



Regional capacity building on analysis
and dissemination of national population
and housing census data
4 April – 29 April 2016
Kingston and Montego Bay, Jamaica

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**REPORT OF THE REGIONAL WORKSHOP ON THE USE OF
REDATAM FOR THE ONLINE DISSEMINATION OF CENSUS DATA
KINGSTON, JAMAICA, 4 – 15 APRIL 2016**

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A. INTRODUCTION

1. Regional capacity building in the analysis and dissemination of census data

1. The Regional Capacity Building on Analysis and Dissemination of National Population and Housing Census Data Project was implemented by the Caribbean Development Bank (CDB) in collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC), United Nations Fund for Population (UNFPA) and the United States Census Bureau (USCB). Two workshops were carried out under the project, a Regional workshop on the use of REDATAM for the online dissemination of census data and a Regional capacity building workshop in demographic analysis and population projections. Both were two-week workshops taking place in April 2016. In the first workshop, hosted by the Statistical Institute of Jamaica (STATIN) in Kingston, ECLAC facilitated training in the REDATAM software (Retrieval of Data for Small Areas by Microcomputer) to statisticians from Jamaica, Saint Kitts and Nevis, and the Cayman Islands. In the second workshop which took place in Montego Bay following the Kingston workshop, experts from USCB facilitated training of representatives from seventeen Caribbean countries in demographic analysis and population projections. This report covers the REDATAM workshop while a separate report will detail the content and results of the demographic analysis and population projections workshop.

2. National population and housing censuses are perhaps the most fundamentally important activity of a statistical office. They are key sources of demographic and social data as well as an input to many social, economic and labour market statistics. Censuses are therefore of critical importance for national development planning, policy making, and monitoring international commitments such as the Sustainable Development Goals.

3. In Caribbean countries, the decennial census exercise is coordinated by the Caribbean Community (CARICOM) Secretariat with support from other development partners including CDB, ECLAC and UNFPA in accordance with their respective mandates. This coordinated approach facilitates the provision of technical assistance to national statistical offices (NSO) in a wide range of areas. It also ensures a strong degree of consistency in the concepts, methods and classifications which are used in national censuses, so that data are comparable across countries.

4. The 2010 round of censuses was coordinated through a Regional Census Strategy. In addition to the organizations mentioned above, the Inter-American Development Bank, University of the West Indies, United Kingdom Department for International Development and the Canadian Department of Foreign Affairs, Trade and Development also provided technical assistance in support of the 2010 round. Activities included support for the development of a common census questionnaire, support for census mapping, data processing, training in demographic analysis, and in census organisation and administration.

5. Notwithstanding the above efforts and significant progress, countries took some time to complete the data processing, reporting and dissemination activities from the 2010 round. At the time of writing, some countries had not yet fully completed the data dissemination and analysis necessary for the use of the data in policy development. The *Regional Capacity Building on Analysis and Dissemination of National Population and Housing Census Data* project was specifically designed to provide support in these two specific areas: dissemination and analysis of census data.

6. Given this focus, the project was concerned primarily with the 2010 round of censuses and with promoting wider use and analysis of the data that was collected. However, in re-establishing a partnership among the organizing agencies, the project should also be seen as a first contribution towards supporting the 2020 round of censuses. It is anticipated that the same partners will develop a more comprehensive

programme of technical assistance to support implementation, dissemination, analysis and use of data in the 2020 round.

2. REDATAM: a tool for census dissemination

7. Providing easy access to census data is critical to ensuring its use for decision making and development planning. Modern statistical offices disseminate census data via the Internet in the form of census reports, through interactive tabulation tools, and by the release of anonymized microdata. Of these, traditional census reports reach the widest range of users. However REDATAM, which provides remote access to census microdata and allows users to generate customized tables, indicators, graphs and maps, provides users with much richer and more flexible access to the data.

8. REDATAM is a software programme supported and developed by the Economic Commission for Latin America and the Caribbean (ECLAC). It has been used by many countries for the quick and effective dissemination of data from censuses and surveys through both the internet and CD-ROMS. The software has been used by many Latin American and Caribbean countries and is increasingly being used by NSOs in Africa, Asia and the Pacific. The REDATAM software makes it possible for statistical offices to provide public access, via the Internet, to census data sets in a way which permits wider and more detailed analysis but still protects the confidentiality of individual census records. REDATAM has greatly expanded access to Latin American census data, for example in 2014, 8,400 unique visitors passed through ECLAC's REDATAM portal to access data (this doesn't include users who accessed data from a REDATAM application directly from an NSO). In addition to census data, REDATAM can also be used to provide online access to survey data sets such as living conditions surveys. In the long term, improved online access to these data sources will encourage their use in research, development planning and evidence-based policymaking.

9. Since REDATAM was first introduced to statistical offices in the Caribbean in the 1990s, several countries have used the software for online dissemination including Belize, Saint Lucia, Saint Vincent and the Grenadines and Trinidad and Tobago. REDATAM is not yet as widely used by Caribbean statistical offices compared with those in Latin America; however, since several countries currently have web applications for the dissemination of census data in various stages of development (Antigua and Barbuda, Barbados, Grenada, and Trinidad and Tobago) it is anticipated that several more countries will release their census data through REDATAM in the near future. The workshop in Kingston extended training to Jamaica, Saint Kitts and Nevis and the Cayman Islands and it is anticipated that there will be a further workshop, for statisticians from Guyana, Suriname and Saint Vincent and the Grenadines, in the second half of 2016. These activities have the potential to significantly expand access to data from the 2010 round of population and housing censuses. They will also provide a sound basis for a more rapid and effective dissemination of data from the upcoming 2020 round of censuses.

10. One of the principal objectives of the Regional workshop on the use of REDATAM for the online dissemination of census data was to train statisticians, IT specialists, and web developers in the use of the REDATAM software. In addition, it was anticipated that during the workshop, participants would develop web applications for dissemination of their national census data sets. The intention is that following the workshop, these applications will be finalized so that all three national census data sets can be disseminated online.

B. ATTENDANCE AT THE WORKSHOP

1. Place and date of the workshop

11. The Regional workshop on the use of REDATAM for the online dissemination of census data was held from 4 April to 15 April 2016 at the Four Seasons Hotel in Kingston, Jamaica.

2. Participation

12. The workshop was targeted at census statisticians, IT and database experts, and web developers from the Statistical Institute of Jamaica, as well as statisticians from the Governments of the Cayman Islands and Saint Kitts and Nevis.

13. A total of 17 persons participated in the first week of the workshop: 13 persons from Jamaica and two each from Cayman Islands and Saint Kitts and Nevis. This first week of the workshop focused on the creation of REDATAM databases and how to run tabulations and calculate indicators. The second week was concerned with the creation of online applications for data dissemination. Eight persons participated in the second week: four participants from Jamaica in addition to the four representatives from Cayman Islands and Saint Kitts and Nevis.

14. Participants were evenly distributed by sex; 9 women and 8 men. The full list of participants is annexed to this report.

C. SUMMARY AND KEY OUTCOMES OF THE WORKSHOP

1. Opening session

15. The opening session of the workshop featured remarks from the Operations Officer, Technical Cooperation Division of CDB, the Director of UNFPA subregional office for the Caribbean; the Population Affairs Officer of ECLAC subregional headquarters for the Caribbean and the Director of STATIN.

16. The Operations Officer, Technical Cooperation Division, CDB, explained how the Caribbean Development Bank has committed in its Strategic Plan 2015-2019 to promote good governance and strengthen evidence-based policymaking among its Borrowing Member Countries. In keeping with these objectives, CDB has been deepening its engagement with its members, development partners and regional institutions in the area of statistical capacity-building, including support for national population and housing censuses. She highlighted other work in this area, including the creation in October, 2014 of a Development Partner Task Force on Statistics – chaired by CDB and with representation from eighteen (18) development agencies – established to coordinate technical assistance, financing and other mechanisms for statistical capacity building in CARICOM, including reporting on the global goals for sustainable development and the data revolution. She emphasized the importance of collaboration among all the respective institutions and thanked CELADE, for their commitment to supporting REDATAM in the Caribbean.

17. The Director of the UNFPA Subregional Office for the Caribbean, welcomed the facilitators and non-national participants to Kingston, Jamaica. She thanked all those involved in the organization of the workshop for their efforts. She underscored the commitment of UNFPA to support collaboration in statistical capacity building, particularly in the area of data dissemination. Finally, she wished all the participants a productive workshop and urged them to take full advantage of the opportunity.

18. In his remarks, the Population Affairs Officer at ECLAC subregional headquarters for the Caribbean, emphasized the potential of the REDATAM software for expanding access to census and survey microdata and described the role of ECLAC in providing support and training in the use of the software. He highlighted that the main aim of the workshop was to develop web applications for the dissemination of national census data. He restated ECLAC's commitment to provide follow-up support in order to achieve this.

19. In delivering her opening remarks, the Director of the Statistical Institute of Jamaica, described the potential benefits of disseminating data using REDATAM. She described the demands from policymakers and policy analysts for census data and highlighted the challenges faced by national statistical offices in responding to the large volume of data requests that they receive from users. She wanted STATIN to improve the way that it disseminates data and noted that REDATAM could help STATIN, and other NSOs in the region, to provide users with easier and faster access to data and reduce the burden of responding to ad-hoc data requests.

2. Organization of work

20. The workshop was organised to facilitate the development of REDATAM web applications for the dissemination of census data. To that end, staff from the statistical offices of the three participating countries received targeted training in three core components of the REDATAM software, namely the Create, Process and Webserver modules. During the workshop, participants gained an appreciation of the full functionality of REDATAM using modules from two versions of the software: REDATAM+SP and REDATAM7. REDATAM+SP was developed in 2004, while REDATAM7 is the latest version (fifth generation) of the software developed in 2012 and features several improvements and upgrades from the previous generation.

21. To achieve its objectives within the timeframe, the workshop was structured so that the content of the first week of the workshop focused on two modules of the software, namely Create and Process. The Create module is used for the creation of hierarchical databases in the proprietary REDATAM format, while the Process module is used to run analyses on REDATAM databases, and to generate tables, indicators and thematic maps. Participants were introduced to REDATAM7 and provided with opportunities to gain hands-on experience of the various stages of creating a database using sample data sets in SPSS format.

22. Once the skills for creating REDATAM databases from the sample data sets were mastered, participants then replicated the steps for creating databases using their own national census data. By the end of Day 3, fully functional databases in the REDATAM format had been produced for Jamaica and the Cayman Islands. In the case of Saint Kitts and Nevis, because the cleaning, processing and checking of the census data set had not already been fully completed as it had been for the other two countries, it was necessary for the participants from Saint Kitts and Nevis to spend additional time addressing various data consistency issues before a REDATAM database could be produced.

23. The final two days of Week 1 were dedicated to the use of the Process module. The sessions focused on the tabulation of data and construction of indicators. The sessions enabled the staff to gain more familiarity with the REDATAM7 environment, in particular how to use the REDATAM programming language to produce outputs such as tables, indicators and maps based on census data.

24. The second week of the workshop focused on developing web-based applications using the REDATAM Webserver module. During this week, the participants used the REDATAM databases that they had created during the first week from their national census data sets. A group of eight participants was shown how to use the REDATAM Webserver module to build functionality into a web application

and how to provide different forms of data access to users. For example, they learned to provide users with functionality such as the creation of basic tabulations of data (frequency counts, cross-tabulations, and area lists); to build social and demographic indicators into the web applications; and to present data in the form of graphs and maps.

3. Closing session and presentation of key outcomes

25. A closing session was held on the final afternoon of the workshop. This was attended by all the participants including those from the first week of the workshop; the Director of STATIN; the Deputy Director of the UNFPA Subregional Office; as well as the Operations Officer, Technical Cooperation Division, CDB, who participated via video link.

26. The session featured three presentations, one from each of the three participating statistical offices, in which the functionality of the newly developed web applications was demonstrated. The web applications for Jamaica and Cayman Islands were near-ready for public release. Both applications will need some final checking and possibly minor adjustments to ensure the complete accuracy of the data produced and to guarantee that the confidentiality of census microdata is protected. For the reasons described above, the application for Saint Kitts and Nevis was not as close to completion and will require more substantial work to be carried out over the next few weeks. This work will be undertaken through collaboration between ECLAC and the two participants from Saint Kitts and Nevis.

27. There were closing comments from the Director of STATIN and the Deputy Director of the UNFPA Subregional Office. Both congratulated the participants for their achievements during the two weeks. They recognised the value of the web applications that had been developed and expressed the hope that these would be finalized and made available online soon. Finally, the Population Affairs Officer of ECLAC committed his organization to work in collaboration with each of the three statistical offices to finalize the applications.

4. Follow-up

28. In respect of the web applications developed in the workshop, there are two main tasks to be carried out to finalise them and put them online:

- Final checking of the accuracy of the numbers being produced from the REDATAM database underlying the web application, and making any final revisions which are necessary;
- Finalization of the web applications themselves, including any final design decisions relating to the balance which has to be struck between data access and protecting the confidentiality of the microdata.

29. These tasks will be carried out over the coming weeks through collaboration between ECLAC and the respective statistical offices.

30. Looking forward, it is anticipated that the partnership of CDB, ECLAC and UNFPA will continue to work together to support the use of REDATAM in Caribbean countries as part of a wider programme of technical support for the 2020 round of censuses. REDATAM has the potential to greatly expand public access to census data if all countries disseminate their data in this way. The same approach can also be used to disseminate other household survey data sets.

31. More generally, ECLAC recently sent a questionnaire to NSOs to assess their needs for technical support in all aspects of the 2020 census round. It is intended that the results of this survey will help the

partner organizations, in collaboration with other organizations, to shape a comprehensive programme of technical support for this round of censuses.

5. Summary of post-workshop evaluation

32. Annex II provides a summary of participants' responses to the evaluation questionnaire administered at the end of Week 1 (to 9 participants) and at the end of Week 2 (to a further 8 participants). The same questionnaire was completed both by those who attended the first week of the workshop and by those who attended both weeks. The summary represents a consolidated account of all the responses received. The evaluation confirmed a generally high level of satisfaction with the workshop.

Annex I**LIST OF PARTICIPANTS****JAMAICA**

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Annex II**WORKSHOP EVALUATION**

Total Number of Participants = 17

Number of Evaluation Forms Submitted =13

Response Rate = 76 per cent

1. The knowledge, skills and techniques acquired on the course were:

Mostly New	Some New	Not New
85%	8%	8%

2. Will you be able to use the knowledge, skills and/or techniques from this course on your job at your office whether presently or in the future?

- Yes.
- Seems applicable and useful in some of the functions of the job.
- Yes, if there is a need to upload a census database or any other survey database.
- Yes, definitely the training exercise gave me a new understanding to the world that is REDATAM and its capabilities.
- Yes, it will be useful for data dissemination.
- Yes, population data is useful for all areas of work at STATIN.
- Yes, gained more knowledge working with both SPSS and REDATAM, I would share the information on managing the databases and writing codes.
- Yes, hopefully on other data sets.
- Yes, in the future. We would like to have information shared through the internet.
- Yes, for dissemination of data.
- It will make the access to statistics much easier in the Cayman Islands; hope to put the program to use for many other surveys.

3. Which topic(s) in the course did you find most relevant to your job?

- All.
- The analytical processes & the creation of databases; coding of queries.
- Database creation from SPSS, Frequencies, Crosstabs, Area Lists.
- The Webserver dissemination module of REDATAM.
- REDATAM Create and Process modules.
- Everything.

4. Which of the topic(s) presented, do you think should be omitted from the course in future?

- None.
- All areas of the course are important.
- I think all topics are relevant to our needs.

5. Indicate your overall evaluation of the course:

	Excellent	Very Good	Good	Fair	Poor
Quality of A/V aids	54%	31%	8%	8%	
Presenter (s) knowledge of the subject area	46%	38%	15%		
Presenter (s) skill in delivery	46%	31%	8%	15%	

6. Were there any weaknesses in the course?

	Yes	No	No response
	23%	62%	15%

Weaknesses:

There are still bugs in the software.

Sometimes the presenters were not sure what they were speaking of.

One presenter seems to be limited in knowledge of the program.

Annex III

SCREENSHOT OF REDATAM APPLICATION FOR JAMAICA CENSUS 2011

The screenshot shows the REDATAM application interface. At the top, a dark blue banner contains the text "Statistics - Everybody's Business" next to a small logo. Below this is a navigation menu with several categories: "BASIC TABULATIONS", "FREQUENCY TABLES", "CROSS TABULATIONS", "AREALISTS", "COUNTS", "SOCIAL AND DEMOGRAPHIC INDICATORS", "DATABASE INFORMATION", and "References". Under "FREQUENCY TABLES", there are sub-options for "Person variables" and "Household variables". The main content area features the Statistical Institute of Jamaica logo and a large graphic celebrating the 70th anniversary (1946-2016). The graphic includes the text "70TH ANNIVERSARY CELEBRATING 1946-2016".