

Tonga's 2006 Housing and Population census

Topic: Census planning and Management in Tonga

Background information

Tonga's preparation for census 2006 starts off in April 2004 with the writing of the Tonga's 2006 Population and Housing census proposal. This was done through the collaboration of the Government Statistician (GS) at the time with SPC Dr. Gerald Haberkorn. This document has been used as the bases to develop all necessary activities that relate to Tonga's census 2006 which outline its:

- a) General purpose
- b) Background and justification to undertake 2006 census
- c) Planned census activities – includes development of census strategy; pre-census activities; census enumeration; and post-census enumeration
- d) Budgetary requirements

Government of Tonga endorsed the document and it went through the proper channel for the donor's assistance.

Human resources

The high turnover of staffs is a common problem in many National Statistics Offices (NSOs). In Tonga's case, is one of the most critical situations, since almost everyone was new to census work. The recruitment of the AGS in June 2004 to be the head of Social and Population Statistics together with the officer in-charge of Tonga's 2006 Housing and Population census shows how Tonga's Statistics Department (SD) desperately needs technical assistance. With the key staffs responsible for the 1996 census being left the department, the new team uses the opportunity to strive for excellence in all census related work especially with the planning and managing the overall census operation. In addition the SD staffs places emphasis on a wide perspective and leadership qualities of senior staffs where visions planning, good coordination, suitable delegation and strong group spirit will enable census work to be performed more effectively and efficiently. Staffs at all levels were encouraged to have an innovative mindset. Incentives for other parties both within and outside the government especially in the wider community where discovered and provided so that they would be able to support the census project.

In addition, 6 of the 34 NSO's staff were made redundant leaving more workloads to the rest of the team within various census committees. However, the SD sees the high turnover of staff as our strength to ensure that planning and management of census phases and activities are running on track. The staff moral and team spirits were very pleasing as every staff's member render assistance to census project whenever needed.

As a result, there were two main objectives bearing in mind as the planning and management of Census gets rolling. Firstly, is to ensure that the total process of collecting, compiling, evaluating, analyzing and dissemination of demographic, economic and social data pertaining, at a specific time, to all persons in the country is probably

carried out in a timely and accurate manner. Secondly, this exercise will be a great opportunity for capacity building to staffs of the Statistic Department (SD) and as a result building NSO's image, credibility and reputation, together with strengthened its infrastructure.

Having said this, Tonga's SD has been secured with the good hands of SPC through its planning, implementing and dissemination of the census overall operations and missions.

Let us start off by looking at the organizational structure of the census bodies, which shows how everyone in the department was involved with the census.

- a) Steering committee (consist of the Head of both Government and non-government organizations) chaired by Secretary for Finance, secretary by the GS
- b) Census committee (consist of all sub-committee leaders with GS, chaired by the AGS)
- c) Five teams (each sub-committee consists of about 5 members chaired by their sub-committee leader) these committees are namely, Mapping, publicity, fieldwork, Training and Data processing. This means that every staff member of the SD were involved with the census operation through these committees.

To begin with, there was a SWOT analysis of the 1996 census, identifying its strength and its challenges. This provides an opportunity to learn from past experiences and analyze major success and challenges in regard to the planning, execution and managing of 2006 population census. The main challenge with this analysis is the lack of documentations. However, we make initiatives to contact the most responsible person for 1996 census who is now residing in Australia and got additional detailed information regarding planning and management of 1996 census. This valuable information were used to provide directions of improvement to:

- a) Methodology – distribution and collections of forms, considering the privacy awareness of people, printing and procurement of census forms and all related materials, amendments of census blocks, fieldwork checks system, selection of enumerators and supervisors.
- b) Striving to obtain understanding and cooperation with every individual in the country through effective use of a publicity framework.
- c) Amend the terms of references of the various committees and sub-committees. Especially with the delegation of duties to staffs of SD.
- d) Updating and digitizing of maps for Tonga.
- e) The timing of various major phases especially with the completion and dissemination of the census results was carefully identified with its problems so that the census results are not only as accurate as it should be but also reported timely.

For the 5 sub-committees, their first tasks were to verify and amend their terms of reference given the SWOT analysis. They then prepare a work-plan, which shows all necessary activities that particular sub-committee is responsible for, assigning the responsible person together with the timeline, ie start and end date to complete that particular activity. These work-plans set up by all the 5 sub-committees were then used by the census manager (AGS) to develop a detailed operational plan with the census

phases, activities required to complete these phases, start and end dates, responsible person and the dependencies, - all in a Gantt chart format.

A census has various interrelated activities to produce the results. These activities consist of tasks that specific teams are assigned to do. Census manuals provide guidelines on processes, organizational structures, controls for quality assurance, and guidelines on processes, and problem solving. The challenge for managers is to develop a work environment that enables census personnel to perform all these tasks with the same goals in mind. Each sub-committee is responsible for their own outputs, and specific decisions for specific situations are made at the lowest level possible. Problem situations beyond the scope of the sub-committee are escalated to the next higher level.

Questionnaire development

Firstly, Tonga was using the Pacific model questionnaire together with the 1996 census questionnaires as the basis in formulating our own questionnaire form. We first distribute these two forms to all stakeholders, Government and non-government organizations including members of the steering committee to identify their policy issues that are being addressed by these two forms and bring forward their left over policy issues to the SD or the steering committee meetings. These were clearly briefed by SPC consultants during a ground visit on the 20th February 2006 to Tonga. It was made clear that the content of the questionnaire form is to be discussed within the steering committee with stakeholders whereas the questionnaire design is the role of the SD in collaboration with SPC. After many discussions of the questionnaire content in both the steering committee and census committee, the AGS then brought this content to a Pacific census meeting in Nadi where questionnaire designing is one of the topics. Within the meeting, representative from ABS, Stats NZ, UNSD, SPC and other Pacific countries were discussion questionnaire content and design. The AGS brought back the outcome of the meetings to SD and they then produce draft questionnaires for Tonga together with SPC. As being mentioned, this draft questionnaire form is a product of the Pacific model questionnaire (which all PICT agreed upon), Tonga's 1995 questionnaire form (comparability) and policy issues from stakeholders being design together with the outcome of the Pacific workshop in Nadi, which has been checked by outside organizations being named above. After some minor amendments, the steering committee approved the content of the questionnaire form and leaves the SD and SPC for any designing details that are necessary for not only data capture but also timing and other factors that may be detected before and after pilot testing. The SD uses our staffs for 3 informal pilots testing of the questionnaire form during which SPC was advising on various aspects of the form to be slightly changes so that questions are clearer and thus improve data capture. This change is a result from the different perceptions that the respondents gave which SD and SPC were not seen before. As a result the questionnaire form was improving greatly as time proceeds. During this time, data processing unit were giving a lot of feedback from the data processing side of things which all contributes to more improved questionnaire form. The final and formal pilot test was done with a sample selection of census blocks and was mainly used for estimating of time spend so that duration of the census enumeration is carefully estimated.

Population Census Development – How to ensure the quality of population census

The nature of a Population Census is being a full coverage enumeration. These are some of the main phases of census that was improved as a result of proper planning and management of the census.

The Mapping sub-committee invested in ensuring that quality mapping underpins a quality census; and the maps should ensure complete coverage of the country; be designed to accommodate the workload of a census enumerator; and be useful for dissemination purposes by the uses of PopGIS is available and easy to use.

Household sites visits were carried out by staffs of SD throughout the country with few exceptions. This exercise assists in amalgamating or splitting of census blocks to ensure an average of 50 households per census block is achieved. Refer to Annex 1 This was also the start of the public campaign under the Publicity framework that was design by the Publicity sub-committee.

Enumerators/Supervisors mapping resources were prepared due to the common problem of both under and over – counting during enumeration. Therefore, provisions of these materials ensure that the coverage is as accurate as possible. These includes, PCmap1 which shows where the census block is located; PCmap 2 shows details of the census blocks with the numbers of the households being located within the map; a list of household heads has been attached to the map so that the number on the map corresponds to the name of the head of household for that particular household on the list.

Selecting of Enumerators/Supervisors were from primary school teachers and we were invested in getting the teacher from that particular census block to be the enumerator of the block. This is an additional asset since the local knowledge of the teacher within the census block not only with the boundaries involved but also some general information regarding the residents of the census block.

Fieldwork sub-committee manages to set up a hierarchical structure with clearly defined roles and responsibilities. Quality assurance being set up for the census enumeration, where the reporting systems is from the enumerator to supervisor, then to district managers, to Island division managers then to AGS then to GS and Steering committee.

Procedures of enumeration were devising and publicly announced that on the first day of the enumeration, 28th November; the responsible enumerator should visit all households. This first visit is to update the household listings. Secondly, the enumerator and the head of the household will arrange a time that suits the household for enumeration during the enumeration period from 28th Nov. until the 4th Dec. This will ensure that the enumerator will minimized visiting the households so often for enumeration and also the households will be prepared well and spend enough time to answer the questionnaires probably. In addition, if a household is not visited on the 28th November, then one of the household members can contact the SD so that SD can trace out the responsible enumerator. On the other hand if a household is visited more than once during the 28th November, then the household should make contact with the SD for clarifications while the enumerators and supervisors are on the field. This exercise will also act as checking system from the SD of those who will both be over or under-counted if enumerators are unsure of their block boundaries

Procurement, distribution and collection of forms were carefully processed by both members of the fieldwork and training sub-committees. These were not only the census forms but also the training materials (enumerators and supervisor's manual, questionnaires manual, and field visits records). The organizations of transportations especially with outer islands with small boats being on time and weather were fine makes all communications possible according to schedules.

The structuring and implementation of the training programmed were carefully managing mainly by training and fieldwork sub-committees. This is to ensure that the training program addressing a particular area of duty, their need to be adequate reference to other related area since there is substantial interaction among the different areas of work.

The training program starts off with the preparation of the manuals. These include, enumerators, supervisors, and questionnaire manuals. These activities were conducted when the draft questionnaire form was ready and hence amendments of the various manuals to updated, as the questionnaires were update.

The training sessions were done after conducting the training of trainers 3 times. Then 3 training teams were set up to conduct trainings throughout the Kingdom. These sessions splits up into 3-half days in all training centers of approximately 25 – 30 enumerators and supervisors. During the last day of each training sessions, teachers were given forms to enumerate two households and correct it through group discussions the next day. After the 3rd day, the training team has to move on the other centers and thus come back within 3-4 weeks for distribution of materials. This was also use to recap any queries especially with the questionnaire form. Also, we open up telephone lines in office for any teacher who find problems to be clarified.

Training sessions for the outer islands were done close to the enumeration period where officers moved off from the main islands with all necessary materials for training and enumerations. This is to avoid traveling expenses, where officers from SD spend about 8 – 10 weeks in the islands for both training and enumeration.

The publicity sub-committee takes the heavy responsibility of ensuring that the general public understands the benefits of the census and why they need to take part and to get to know exactly how, when and what they need to do to take part. To achieve this the publicity sub-committee set up a publicity framework. These include TV, radio programs, talkbacks, posters, newspapers articles, banners, T-shirts and Ids, teachers' radio programs.

TV and radio programs – This is a two weeks program that consistently informs the public in general about the progress and the needs for census cooperation's from the general public at large. During the last two weeks before the enumeration, these programs were used to brief the questionnaires to the people of Tonga.

Talkbacks – The response from the public was very positive and their mindset was restricted to census being counting of people. As because its one in 10years collection information about the most important resource of a county is its people and understanding the complexity of such exercise, people were asking for talkbacks so that there will be good communications between the two parties involve. (SD and general public.)

Newspapers were used as spot advertisements. We also published the full questionnaire forms in all newspaper in Tonga. This is to ensure that everyone had a chance to see the questionnaires that they need to answer. Again, the TV and radio followed up with the briefing of the correct meaning of the questionnaire forms.

Banners and posters were used to display census aims, dates of enumeration, census night and other. The using of Ids and T-shirts were just to promote awareness to census.

Teachers radio programs - were also used for publicity especially informing teaches who are involved and training programs and other.

Work is being in progress with the Data processing unit. However, the sub-committee invested on quality management in data procession for census as their key tool. This defines the activities to be carried out for project organization, planning, risk management and control and balances and optimizes among Function, Time, Resources, Quality and Risks.

As for timing, the various activities like coding is almost finished, with the data entry being started. It is proposed that the dissemination of the main report is expected to be out in August 2007. This has to be confirmed by SPC.

As being mentioned earlier, these outcomes were carried out effectively and efficiently due to the proper planning (both strategic and operational) and management. The tool being used, which is the Chant chart, clearly identifies activities, which is responsible, start and end dates, dependencies and milestones were very useful. It has been used for monitoring purposes where team leaders has been consistently reminded of various activities and if it is being fail then what are the risk control being used for control. It also gives the sub-committee's leaders the opportunity to assess the project progress. It enables more realistic estimates at every stage. Planning assumptions plays a vital role in managing risk.

With these few analysis of Tonga's 2006 census planning and management, I would like to acknowledge the valuable assistance offered by SPC staffs, starting from planning, implementing, managing and dissemination of our census results. Not forgetting the donors who made funds available for such technical assistance to be in place.

Malo 'aupito

Annex 1: Some notes on census cartography

Figure 3.1: Divide existing census block (eg. Block number 65) into two separate census blocks (Blocks 65-1 and 65-2).

Whenever the number of households per census block would have increased beyond the capacity of a single enumerator to handle (example: 60 blocks could be handled by one enumerator, possibly with a bit of extra pay; with 70 blocks), it is advisable to split census blocks into two groups.

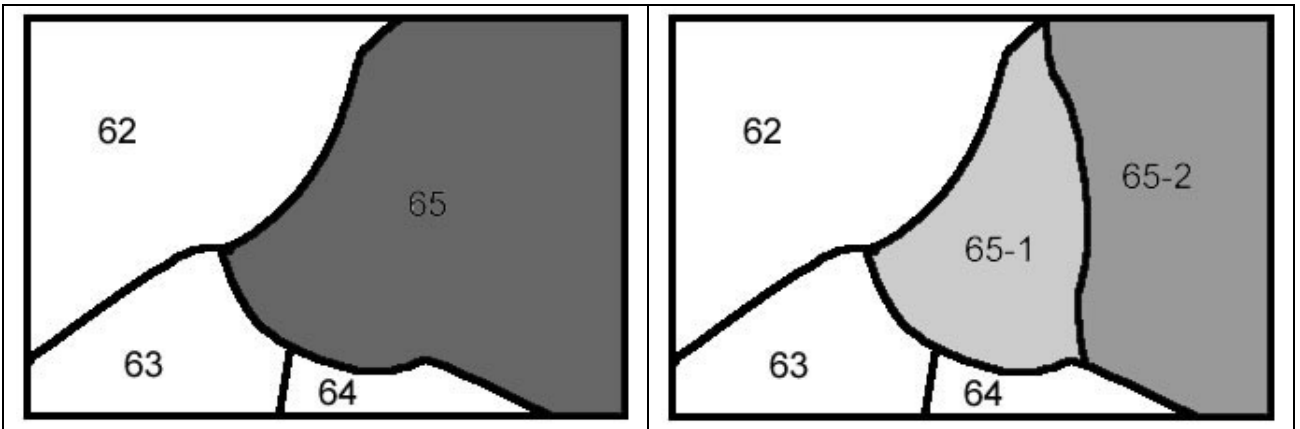


Figure 3.2 Amalgamate adjacent census (65 and 66) blocks into one (6566)
Whenever the number of households per census block would have decreased well below the capacity of a single enumerator to handle (example: should the combined number of households drop below 70, it is Advisable to amalgamate both adjacent census blocks into one new block.

