census 01	ESIS 99	DHS 88/98	DHS 00/01	DHS 92/01
16. Maternal mortality ratio	DHS 96/01	DHS 98	DHS 98/99		DHS 00	HS/DHS 92	DHS/HS	DHS 88/98	DHS 00/01	
ENVIRONMENT										
30. Access to improved water	Census 01	DHS 98	ENV 02	DHS 93/98 MICS 00	PHC 98	Census 01	DHS MICS	MICS 00	DHS 00/01 HH SURVEY	Census 90 Census 00
31. Sanitation to improved sanitation	Census 01	LSMS 01	ENV 02		PHC 98	Census 01	Census 02	MICS 00	99/00	

Indirect monitoring of the MDGs through census-based surveys

Goal 1—Eradicate extreme poverty and hunger

Although the census is exhaustive and reaches down to the smallest geographic area, the enumeration area (EA), it does not provide information on income, nutrition and HIV/AIDS. This limitation can be overcome by using specialized survey information. The Living Standard Measurement Surveys (LSMSs) aim at providing information on income and expenditures that are used to estimate poverty in each country. The DHS and MICS collect anthropometric measures used to estimate maternal and child nutrition status.

Goal 6—Combat HIV/AIDS, malaria and other diseases

Data on HIV in pregnant women come from tests on leftover blood samples taken for other reasons during pregnancy. DHS surveys are also collecting such information at the household level. In addition, DHS and MICS provide information on condom use, malaria and tuberculosis (TB).

Census as a powerful tool for the localization of the MDGs

Household surveys such as the DHS and MICS provide a wealth of information on various social, economic, health

and environmental aspects. However, due to their limited sample size (between 5,000 and 10,000 households, in most cases), estimates for these surveys are usually at national, regional and urban-rural levels. Information at the district or lower levels is usually obtained from censuses and covers very limited socio-economic information. Geographical targeting, or targeting poor areas, is sometimes proposed as a feasible alternative to targeting poor people, and poverty mapping using census data, may serve as a valuable tool in this regard. Mapping census information aims at developing capacity among multiple national stakeholders on participating in policy analysis and on implementing the MDGs in favour of the poor.

A census does not provide information on nutrition, security of tenure, social capital, HIV/AIDS and income, although it is exhaustive and reaches lower geographic levels down to the enumeration area (EA). This limitation can be overcome by using the Small Area Estimates Method (SAEM) based on census and survey information. In principle, variables not observed in the census, are collected and modelled in the survey in relationship with other variables collected both by the survey and the census. However, it is preferable if the census and the survey are almost contemporaneous, and use similar methods and instruments to collect common variables.

Underutilization of census data to monitor MDGs

A training workshop on data and indicators to monitor progress towards the MDGs, organized by UNSD in collaboration with APHRC, UNDP, WHO, UNFPA, UNICEF and UN-Habitat, was convened in Nairobi on 22–27 September 2003. The workshop was aimed at improving national statisticians' and analysts' understanding of the MDGs, and strengthening national capacities to produce statistics, indicators and analyses for monitoring their implementation at the national level. Analysts and statistics experts from twenty-two African countries actively involved in the preparation of MDG indicators and MDG country reports, and experts from United Nations agencies and APHRC attended the workshop. During the workshop, the country representatives were asked to complete a questionnaire on data sources used to compute each MDG indicator. For ten countries (Benin, Cameroon, Côte d'Ivoire, Kenya, Malawi, Namibia, Senegal, Togo, Uganda and Zambia), information on data sources to monitor MDG targets has been compiled and summarized in Table 2.

As shown in Table 2, countries mainly used household survey data to monitor MDGs. Few countries indicated using census data for the estimation of health and education indicators. However countries such as Benin, Namibia and Zambia indicated using census data to monitor water and sanitation. The underutilization of census data in the monitoring of the MDGs may be due to the fact that census data are often poorly disseminated at the national as well as sub-national levels. In most countries, the census project includes the data collection and a main national report. Secondary analysis is rarely planned and undertaken. Household data such as DHS, MICS and LSMS are the main sources of further analysis. During the two MDG workshops sponsored by UNFPA, UN-Habitat, UNSD and partners in 2004, very few NSOs brought census data. In the Asian MDGs workshop organized in Bangkok in November 2004, census data were available only for two countries (China and Malaysia). In the African MDGs workshop organized in Nairobi in December 2004, census data were available only for South Africa and Tanzania.

Conclusion

Data gathering capacities

Data gathering capacities are largely influenced by the political commitment to the support of surveys, censuses, vital registration and administrative statistics in the collection of health and social information. Availability of human resources is also a factor. Most countries consider themselves to have moderate capability in collecting social, economic and health data for the monitoring of the MDGs, to be fair. However, there is a need to technically and materially strengthen the census data collection mechanism for maternal mortality, security of tenure and other environmental factors.

Monitoring and evaluation mechanisms

Although census information exists in countries, monitoring and evaluation mechanisms using this information remained weak in most countries. This may be related to the lack of national information systems. When data are not organized within a national system, it becomes difficult to use it to monitor and evaluate projects. For most MDG indicators, countries have recognized and expressed a lack of monitoring and evaluation mechanisms. National governments and partners must strengthen national institutions in the development of techniques and tools to build an information system from censuses and various household surveys.

The 2010 Census Round in the Pacific Islands

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Introduction

While the Pacific Islands region contains twenty-two countries and territories (not including Hawaii and New Zealand), this note refers particularly to those countries supported by UNFPA, namely: Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu. The populations of these fifteen countries range from Papua New Guinea's 5.8 million to Tokelau's 1,500. The islands exhibit a wide diversity of conditions that either constrain or facilitate census-taking depending on the country in question.

No Pacific Island country has reached full self-sufficiency in census-taking, but the type and extent of external technical or financial assistance required varies widely. The territories of France, the United States and New Zealand continue to rely, in varying degrees, upon their national statistical offices, and some independent countries also receive technical support from the Australian Bureau of Statistics or the U.S. Bureau of the Census. Regional agencies such as UN/ESCAP and the Secretariat of the Pacific Community (SPC) have provided technical assistance in census-taking for several decades. The European Union has provided both technical and financial support in some countries. UNFPA has provided substantial financial and technical support for census-taking in the Pacific, particularly during the 1970–1990 Rounds. However, UNFPA support for censuses declined markedly during the 2000 Round, largely due to the strong emphasis placed on Reproductive Health in Country Programmes and the relative neglect of Population and Development issues.

The 2000 Census Round in the Pacific Islands

All Pacific Island countries conducted a census in the 2000 Round, but not all did so without difficulty and not

all censuses were fully successful. The deficiencies in the 2000 Round of Censuses included inadequate mapping, outdated or incomplete household listings, inadequate data verification and editing, poor response rate (high proportion of “not stated” responses to some questions), errors of both content and coverage, insufficient analysis and dissemination and a lack of or deficient Post Enumeration Surveys.

The precise reasons for deficiencies in Pacific censuses vary among the countries. As in other developing regions, statistical operations in most Pacific Island countries have been increasingly constrained by the lack of financial and human resources. Government funding for general statistical work has been insufficient to ensure that data of sufficient range and quality are collected and utilized in planning for development. User-pay approaches have not been able to raise sufficient revenue to fill the funding gap. Statistical offices also suffer from high turnover among staff, especially those with a high level of skill in computing or information technology. As a consequence of these two processes, statistical capacity frequently weakens during the intercensal period, and this can be particularly acute in those countries that conduct a census on a decennial basis. Civil conflict has also had an impact on census capacity in some countries, but even where political conditions are stable, census capacity has weakened and has had to be reconstructed prior to each census.

Lack of donor support also contributed to the decline in census quality in 2000. Very few Pacific countries received direct UNFPA assistance to conduct a census during the 2000 Round, although UNFPA CST advisers did provide technical assistance, and a number of countries made use of the “model questionnaire” that UNFPA produced jointly with the SPC. It was not the case that countries requested assistance that was denied; rather, they did not request assistance because they believed that none was available. To some extent this was a misperception based upon a belief that UNFPA

The 2010 Census Round in the Pacific Islands

COUNTRY	LAST CENSUS	POPULATION LAST CENSUS	NEXT CENSUS	EXPECTED CENSUS INTERVAL
Cook Islands	2001	18,027	2006 (Dec.)	5-years
Fiji	1996	775,077	2006 (April)	10-years
Kiribati	2000	84,494	2005 (Nov.)	5-years
Marshall Islands	1999	50,840	2009	10-years
Federated States of Micronesia	2000	107,008	2010	"
Nauru	2002	10,065	2012	"
Niue	2001	1,788	2006	5-years
Palau	2000	19,129	2010	10-years
Papua New Guinea	2000	5,190,786	2010	"
Samoa	2001	176,710	2006	5-years
Solomon Islands	1999	409,042	2009	10-years
Tokelau	2001	1,537	2006	5-years
Tonga	1996	97,784	2006	10-years
Tuvalu	2002	9,561	2012	"
Vanuatu	1999	186,678	2009	"

had shifted the focus of its work entirely to reproductive health. In some countries (Papua New Guinea and Solomon Islands, for example) the EU or AusAID provided both funding and technical assistance to ensure that a census was conducted.

Pacific Island Countries Conducting a Census in the 2010 Round

As shown in the table below, seven countries of the fifteen supported by UNFPA, are scheduled to conduct a population and housing census in 2005–2006. The combined population of these countries at the time of their last census was approximately 1.2 million persons, with Fiji making up more than two-thirds of this number. Fiji is the most self-sufficient in census-taking, but it is expected that technical and financial assistance will be required to improve the quality of the 2006 Census relative to 1996.

A detailed assessment of the needs of Pacific countries to support their 2010 Round of Censuses is currently being conducted by ESCAP. According to a preliminary assessment conducted by the Secretariat of

the Pacific Community, however, the primary needs are in cartography, census planning, operational design and management, and data processing. Some countries have indicated that their capacity to conduct a census must be completely re-established for the 2010 Round. In extreme cases, all staff with census experience left the statistics office after the previous census. In such cases, a major recruitment and training programme is required prior to the next census. In several countries, data processing equipment is either antiquated or in disrepair. A more detailed country-specific assessment will be available by mid-2005.

Conditions to be fulfilled to ensure a successful 2010 Round

The following conditions will need to be fulfilled if the 2010 Round in the Pacific is to be fully successful:

- Adequate financial resources available in a timely manner;
- Trained and/or experienced personnel; and

- Sufficient technical assistance available when needed.

To meet these conditions, a collaborative effort among all relevant agencies is essential. A regional mechanism for donor coordination should be established to ensure efficient communication and to avoid duplication of effort. The key agencies are SPC, UNFPA, UNESCAP, SIAP and ADB. With a regional mechanism in place, countries will be able to funnel requests through a single clearinghouse rather than sending multiple requests to several agencies for the same type of support. This approach has been endorsed by statisticians and planners from the Pacific at a recent regional meeting at SPC, Noumea.

Given the small scale of many Pacific Island countries, a regional approach to technical assistance is also likely to be more cost-effective than a country-by-country approach. As in the 2000 Round, a shared basic questionnaire with optional modules for special topics would reduce the costs associated with questionnaire design and pre-testing. Data processing training can also be organized on a regional or sub-regional basis. The preparation of a set of regional guidelines would also promote more standardization across countries and increase the comparability of results.

Advocacy is required both within countries and externally to donor agencies. Arguments for increased support for the census include the following:

- Population and housing censuses form the core of national statistical systems. No other data collection system can presently meet the needs for data to plan and monitor national development.
- Only the census can provide comparative small area data that are essential for regional or local planning.
- The census provides the sample frame for specialized surveys.
- In many countries, the census is the only reasonably reliable source of data to estimate demographic rates.
- The census may also be the only reliable source of data on education attainment or school enrolment.
- Only a population and housing census provides data to assess the quality of housing and related infrastructure across the entire country.
- Census data are indispensable for ensuring the equitable allocation of government resources and the distribution of services.
- Census costs should not be seen only in terms of the affect on the budget in a census year, but pro-rated across the entire intercensal period.
- The costs of a census should be compared with the costs of not doing a census (i.e., if the data are fully utilized, the benefits more than equal the cost of producing them).
- Census-based data are essential not only for the *measurement* of progress towards international development goals (MDGs, ICPD, Poverty reduction, etc.), but also for the *achievement* of them.
- Census data provide the denominator for most MDG indicators.
- Census data can contribute to “good governance” by providing a framework for universal (one vote per person) representation.
- Countries have included a strategy for data utilization/dissemination in their census planning at an early stage.
- Countries have established strong accounting controls for handling donor funds.
- Countries are able and willing to coordinate funding from multiple donors.
- Support for the census will contribute to institutional strengthening in general, i.e., go beyond the census.
- An investment in the census should be seen as an investment in long-term capacity-building.
- Countries are willing to consider ways of reducing census costs, including the sharing of expertise (South-South cooperation).

Conclusion

A harmonised, regional approach to census-taking is likely to contribute to the successful completion of the 2010 Round of Population and Housing Censuses in the Pacific. While regional coordination along the lines of

the CARICOM model is probably not yet feasible, a more coordinated and uniform approach that incorporates multi-donor and multi-year funding would be in the spirit of the “Pacific Plan” that is currently in preparation. This plan encourages Pacific countries to develop regional approaches across a wide range of activities and sectors, including shipping, airlines, trade, education and training, telecommunications and statistical development. The establishment of a *regional census project* would permit new census technologies to be developed and tested to the benefit of all countries. Such a project could provide a framework within which sustainable, consistent technical assistance could be provided. All donors and interested agencies are encouraged to work towards the creation of such a project.

Proyecto De Censo Comun Del Mercosur: Una Experiencia De Integracion Regional^{1, 2}

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Antecedentes

En el campo de la actividad estadística, a partir de 1992 comenzaron a celebrarse acuerdos de tareas conjuntas con el objetivo general de fortalecer e integrar los respectivos sistemas estadísticos nacionales para producir información homogénea.

Dentro del área de Población, surgió en 1997 el Proyecto de Censo Común de MERCOSUR, a partir de la convocatoria de Argentina que ya había iniciado su programa censal.

Desde esa fecha, la información censal, proveniente de la región asume una utilidad mucho más relevante y ofrece una perspectiva diferente de comparación, para encarar la negociación permanente que representan los procesos de integración económica y social.

Los acuerdos realizados por los Institutos de Estadística, otorgaron viabilidad al Proyecto de Censo Común y permitieron cumplir con la Primera Etapa. En el Acta firmada por los presidentes de los países miembros en Asunción, Paraguay, el 15 de junio de 1999, fue oficializado el acuerdo de levantar los respectivos censos en la Ronda 2000-2005.

Este Proyecto, desde el punto de vista financiero, contó con el apoyo de los Institutos de Estadística y en distintos momentos, del Fondo de Población de las Naciones Unidas (FNUAP), del Programa Naciones para el Desarrollo (PNUD), de la Agencia Japonesa de Cooperación (JICA), de la Organización Internacional para las Migraciones (OIM), entre otras instituciones. La II Etapa, 2002/2003, fue financiada con un subsidio del Fondo Regional del Banco Interamericano de Desarrollo (BID).

Proyecto del Censo Común

El propósito fundamental del Proyecto, es contar en la región con datos censales precisos y comparables sobre

las características de la población, sus hogares y viviendas.

En atención a ese objetivo, el programa de trabajo de la ronda de los Censos del 2000 incluyó en 1997, en una Primera Etapa, una propuesta de incorporación de contenidos comunes en las cédulas censales de los países miembros, referidos a variables estructurales de población y vivienda, que permitirán precisar el diagnóstico sobre la región y facilitarán la toma de decisiones de carácter económico-social. La experiencia de Uruguay con el Censo Nacional de 1996 sirvió de marco para introducir innovaciones de carácter tecnológico, en especial la utilización de captura de imágenes por medio de scanners y reconocimiento inteligente de caracteres (intelligent character recognition). Entre 2000 y 2001 se llevaron a cabo los Censos de Argentina, Bolivia y Brasil. En 2002 fueron a campo Chile y Paraguay.

La Segunda Etapa del Proyecto contó con el apoyo financiero del BID y concretó el desarrollo de productos censales tales como el diseño de la Base de Datos Común, avances en los aspectos metodológicos y acompañamiento de la experiencia censal de Chile y Paraguay en el 2002.

Entre los años 2003 y 2004 se trabajó a los efectos de concertar una Base de Datos Agregados y una Base de Microdatos Multidimensional, además de poner en línea la Página Web con sede en el Instituto Brasileiro de Geografia e Estatística (IBGE) de Brasil. Se está trabajando en la Evaluación de los Programas Censales a los efectos de formular recomendaciones, dar testimonio de las lecciones aprendidas y fijar nuevas metas y acuerdos para la próxima Ronda de 2010.

Resultados del Proyecto

Entre los principales resultados del Proyecto debemos citar:

¹ Documento presentado en el United Nations Symposium on Population and Housing Censuses, Setiembre 2004, New York.

² Los autores agradecen la colaboración de Magdalena Goes en la parte correspondiente a nomemcladores.

- Una particular y novedosa modalidad de organización
- Contenidos temáticos comunes: variables censales acordadas
- Nomencladores comunes para Ocupaciones y Actividades Económicas
- Pruebas Piloto Conjuntas
- Documentos metodológicos
- Cooperación Horizontal
- Tabulados Básicos Comunes
- Diseño de una Base de Datos Multidimensional Común
- Diseño de una base de Datos Agregados Común
- Diseño de la Página Web del Censo Común

Organización

La modalidad de organización de los Grupos de Trabajo ha sido quizás lo más innovador de este Proyecto. Se trata de una dinámica de trabajo en la que no existen liderazgos, sino que se ha estructurado a partir de la horizontalidad.

El acompañamiento de los distintos asuntos propuestos ha despertado un sentido de pertenencia a una región, que esta por encima de los intereses particulares de los países. Cada uno de los técnicos involucrados se siente parte de un todo donde prevalecen el espíritu de cooperación y el respeto mutuo.

Se ha conformado un “espacio de gestión” común donde los acuerdos se han logrado con gran fluidez. La cuestión de articular, de manera bastante razonable, las actividades dentro de las Instituciones de Estadística ha sido quizás uno de los problemas registrados, ya que resultaron extras a las habituales. A pesar de ello, existió una simpatía particular, algo afectuoso que hizo sentir a los involucrados que **se debía** cumplir con esos trabajos.

De allí que el desarrollo y la continuidad del Proyecto hasta el momento, haya dependido más de la voluntad de los miembros de los grupos permanentes que de una decisión institucional de las autoridades, quienes siempre han apoyado la actividad conjunta y otorgado el respaldo institucional en reiteradas oportunidades.

Para concretar los acuerdos y llevarlos a la práctica,

se conformaron Grupos de Trabajo: el Grupo de Trabajo Conceptual y Temático; Nomencladores; Capacitación; Informática; Difusión y a partir de 2000, el de Planificación, Supervisión y Control, que funciona como Coordinador de las actividades.

Este último Grupo, ha sido el que le ha otorgado continuidad y permanencia a las actividades programadas y a las acciones de sostén del Proyecto actuando como nexo entre los distintos actores tanto técnicos como institucionales.

Contenidos Temáticos Comunes

Estos aspectos temáticos acordados en Santa Cruz de la Sierra (1998) y Talleres sucesivos son los siguientes:

1. Vivienda: Dado que existen algunas diferencias en el relevamiento de esta variable, se realizaron comparaciones entre los países, con las salvedades correspondientes.
2. Tipo de vivienda particular: se construyó una tipología de viviendas a partir de la clasificación de la calidad de los materiales de construcción y otras variables relacionadas.
3. Condición de ocupación de la vivienda: se aplicaron definiciones de vivienda habitada y deshabitada.
4. Material predominante en paredes, pisos y techos: a pesar que continúa la discusión acerca de estos, Argentina elaboró una tipología que fue puesta a consideración de los países en el Taller de Santiago.
5. Servicios: se aplicó “procedencia del agua para beber y cocinar” y “sistema de abastecimiento de agua para beber y cocinar.” Se consideró la importancia de la procedencia del agua para el saneamiento ambiental.
6. Hogar y familia: se trabajó la producción de tabulados que permitieron compatibilizar los conceptos de hogar (Argentina, Bolivia, Chile, Paraguay, Uruguay) con el de familia (Brasil).
7. Condiciones habitacionales del hogar: se indagó sobre “disponibilidad y uso de servicio sanitario” y “número de cuartos utilizados para dormir.” En 2002, se realizaron ejercicios sobre Indicadores de Situación Habitacional.
8. Población: Edad, Sexo y Relación de parentesco fueron características sin dificultades de comparabi-

lidad, aun con las ligeras diferencias entre países.

9. Migración: se aplicó “residencia habitual,” “residencia habitual hace 5 años,” “lugar de nacimiento”, y “año de llegada al país” (para extranjeros) y, fue discutida la conveniencia de incorporar la migración “pendular” por razones de trabajo en la agenda de discusiones de la próxima ronda de Censos.
10. Educación: se aplicó “asistencia escolar,” “nivel de instrucción y grado o año aprobado,” para los que asistían y asistieron a establecimientos educativos. Se construyeron tablas a partir de una variable según años de escolaridad.
11. Actividad económica: se aplicó “condición de actividad,” “ocupación,” “rama de actividad” y “categoría ocupacional.”

En junio de 2002 se realizó una serie de acuerdos complementares con respecto a los indicadores y tabulados comunes a ser construidos.

Definición de nomenclatura común para actividades económicas y convergencia de las clasificaciones nacionales de ocupaciones

La comparabilidad de la información de actividades económicas y ocupaciones—fundamentales para los estudios del mercado de trabajo—fue asegurada a partir de los compromisos asumidos con relación a las respectivas clasificaciones.

En las economías de la Región, con elevada participación de trabajadores autónomos (independientes) y fuerte presencia de economía informal, la información sobre el volumen de población ocupada y la respectiva actividad económica, posición en la ocupación e ingresos relevados en los Censos Demográficos o de Población, es de fundamental importancia en la caracterización de la fuerza de trabajo. La comparabilidad de esta información entre los países gana más importancia por tratarse de países que comparten mercados.

El Proyecto propició el contacto, por primera vez, entre los “nomencladoristas” de los países de la Región y el intercambio de experiencias nacionales con diferentes grados de avance. Se reforzó así la percepción del papel fundamental de las clasificaciones como infraestructura del sistema estadístico, lo que dio origen, a partir de entonces, de la definición de equipos de clasificaciones y al desarrollo de clasificaciones nacionales de actividades económicas y de ocupaciones, en los países que todavía no contaban con estos instrumentos.

Se constató que la estructura de la Clasificación Internacional Industrial Uniforme (CIIU) Rev. 3 no era

adecuada para pesquisas como el Censo que colecta informaciones por medio de entrevistas en las viviendas y hogares. El nivel más desagregado es excesivo para las descripciones dadas por los entrevistados. El nivel siguiente presenta una agregación excesiva para lo que es importante captar en una investigación de hogares (censos y encuestas de viviendas y hogares), ora un exceso de detalle. Se optó, entonces, por un detalle propio para encuestas de hogares reagrupando o abriendo grupos/clases de la Clasificación Internacional. A esta estructura se la denominó Clasificación de Actividades Económicas para Encuestas Sociodemográficas del MERCOSUR—CAES-MERCOSUR y está compuesta de tres niveles: en los dos primeros es idéntica a la CIIU, y en el tercer nivel define 123 clases que corresponden a clases o grupos de categorías de la CIIU, con lo que se mantiene la comparabilidad internacional y con otras fuentes nacionales.

Con relación a la clasificación de ocupaciones, dificultó el hecho de que los países de la Región trabajaran con clasificaciones con estructuras diferenciadas. Bolivia, Chile, Paraguay y Uruguay trabajaban con estructuras referenciadas o próximas a la Clasificación Internacional Uniforme de Ocupaciones (CIUO). Argentina desarrolló una clasificación de ocupaciones propia y en el caso de Brasil, la clasificación nacional si bien derivada de la CIUO, no guarda correspondencia perfecta con cualquiera de sus niveles jerárquicos. En estas condiciones se optó por la definición de 26 categorías/agregaciones derivadas de los dos dígitos de la CIUO, acordándose compromisos de convergencia de las clasificaciones nacionales a estas categorías, garantizándose, así, la comparabilidad de la información sobre ocupación.

Pruebas Piloto Conjuntas

Las pruebas piloto conjuntas realizadas en 1998 y 1999 permitieron recoger experiencias prácticas en las zonas de frontera (áreas con rasgos geográficos parecidos) y compartir múltiples tareas de capacitación, procesamiento y análisis de la información.

La selección de lugares de frontera procuró facilitar el intercambio de observadores y sensibilizar a la población participante en los operativos.

La difusión de las actividades en medios locales produjo un efecto inmediato sobre los medios de comunicación masivos hasta llegar a niveles nacionales.

Las áreas de frontera seleccionadas como escenario para las Pruebas Piloto Conjuntas fueron: Puerto Iguazú - Foz do Iguazú (entre Argentina y Brasil), Corumbá—Puerto Quijarro (entre Brasil y Bolivia) y Clorinda—Asunción (entre Argentina y Paraguay).

Los objetivos generales de estas pruebas, fueron:

- probar los contenidos comunes de las cédulas censales;
- evaluar la efectividad de las metodologías de capacitación desarrolladas por cada país; y
- probar estrategias de implementación acordadas: efectividad de la capacitación a censistas en aspectos que permitan mejorar la captación de la información, en especial, de la actividad económica y la ocupación a efectos de probar nomencladores comunes. (CAES—MERCOSUR y Nomenclador de Ocupación).

A su vez los países participantes tenían objetivos específicos. En el caso de Bolivia, se trataba de su primera prueba piloto con vistas al Censo 2000, mientras que Argentina y Brasil ya venían realizando pruebas desde 1996 y 1997 respectivamente. Eso marcaba diferencias y semejanzas en el diseño del operativo.

Todos los levantamientos implementados en el marco de estas pruebas se caracterizaron por ser de tipo integral, probando por tanto metodologías de organización, de capacitación, de logística, etc. También probaron aspectos conceptuales o temáticos y partieron de un diseño específico de la cédula censal con vistas a una diagramación definitiva que facilita su procesamiento.

Cada una de las Pruebas tenía sus propios objetivos específicos. Se intercambiaron observadores y se programó una Difusión Conjunta.

Todo el esquema publicitario estuvo orientado a destacar los aspectos vinculados a la Prueba Conjunta. Se organizaron entrevistas con los medios de comunicación radiales y televisivos para dar a conocer a la ciudadanía los pormenores del levantamiento.

Documentos Metodológicos

En el transcurso del Proyecto se intercambiaron numerosos documentos correspondientes a los programas censales de los países. Asimismo, fueron elaborados documentos específicos entre los que se destacan los referidos a las temáticas de Educación (Paraguay), Vivienda y Situación Habitacional (Argentina), Localidades (Argentina, Bolivia), Población Urbana y Rural (Argentina, Paraguay); Tabulados Básicos (Argentina, Bolivia, Uruguay), Indicadores (Brasil), Lectora de Caracteres (Bolivia); Captura de la Información Censal (Argentina, Brasil); Vulnerabilidad (Argentina), Base de Datos Común (Brasil), Cartografía y SIG (Chile) y Difusión de Información Censal (Uruguay).

Cooperación Horizontal

Otra de las características más sobresalientes del Proyecto, fue la Cooperación Horizontal entre los Institutos a través de la cual se compartieron experiencias y avances tecnológicos con un espíritu de colaboración y una gran apertura. De este modo, se realizaron acciones concretas como préstamo de scanners (Brasil) a Bolivia; el apoyo a Paraguay en la capacitación (Argentina) colaboración entre Argentina, Bolivia, Brasil, Paraguay en la codificación asistida, impresión de formularios (Brasil), apoyo entre los países en las experiencias con la captura de imágenes (Argentina, Bolivia, Brasil, Chile, Uruguay). Los otros países acompañaron la experiencia del Censo Indígena de Paraguay, y los operativos censales de Argentina, Bolivia, Brasil, Chile y Paraguay sucesivamente, efectuados entre 2000 y 2002.

Base de Datos Multidimensional, Base de Datos Agregados Común y Tabulados Básicos

La propuesta de Brasil para las dos Bases de datos, formó parte de un documento metodológico que fue evolucionando con los agregados de los países. Las bases están siendo montadas actualmente.

En el Taller de Chile realizado en 2002, se acordaron 14 tablas Básicas de Población, Hogares y Viviendas, como también un conjunto de indicadores comunes.

Página Web

El diseño de la Página Web, propuesto por Brasil, se halla en pleno desarrollo y su enriquecimiento por parte de los países se puede verificar “on line” en (www.Censomercosul.org)

Actividades en Desarrollo

1. Base de Datos Agregada
2. Base de Multidimensional de Microdatos
3. Página Web
4. Evaluación conjunta de los Censos de MERCOSUR de la Ronda de los 2000
5. Trabajos Especiales

Tareas Futuras

1. Recomendaciones surgidas de la Evaluación de los Censos Ronda 2000 para la próxima Ronda Censal.

2. Discusión Conjunta de las metodologías de los Censos del 2010.
3. Indicadores comparativos de los datos censales acerca de las características socioeconómicas de la Población.
4. Temas Emergentes.
5. Metodologías Comunes.
6. Comentarios Finales.

Esta experiencia, surgida de la voluntad política de los Institutos y del interés manifiesto de los técnicos en la creencia de sumar debilidades para construir fortalezas, se está tornando en paradigma de un estilo de trabajo eficiente y participativo, sin liderazgos específicos, para el que esperamos lograr continuidad.

Advocacy for Improved Utilization of Population and Housing Census Results

GRIFFITH FEENEY

International Union for the Scientific Study of Population (IUSSP)

UNFPA Deputy Executive Director Kunio Waki said in his introductory remarks that

“ ... to speak quite frankly, counting the population (enumeration) and not analyzing and using the data for policy planning at both national and sub-national levels is a waste of resources. Unfortunately that was the case of many countries during the 1990 and 2000 Rounds.”

Persuading donors that census information will be better used in the future than it has been in the past will be an important element of advocacy for support of the 2010 Round of Population and Housing Censuses.

Proposal 1: Produce a Census Utilization Advocacy Publication

Produce a detailed and attractive publication describing the many and diverse uses of population and housing census information. The document would be aimed at a very broad audience including international donors, national governments, international organizations, research and educational institutions, national statistical offices, census offices and all potential users of census information.

No existing publication adequately serves this purpose. Technological and social change have created myriad of new opportunities for utilizing census information. Conventional wisdom and practice have not kept pace. There is a huge potential for increasing the utilization of census information. Developing this potential will provide a powerful argument for stronger support for population and housing censuses.

The publication would consist of four parts:

- A brief overview of what population and housing censuses are. This information is well known to the community of persons familiar with population censuses. This overview would be a lively presentation to draw in readers outside this community.

- Examples illustrating the full range of uses of census information, with headings to capture the attention of interested readers. A wide diversity of examples will ensure that every reader finds several that they would strongly support. Each example would indicate briefly what information was used, by whom, for what purpose, with what benefit. Examples would ideally describe actual experiences rather than generic, hypothetical uses.
- Outline of an action programme to improve utilization of information from the 2000 and 2010 Rounds, including advocacy at all levels, regional meetings to train participants and share country experience, and national training activities to develop the producer-user dialogue necessary to improved utilization.
- A brief conclusion summarizing and urging support for population and housing censuses.

The style of presentation used in manuals and handbooks, aimed at census-takers and other technical audiences, would obviously be inappropriate for this purpose.

Proposal 2: Action Program for Improving Utilization of Census Information

Regional workshops on utilization of population and housing census information would aim to accomplish the following objectives:

- Communicate the message that donors will be reluctant to fund population and housing census projects without demonstrated commitment by census and statistics offices to improving the utilization of census information from the 2000 and 2010 Rounds.
- Produce documented examples of utilization of cen-

sus information from the 2000 Round by a wide variety of users in a wide variety of settings, examples that can be shared with data users and producers throughout the region and the world.

- Produce documented examples of the diversity of statistical products and services based on 2000 Round census information, a diversity made possible by developments in information and communication technology.
- Get concerned international and regional organizations “on the same page” with respect to the nature and importance of better utilization of census information.
- Communicate to census and statistical offices about the necessity of working proactively to improve utilization, by creating a continuing dialogue with potential users. Illustrate the issues that arise by involving users as well as producers in the meetings and illustrating the kind of dialogue that is required.
- Initiate training in the knowledge and skills necessary to successful producer-user dialogue, developing and maintaining user contact databases, organizing productive meetings, and developing new statistical products, training that can be pursued further at national and sub-national workshops.
- Share lessons learned with data producers and data users throughout the world by means of report(s) published in conventional printed form and/or in one or more electronic formats on the World Wide Web.

Regional workshops would involve some or all of the following kinds of participants. Given the constraints on the number of participants, invitations will necessarily be highly selective.

- Staff of census and statistical offices in countries in the region who are or will be responsible for implementing activities to improve utilization of information from the 2000 and the 2010 Rounds (selected countries in the region).
- Line ministry staff whose responsibilities include the use of census information. This potentially includes staff from the ministries of defence, disability, education, environment, finance, health, housing, interior, labour, planning, transportation, urban affairs and veterans’ affairs. Staff of other government offices at the

national or sub-national level who use census information.

- Staff of UN organizations who work with national counterparts in countries in the region who use census information, including UNSD, the regional commissions (ECA, ESCAP, etc.), programmes and funds (UNDP, UNEP, UNFPA, UN-Habitat, UNHCR, UNICEF and UNIFEM), and specialized agencies (FAO, ILO, UNESCO, WHO and the World Bank).
- Staff of international non-governmental organizations who work with national counterparts in countries in the region who use census information. Staff of national non-governmental and civil society organizations who use census information.
- Staff of national or international businesses who use or are interested in using census information.

Preparation for regional workshops would involve the following kinds of work:

- Identification of potential participants, focusing on those most able to contribute to the objectives of the workshop, and with the understanding that participants from a wide diversity of sectors will enrich the range of knowledge and experience in using census information.
- Identification of potential venues, collaborating institutions and sponsorship for the workshop.
- Preparation of background materials and requests for contributions to be provided to workshop participants in advance of the workshop. Participants would be expected to contribute examples of use of census data, preferably in advance of the workshop.
- Preparation of training materials and planning of training components of the workshop. The most important training components are likely to: address the knowledge and skills needed to create a continuing, fruitful producer-user dialogue; analyze and segment users and uses of census information; and develop new statistical products and services to best meet user needs.
- To realize the greatest possible value from the regional workshops, it will be desirable to post full information on them, including preparatory documents, most or all participant contributions, and the final

report of lessons learned, on a World Wide Website accessible to producers and users of census information throughout the world.

Regional workshops would be followed by national workshops in selected countries. The aims, participants and preparations for the national workshops would be broadly similar to those for the regional workshops, but with focus restricted to utilization in the country in which the workshop is held. National workshops might have somewhat larger numbers of participants and should include participants from states/provinces, major cities and local areas, as well as participants from the national capital.

National workshops might be followed in some countries by province/state, city and local workshops in different locations around the country. These workshops would be a joint effort of the census or statistical office and the local government. International participation would be minimal, though some international participation might be useful for sharing lessons learned with other countries.

Improving Utilization of Census Information

Utilization of population and housing census information occurs when a user receives a statistical product or service, derives information from it, acts on the information and provides some benefit to society as a result. Utilization thus involves four elements:

- **Users**—Who are they? What positions do they occupy, in what organizations? What is their contact information?
- **Products**—What is the product? From the point of view of the publications department of the statistical office, a published volume may be a product. From the point of view of the user, a particular table in this volume may be the product. It is important to know what *users* think is the product. This will vary from user to user.
- **Uses**—Which user? Which product? What information is the user deriving? By what means? What action is being taken as a result?
- **Value**—How is society benefiting? What are the metrics? Number of persons vaccinated? Estimated number of lives saved?

Improving the utilization of census information means:

- increasing the number of uses—by increasing the number of users and/or the number of products and services;
- decreasing the cost of use—by providing more “user friendly” products and/or by educating the users to be more productive; and by
- increasing the benefits of use.

Methods for increasing the benefits of use must be considered on a case-by-case basis, with the first task being the identification of appropriate metrics to measure benefit. Statistical products and services may not be amenable to standard cost-benefit analysis, but some judgment about the value of products and services is necessary for the sensible allocation of resources to and within statistical offices.

Importance of ICT Developments

Developments in information and communication technology (ICT) over the past decade, have created a demand for many new statistical products and services that could not have been imagined even ten years ago. Traditional printed publications are not obsolete, and will likely be with us for decades, but it is increasingly essential that they be complemented by electronic formats.

- Given the capacity of computer media, the volume of information provided to users may be increased by many orders of magnitude. Statistical products that would have been unimaginable in the days of print-only publication, can now be commonplace.
- The low cost of computer media and Internet distribution makes it possible to serve small, specialized groups of users for whom traditional publications would not be cost-effective.
- The development of “spreadsheet” programmes has created a market for an entirely new product, computer tabulations in the form of spreadsheet files. The value realized by the user who does not have to “re-enter” the contents of printed publications, is enormous. The cost to the producer is negligible.
- The development of statistical analysis packages has created a market for public use samples of census data provided as computer files in popular formats. Sample data can be “anonymized” to protect confi-

dentiality, while greatly extending the range of analyses users can carry out.

- The development of a relatively low-cost and easy-to-use geographic information system (GIS) software allows census data to be combined with other geo-referenced information and aggregated over non-traditional geographic areas, e.g., low lying coastal areas, proximity to major cities or transportation routes, desertification areas and so on.
- The development, and increasing availability and cost-effectiveness of the Internet, allows users to obtain census tabulations “on the fly” over the World Wide Web. See, for example, <http://www.cepal.cl/celade/>, follow the “Censos de 2000” link, and choose a country, e.g., Costa Rica. The user can specify any two-way tabulation and have it returned in a few minutes. The operation requires no more than basic computer literacy. Given that statistical offices will increasingly implement such a facility for their own internal use, and that almost every statistical office has a website, the marginal cost of providing this statistical tabulation service will often be close to zero.

The distinction between data collection *instruments* (censuses, surveys, registers) and information *products and services* derived from these sources, is important. Users use the products and services, not the instruments, and should be encouraged to think in these terms. In an ideal world, users would be concerned only with products, not with instruments. In the real world, users may be concerned with instruments as well as products, because assessing the quality of products often requires understanding the process by which they are created.

Data producers need to know the computer capabilities of their users. When printed census volumes were the main means of dissemination, the only question was what languages should be accommodated. Electronic products raise far more complicated issues of what computer hardware users have, what software applications they know how to use, and how they are connected (if they are connected) to the Internet.

It is important to remember how rapidly ICT has developed and spread throughout the world over the past decade. Planning for census utilization needs to take into account the likelihood that this rapid change will continue over the coming decade.

Developing Dialogues with Users

Data producers need to take proactive responsibility for utilization by initiating systematic, continuing dialogues with users. They need to analyze and segment their user markets according to their user’s ICT capabilities as well as their user’s need for information. Data producers need product development units to identify and prioritize possible new products. They need to promote higher levels of utilization, because this is the only rationale for the higher levels of support (budget and personnel allocations) that census and statistics offices will require to carry out the 2010 Round Population and Housing Censuses.

Data producers need to develop a contact information database for users in each organization in each market segment. Given the diversity of uses of census information, it is likely that this will include at least several hundred contacts. This contact information database will be used for traditional mailings, electronic mailings, notices of meetings, etc.

Data producers need to learn how to conduct effective meetings with users. They need to develop guidelines and protocols for planning, executing and following-up on user meetings. Preparation for a meeting should include a written plan indicating:

- the objectives of the meeting;
- the market segment(s) aimed at;
- what users in the contact database will be invited;
- how the meeting will be publicized;
- what advance information will be provided;
- what presentations will be made to the participants;
- what information will be solicited from users; and
- what follow-up will be carried out.

Every user meeting should aim at the following three general objectives, as well as at more specific objectives:

- Educate users about how the statistical office can serve their needs and what information the statistical office needs about users to be able to do so most effectively. This reduces the risk that participants will make suggestions or requests that the statistics office cannot follow or meet.

- Obtain information about participants' needs and situations that will enable the statistical office to serve them most effectively. The focus should be on information needs rather than on data collection instruments, and on the details of their ICT situation necessary to know what products and services will be useful to them.
- Obtain a list of potential users, uses, and products and services. Participants in every meeting should always be asked for suggestions, verbally and in written form.
- follow-up actions to be taken, internally and in response to user requests or expressions of interest.

Written reports are essential for institutional memory and for improving the ability of the statistical office to conduct user meetings in the future.

Every meeting should be followed up with a written report providing:

- matter-of-record information, preparations, invitations, publicity materials, advance information provided, presentations made, etc.;
- an account of lessons learned, in sufficient detail, to be useful for developing new products and services; and

Summary and Conclusion

Utilization of information from the 2000 Round of Population and Housing Censuses fell short of what it might have been. A promise of improved utilization will help persuade international donors and national governments to supply the substantial resources required to carry out a population and housing census. Rapid developments in information and communication technology over the past decade provide more opportunity than ever before for making use of population and housing census information. The development will continue and the opportunity will increase over the coming decade, but data producers and users alike, need to adapt to the new conditions to realize the opportunity. The international community can play an important role in encouraging this adaptation.

Census Data Demand And Use In Nigeria: Lessons In Census Advocacy For The 2010 Round Of Population Censuses

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Introduction

Many countries did not participate in the 2000 Round of Population and Housing Censuses and defaulted on the ten-year periodicity of censuses. A persistent problem, in this regard, is the lack of national commitment to undertake population censuses because the value of censuses for development planning and policy decision-making is not recognized. Hence, as we prepare to implement the 2010 Round of Population and Housing Censuses in developing countries, there is a need to take stock of what facilitated and what impeded the implementation of population censuses in the past, and what lessons can be learned from such experiences. Drawing on the experiences from Nigeria, and using the framework of Data Demand and Utilization (DDU) (MEASURE Evaluation, 2003), we examine how generating effective demand for census data and utilization of census data for policy formulation and programme decision-making, facilitated advocacy for Nigeria's 2005 Population and Housing Census.

Historical Background

Nigeria has had several population censuses (about 12) in its post-colonial history, yet there was an acute dearth of current demographic data in the country. This situation arose from a protracted history of controversial census results and limited demographic sample surveys. Nigeria had its first population census in 1866. Censuses conducted in 1871 and 1896 were restricted to Lagos Island and part of the mainland. The Censuses of 1911 and 1921 added some urban towns in the then colony. In 1931, the procedure for the conduct of the census in the Southern Protectorate was different from that of the northern part of the country. The tax riot and the locust invasion in 1931 affected enumeration. There was no attempt to conduct a census in 1941 because of the Second World War. The 1952/53-Population Census was the first elaborate and near-scientific census conducted in Nigeria. However, it lacked simultaneity and

it likely, under-enumerated the population of Nigeria.

The first post-independence census was carried out in 1962. Provisional figures of the 1962 Census showed that the southern states had more people than the northern states. The 1962 Census was regarded as a critical input of the 1964 Federal elections. State Governments of the then three states (Northern Nigeria, Eastern Nigeria, and Western Nigeria) dominated by ethnic based parties "handled the publicity of the census as if it were as political party campaign for elections" (Udo, 2000:8). Religious leaders publicized the importance of that census. The realization of the meaning of population size led to situations where some enumerators were found to have made false entries in their census forms. Census migration from cities to hometowns and villages assumed greater importance and occurred in large numbers. Disputes caused by various irregularities led to the cancellation of the 1962 Census by the Federal Government.

Another attempt at census enumeration was made in 1963, to provide the Federal Government with population data for the delineation of electoral constituencies for the 1964 general elections. Despite the fact that several precautionary measures were taken for the 1963 Census, the measures were ineffective in checking large-scale census fraud (Udo, 2000). Nevertheless, the disputed 1963 Census figures were officially accepted. The 1964 results of the elections confirmed the political significance of the 1963 Census, as the importance of population size in the political control of the country took on more weight. Additionally, the revenue allocation to the states, which was based on population size, took on increased importance during the oil boom. This served as an incentive to inflate population figures. The 1973 Population Census results never saw the light of day, as they were declared "unacceptable."

In 1986, the Government released a plan to conduct a population census in 1991. History certainly played a major role in guiding the preparation and execution of the census in 1991. Under the third UNFPA Country

Programme (CP) of Assistance, the census project focused on strengthening the capacity of the National Population Commission (NPC) of Nigeria and on completing all preparatory activities for the census. These activities were demarcation of enumeration areas; updating of the data processing system; and strengthening of census cartographic capability. The 1991 Population Census was reasonably comprehensive in content and national in coverage. It is considered the most successful census conducted in the history of Nigerian censuses. It clearly reversed the fate of census-taking in Nigeria, and “*laid a solid foundation for primary data collection, collation and analysis in the country*” (General Abacha, Yola, October 1997). Provisional results of the 1991 Census were announced on March 19, 1992. The final tabulations of the census data were accepted by the President of Nigeria in February 1997.

However, even though the census provided critical demographic and socio-economic data for design, implementation and evaluation of development programmes, the data were not fully analyzed, and hence inaccessible to data users. The government and data users questioned the utility of undertaking another population census, given the large expense involved and its politically volatile nature. Nevertheless, the Commission started preparations for the next census in 2001. However, on February 15, 2000, the seven-member Board of the NPC was dissolved, and the Director-General took over the administration of the Commission, leading to rumours that there would be no census. On October 30, 2001, the Government appointed a new thirty-eight member Board of the Commission, with Chief S. D. Makama as the Chairman. The challenge was to convince the Government to embark on this expensive exercise. It is within this context that the Data Demand and Use (DDU) framework is examined.

Data Demand and Use (DDU) Framework

Data Demand and Use (DDU) is an innovative framework for generating effective demand for quality health and population data and for facilitating the use of knowledge, methods and data for decision-making. It was first developed by MEASURE Evaluation, and is now being used by its partners in technical and development assistance in population, health and nutrition (MEASURE Evaluation, 2003). The DDU framework asserts that “sustainable demand for high quality health information is most likely to result from a strategy that

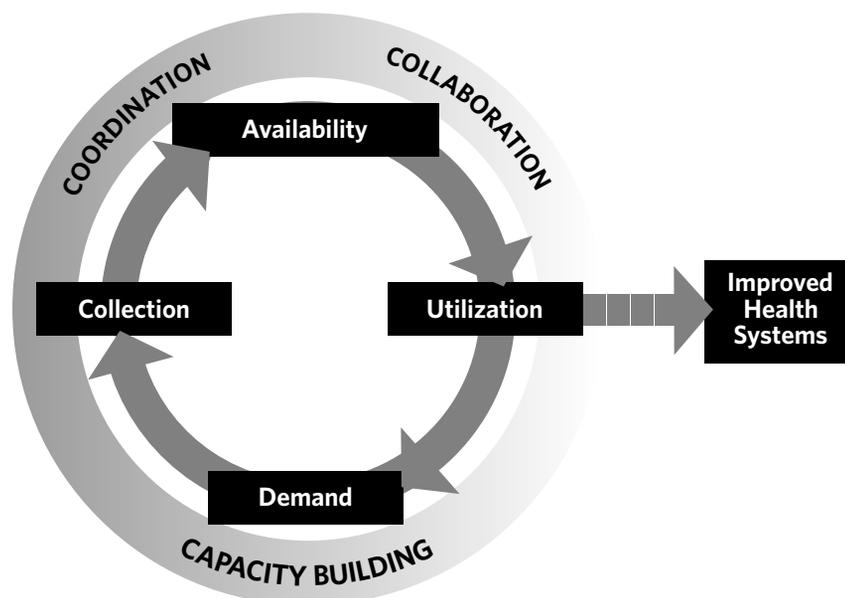
simultaneously focuses on three fronts: improving technical quality of data and data tools, building individual capacity for understanding and using data, and strengthening organizational capacity and the organizational context to support data collection and use” (MEASURE Evaluation, 2003). The DDU framework is seen as a continuum of data demand, generation and use activities, to ensure that data users demand quality data and data producers understand users’ priorities and information needs. This continuum is cyclical, reflecting an ongoing, iterative process, and pursued with an appreciation of the importance of understanding the political, cultural and social contexts of decision-making. The DDU was originally applied to the utilization of health and population data. In this paper, it is being extended to examine how building the capacity of the National Population Commission in the analysis of population census and health data facilitated utilization of census information for policy decision-making and for advocacy for the next population and housing census.

The Demographic and Health Data Collection and Analysis Project was a part of the Population and Development Strategies (PDS) sub-programme under the UNFPA Fourth Country Programme. The project was expected to lead to the delivery of four main outputs, which would contribute to the attainment of the purposes and goals of the National Population and Development Strategy Sub-programme: **1) Increased availability of reliable, accurate and current demographic, socio-economic and health data; 2) Strengthened capacity of the NPC to publish and disseminate population data; 3) Improved measurement of impact indicators through a Sentinel Survey for monitoring and evaluation of the National Population Programme (NPP); and 4) Strengthened capacity of the NPC to conduct the next Population and Housing Census and a Post-Enumeration Survey (PES.)** An International Chief Technical Adviser (CTA) was recruited to provide the NPC with technical backstopping on a continuous basis to achieve these outputs as well as to monitor, evaluate and coordinate other activities of the Commission.

Capacity-Building for Census Data Analysis

One of the major objectives of the project was the development and improvement of national expertise and skill. This was the underlying factor in the Chief Technical Adviser’s request that the Commission establish a team of national professionals to work with him on the further analysis of population census and health

FIGURE 1: DATA DEMAND AND UTILIZATION (DDU) FRAMEWORK (MEASURE EVALUATION, 2003)



data. Rather than working with just one counterpart as the usual practice, the CTA recognized the importance of training a cadre of highly competent staff so as to build the Nation’s capacity to implement present and future population and health programmes. The rationale was also to develop the spirit of collective responsibility in team members while allowing the demonstration of individual skills and initiative, with the CTA providing guidance and sharing expertise. The team that was constituted, worked diligently and assiduously with the active supervision and training of the CTA to analyze the census data. The results of this strategy were impressive. In addition to each member acquiring new skills in their subject matter areas, the members of the team gained tremendous experience in other areas, mainly through on-the-job training and formal in-house training workshops. The Commission was impressed by the readiness of the team members to handle difficult tasks on short notice, and by the diligence and dedication that they demonstrated in all spheres of activity. Under the leadership of the CTA, they surmounted constraints and presented a number of valuable achievements to the Commission.

The CTA also designed programmes to train staff of the National Population Commission through fellowships, workshops and study tours to strengthen their capacity to conduct the 2005 Population and Housing Census and PES, and to undertake other surveys. The CTA also insisted on and ensured that all staff members who were trained, also imparted their knowledge and skills to other NPC staff. This made it possible for sev-

eral staff members of the Commission to benefit from such training.

Capacity building in data analysis resulted in the availability of reliable, accurate and current demographic, socio-economic and health data for evaluating the National Population Programme (NPP). Many policy relevant monographs were published. In addition, summary statistics at National, State and LGA levels were published in a variety of formats. Publications resulting from further analysis of the 1991 Population Census and PES were:

1. Nigeria Population Census 1991 Analysis. Volume 3. *The Elderly* (May 2004).
2. Nigeria Population Census 1991 Analysis. Volume 4. *Relevance of Census Data to Public and Business Administration* (March 2003).
3. Nigeria Population Census 1991 Analysis. Volume 5. *Data Needs for Sustainable Development in the 21st Century* (March, 2003).
4. Nigeria Population Census 1991 Analysis. Volume 6. *National and State Population Projections* (August 2002).
5. Nigeria Population Census 1991 Analysis. Volume 2. *Children, Adolescents and Youth* (May 2002).
6. Nigeria Population Census 1991 Analysis. Volume

1. *Gender and Sustainable Development* (May 2001).

7. 1991 Population Census of the Federal Republic of Nigeria: *Analytical Report at the National Level*. National Population Commission/United Nations (1998).

Policy Briefs, Wall Charts and Statistical Abstracts:

8. *Nigeria At A Glance* (June, 1998).

9. *Nigeria State and Local Government Area Demographic Profile: 1991–2010* (November 1999).

10. *Nigeria Population Data Sheet: 1991–2010* (November 1999).

Other Publications:

11. *Sentinel Survey of the National Population Programme, Baseline Report, 2000* (August 2002).

12. *Nigeria Census 2001 Strategy and Implementation Plan* (February 2000; 2002).

Strengthening National Capacity to Disseminate Population Census Information for Census Advocacy

Census advocacy: A very useful lesson from previous censuses of Nigeria that guided dissemination and advocacy strategies was the **interplay of politics, ethnic, religious and cultural diversity in a federal setting**. In Nigeria's Federal system of government, political power and allocation of federal resources have come to be directly proportional to population size. Census information and data are being used, therefore, to support policymaking across a broad range of sectors and to provide the basis for evidence-based dialogue. The volume on *National and State Population Projections*, for instance, was published at the request of the Federal Government for this purpose. The need for information has become even more pertinent within the context of international development initiatives such as the Programme of Action (POA) of the International Conference on Population and Development, the Poverty Reduction Strategy Papers (PRSPs), the

Millennium Development Goals (MDGs), the UN's Common Country Assessments (CCAs) and New Partnership for Africa's Development (NEPAD). Census data may be the most reliable means of monitoring many of these goals.

The Commission, therefore, argued that the cost of not having a reliable, accurate and timely population census is not only financial but also includes lost opportunities for children and the youth, women, the poor, the elderly, the disabled, migrants and the labour force, as well as the loss of a critical component of the **foundation for good governance, decentralization and development**.

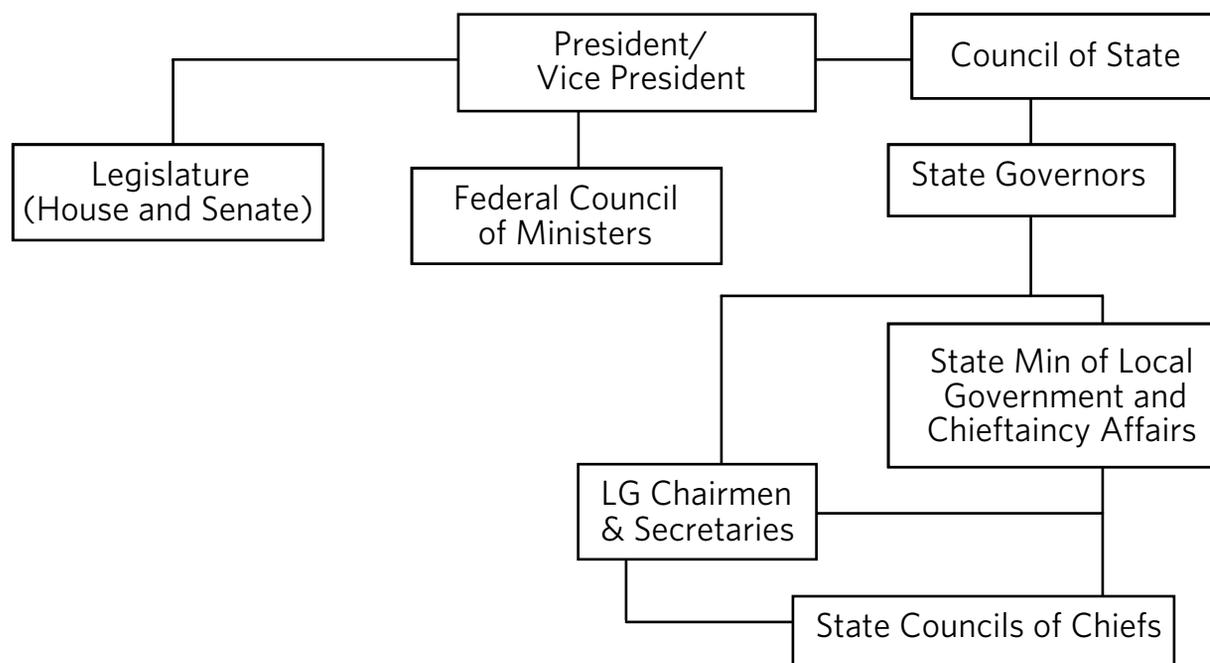
Hence, the Commission saw dissemination of these publications as a major **advocacy tool**, and initiated a well-targeted census advocacy campaign to increase awareness of and widespread support for the census at all levels. Creating policy-level dissemination strategies for effectively communicating with policymakers and the media were priorities (Figure 2). Efforts were made to develop pro-active dissemination and utilization strategies through print and mass media, press releases, radio/TV discussions, census data users' seminars and workshops, and to promote the extensive use of census information by tailoring dissemination to the different needs of users such as the Federal, state and LGA levels, bilateral and multilateral organizations, non-governmental organizations (NGOs) and commercial and private sectors.

An international conference on dissemination of the 1991 data, "*Data Needs for Sustainable Development in the 21st Century*," was held in Abuja in November 1998, where the background document was the Analytical Report. Two zonal seminars on **Demographics in Nigeria** were organized in Calabar and Kaduna in 1999, to evaluate the extent of use of the 1991 Population Census data in public and business administration, and to disseminate the products of the census.

In order to make dissemination more effective, key stakeholders and organizations were identified and provided with copies of the publications:

- Members of the Council of State;
- Ministers, Speakers and National Assembly members of the Population & Development Committee;
- State Governors;
- Chairmen of Local Governments;
- Former Members of the National Population Commission;

FIGURE 2: LEVELS AND LINKAGES OF POLITICAL LEADERS TARGETED FOR CENSUS ADVOCACY: A SCHEMATIC DIAGRAMME



Notes:

1. To reach the President and Vice President, the NPC Chairman and Commissioners elicited the participation of influential citizens to gain access and solicit their support.
2. The NPC's approach to the legislature proceeded on two tracks: (a) lobbying with the Senate President and House Speaker and leadership of both Houses, and (b) lobbying for the creation of Population Committees/caucuses in both Houses.
3. The NPC Chairman and Commissioners solicited the support of the President/Vice-President to appeal to the Council of State.
4. The State Governors, already briefed/sensitized at the Council of State, will be responsible for organizing briefing/mobilization of LC Chairmen and Secretaries as well as State Councils of Chiefs

- National and State libraries, including the Library of Congress;
- Libraries of Universities and Research Institutes;
- International Population Centres such as the U.S. Census Bureau (Main Office and IPC), Michigan, Brown, Pennsylvania, North Carolina, Johns Hopkins, Duke, Harvard, Rand Corporation, Cornell, Florida State, East-West Population Center and London School of Hygiene and Tropical Medicine;
- International organizations, such as UNFPA (CST, headquarters and Country Offices), UNDESA (Statistics Division and Population Division), USAID, UNDP, UNICEF, WHO, POLICY, DFID, CIDA, ILO, UNESCO, Population Council, Ford Foundation and Population Reference Bureau, etc.;
- Some population experts;
- Public office holders; and
- Private corporations.

Conclusion

The wide distribution of the monographs helped to sensitize Nigerians on the need for and importance of the population census. Planners, policymakers, stakeholders, census data users and the entire public became aware of the latest publications from the Commission. This not only created awareness for the next census, but also garnered support for it and, in that process, influenced the decision of policymakers (government) in responding positively to the request to undertake the next population and housing census. The support of the President was key in gaining the support of the major development partners.

REFERENCES

Udo, R. K. (2000): *Population Census in Nigeria: Depoliticization*. EbieAkwa Ventures Ltd., Lagos.

National Population Commission (1998): *1991 Population Census of the Federal Republic of Nigeria: Analytical Report at the National Level*. NPC, Abuja.

Ekanem, I. I. (1972): *The 1963 Nigerian Census: A Critical Appraisal*. Ethiope Publishing Company, Benin City.

Fosu, Gabriel B. (2002): **Issues and Challenges in Nigeria's 2004 Population and Housing Census**, A paper presented at the In-House Capacity Building Workshop on Population Censuses: New Directions and Cost Saving Strategies, 21–23 October 2002, Chauncey Conference Center, Princeton, New Jersey.

Background paper prepared for the UNFPA Advocacy and Resource Mobilization International Meeting towards the Successful Implementation of the 2010 Round of Population and Housing Censuses in Developing Countries, 24-25 February 2005, New York

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Overview

The International Programs Center (IPC) of the U.S. Census Bureau, was established in response to the need for technical assistance and workshops in developing countries focused on collecting, processing and analyzing statistical data. One particular area of assistance has been population and housing censuses. Over the past several decades, IPC has worked in more than 100 countries on designing, planning, and conducting statistical surveys and censuses that contribute to the economic and social development of countries. For over fifty years, IPC has assisted in the collection, processing and analysis of statistics all over the world, and promoted the dissemination and use of this information within participating countries and throughout the world. IPC strengthens statistical development of countries through technical assistance, training and software products. Since 1947, more than 13,000 participants have completed IPC workshops in either their own country or in Washington, D.C.

For the most part, IPC operates on a reimbursable basis, with only limited funds coming directly to the Census Bureau for international activities. For the past several decades, IPC's principal reimbursable sponsor has been the U.S. Agency for International Development (USAID). Currently, IPC's umbrella project with USAID is called **MEASURE Survey and Census Information, Leadership and Self-Sufficiency (SCILS)**. This project provides quality information, methods and tools for global health and population. The principle elements of SCILS include software and methodology development; technical support to USAID missions and government programmes in monitoring and evaluation; collection, analysis, and dissemination of demographic data; statistical capacity-building; and collaboration with other governments,

multinational agencies, and other USAID cooperating agencies, in support of census-taking and direct programme-oriented data collection, and in support of capacity-building. The ultimate goal is to improve the planning, collection, processing, understanding, and use of data by decision-makers, the international community and the population of each country with the purpose of affecting change.

Technical Assistance

IPC's technical assistance activities are conducted with common set of goals. These include:

- Increase availability of data to support policy formation, programme design, monitoring and evaluation
- Support data collection, processing, analysis, and dissemination and use
- Foster host-country capacity-building

Our operating principles support the provision of high-quality appropriate assistance in a coordinated fashion, maximizing the benefit to the host country:

- Host-country ownership of activities
- Identify and support counterparts
- Multi-donor assessments and support
- Project definition using most cost-effective strategy
- Flexibility

The countries within which IPC has worked in the past several years are indicated on the attached map.

Statistical Training

IPC offers courses that fill very specialized needs in statistical training. The workshops are product oriented and focus on the practical skills needed in a statistical office. IPC staff work with the participants to fully develop their abilities. They want to enhance the capabilities of statistical agencies, to increase the value of the statistical products and meet the training needs of the agencies.

This year the schedule for the 2005 Summer Workshops offered by IPC in Washington, D.C., start in July 2005. The courses are:

- 1) **Census Planning and Management Workshop**
11–22 July 2005 (2 weeks, USD \$2,000)
- 2) **Measuring Techniques and Methods Regarding Poverty**
25 July–5 August 2005 (2 weeks, USD \$2,000)
- 3) **Disseminating Official Statistics**
8–26 August 2005 (3 weeks, USD \$3,000)
- 4) **Statistical Methods for Measuring Economic Development and Growth**
29 August–16 September 2005 (3 weeks, USD \$3,000)
- 5) **Microcomputer Processing of Censuses and Surveys (CSPro)**
19 September–14 October 2005
(4 weeks, USD \$4,000)

Those interested in attending these workshops or in obtaining additional information on these and other statistical training workshops, are encouraged to access the U.S. Census Bureau's website on IPC training programs at:

< www.census.gov/ipc/www/cspro/train.htm >

Software and Methodology Development

A cornerstone of IPC's technical assistance to statistical offices over the past thirty years or more has been the provision of state-of-the-art computer software for the processing of census and survey data. We are very proud of our current product, the Census and Survey

Processing System (CSPro). CSPro was designed and has been implemented through a joint effort among the developers of predecessor software IMPS and ISSA, namely, IPC, Macro International, and Serpro S.A. Funding for the development of CSPro has been provided by USAID.

CSPro is a Windows-based package intended to allow the user to move from questionnaires through to final tabulation and analysis. It incorporates modules for:

- Data entry
- Data editing
- Data management
- Data documentation
- Tabulation
- Thematic mapping

CSPro is being used in more than 120 countries around the world. It is available in the public domain and can be downloaded free of charge from the Internet at www.census.gov/ipc/www/cspro/index.html

Recent Innovations

Trend Analysis. In recent years, the development of computers to easily handle large data sets and the development of user-friendly analytical software, opened new ways to look at census data across the years. The U.S. Census Bureau's International Programs Center (IPC) has worked with national statistical offices in five countries to make old data sets compatible with current data sets, evaluate the quality of the older data sets, and develop tabulation, analytical and dissemination plans that include trend analysis on various topics. The incorporation of historical, but comparable, data into current data releases, provides more than the usual static picture of the survey/census topics under investigation. It gives an analysis of the current status with historical trends. It also promotes nationally and internationally comparable and consistent variables, leading to better monitoring of indicators of interest over time. In many Sub-Saharan African countries, estimates' and projections' workshops were also held, which incorporate AIDS mortality, providing not only a picture of historical trends but leading to better accuracy in forecasting future trends.

The U.S. Census Bureau disseminates this knowledge

and experience through a compilation of tools, methods, guidelines and lessons learned in a trend analysis. These have been shared with a variety of national statistical organizations that are involved in data production and utilization. Our collaborative work has generated a culture of demand for trends analysis to use in decision-making based on a comprehensive review of available, comparable data instead of relying on snapshots in-time provided by current survey and census data alone. It is an extremely useful tool for a country to obtain a complete picture of their country's development.

Media Workshops. Another innovation that the U.S. Census Bureau developed is a workshop for the media on how to report statistics. National Statistical Offices (NSOs) experience unique problems due to the fact that the work they do often attracts national and sometimes international attention. The specific problem is that the data results that the NSO releases may be accurately stated but the radio, television and newspapers need to make an interesting story to tell the public. The result is that they restate what they think is an accurate reflection of the statistical results and actually misstate what they are trying to say. The U.S. Census Bureau has been called in to help by developing a workshop for the media to teach them how to report statistics accurately. Overwhelmingly, the response from the media has been favourable because they welcome training on handling a difficult part of their job. Also, it greatly assists NSOs because they can be assured their results are accurately reported and they do not have to respond to inquiries correcting a misinterpretation of their data results.

Discussion

The work of IPC is commissioned and funded by federal agencies, international organizations, private businesses and other governments. IPC has received funds for census work from a variety of programmes beyond population programmes, including Democracy and Governance, HIV/AIDS, Child Health and Survival, Economic Growth, etc. The benefits of a census accrue to virtually all aspects of development.

Examples of how censuses support other aspects of government and donor interest programmes include:

Democracy and Governance—A census is vital to a democracy. Only a census can ensure that legislative districts can be drawn so they are of equal population, guaranteeing that one citizen's vote is worth as much as another's.

Allocation of Resources—A census provides the population distribution across the country that allows

the national government to ensure every subnational area receives its fair share of money. These funds are used for a wide variety of public purposes.

Planning—Governments use census data to plan facilities and services, such as roads, schools, public transportation, playgrounds, child care centres, employment programmes, fire and rescue units, hospitals, clinics and housing programmes.

Economic Growth—Businesses need census numbers to be successful. They use them to determine where to market new products, locate new stores and build factories. And as businesses benefit, so too do workers and consumers: census statistics create jobs and make sure goods and services are delivered to areas where there is a demand for them. Census data help keep a free-market economy running smoothly.

Disaster Assistance—Computer-readable map databases can be combined with census data to allow governments to assess damage from natural disasters and guide relief efforts. The use of census data to target hurricane relief efforts in Mozambique is a perfect example of this.

Environment—A census also provides information vital to the assessment of environmental problems and planning of remedial programmes.

Women in Development—A census provides information on the number, location, marital status, age structure, education, employment, child-bearing history and mortality of women. This information is critical to determining the status of women and the identification of high-risk groups for policy formation and programme planning.

When a country is seeking funding support for census activities, support can be sought from many of these areas of government and donor interest.

Of course, censuses are also critical to population programmes. Censuses provide the comprehensive information on size, growth, composition, and geographic distribution of the national population necessary for sound policy formation, programme planning, monitoring and evaluation. They typically generate the data needed for estimation of fertility and child mortality at subnational levels, as required for effective programme monitoring.

Population censuses are excellent vehicles for institutionalization because they require the full range of data collection, processing, analysis, and dissemination skills, and are "fully owned" by the host country. Further, population censuses provide the sampling frame needed to design accurate intercensal household surveys and thus serve as the basis for a country's own ongoing survey activities.

IPC Worldwide Activities 2001-2004



Moreover, censuses can be an effective tool for creating awareness of population issues and fostering use of population data. For example, through a well organized and implemented census publicity campaign, focusing on the importance and use of information to illuminate population-related issues like migration, fertility, health, education, etc., the census can unite the population, improve the participation in the enumeration and increase awareness of population-related issues. The dissemination of data results is crucial to making the population, the governing bodies and donor organiza-

tions aware of existing problems and direct corrective action to improve the situation.

IPC is committed to supporting countries in their efforts to collect high-quality statistics. Our approach is one of providing appropriate assistance in a collegial manner to statistical offices and others involved in this effort. We stand ready to assist countries around the world as they embark on the next round of population and housing censuses. We will join with UNFPA, the UN Statistics Division and other international and bilateral organizations in this effort.