

Census Planning and Management

Kiribati

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Disclaimer: Note the views and opinions presented here are those of the author only, i.e., they do not necessarily reflect the stance of the National Planning and Statistics Office, nor the Kiribati government.

1. Introduction

This paper is meant to give an overview of the census management and operation of the past few censuses in Kiribati. It is not a narrative of a single census but rather picks on the general features of several censuses. For the description and explanation of any single census, the user should consult the respective individual census reports. Like most country reports, this report will start off by describing the geographical and economic setting of Kiribati in order to put the subsequent discussions in context as well as providing background information for those not so familiar with the country.

2. Background Information

Kiribati is a country comprised of small atoll islands straddling the Equator and the International Dateline. There are three main island groupings: the Gilberts group; Phoenix islands group; and the Line islands group (or the Linnix group). The population is around 92,000 and the total land area is 810 sq km. The capital island, South Tarawa, is located in the Gilberts group, and has just over 40,000 residents at the time of the 2005 Population Census—i.e. over a third of the total population. Christmas island, probably the largest atoll island in the world, lies further to the east and is closer to Honolulu, USA, than to Tarawa. It has a population of over 5,000 and is fast becoming another ‘urban’ centre besides South Tarawa.

The economy is still very much dominated by the subsistence sector though there is increasing evidence of the country moving towards a monetized economy. Of the total potential labor force¹ of 53,000, only 13,000 people have jobs or are working for cash (i.e. including copra cutters and other ‘informal cash-workers’). If we consider people in the villages who are basically subsistence workers as unemployed², then the unemployment rate³ would be extremely high compared to developed countries unemployment rate. As to the production of the country, the GDP per capita is about \$1,000 while the GNP⁴ per capita would be twice as much. The low domestic production reflects the lack of manufacturing and processing industries in Kiribati while the high GNP figure resulted from the substantial inflow of income from abroad, which includes; fishing license (\$20-40 million a year); investment income (over \$20 million); and remittances from seamen working on overseas vessels (\$10-15 million). Like most other governments, the Kiribati government also incurs fiscal deficit (about 20-30% of GDP) and this is financed primarily from the drawings on the government’s reserve fund (RERF)⁵ and bank overdraft—in recent years this has risen quite substantially.

3. Statistics and Census legislations

In order to carry out the statistics and the census activities in Kiribati, there are two separate legislations that give legal backings to these undertakings, i.e. one for the Statistics and the other for the Census. The statistics legislation allows and facilitates the collection and compilation of statistics on a national level but does not cover the conduct of a population census. How

¹ People of age 15 to 59 years (Source: 2005 Census of Population Vol 1. p 36)

² Many people in the villages are keen and ‘ready’ to be employed even though they do not ‘actively’ seek employment.

³ In most countries ‘unemployment’ refers to people not working/employed but are actively seeking job, but in Kiribati the term or the notion of ‘actively’ seeking job is not very practical nor meaningful.

⁴ Roughly equals GDP plus net factor income from abroad.

⁵ This is the ‘reserve fund’ of the government which is being invested abroad in bonds and equities. Two investment firms are managing this fund while another body is doing the monitoring and auditing of these fund managers.

or why the two legislations are separated is not quite clear given that these legislations were formulated in the 1970s but it is very likely the reason is that prior to the 1985 Population Census the census taking was under a different ministry therefore a separate legislation was required.

Under the Statistics legislation the Republic Statistician is given the legal authority to oversee the implementation of the Statistics Act while the Census Ordinance assigns the Census Commissioner the power to collect census information from individuals during the census period and is answerable to the Minister, not to the Republic Statistician. Obviously having two separate legislations to back up the activities of a single office is not a very efficient set up and in fact could be a source of conflict in the future, especially if the chief statistician and the census commissioner do not get on well together.

4. Census management and budget

The last five population censuses, starting from the 1985 Population Census, were all conducted under the overall management of the National Statistics Office (NSO). Before then, i.e. before the 1985 Population Census, the censuses were conducted by the Ministry of Home Affairs⁶ and all were conducted under the direct supervision of an expatriate. In 1989 the Republic Statistician (a local officer) was given the task of planning and carrying out the 1990 Population Census. Since then all the subsequent census commissioners were local I-Kiribati recruited from within the NSO. The rationale for having local officers in charge of the census project is to give the officers an opportunity to build up their skills in managing a big statistical undertaking—part of the capacity building of the NSO staff. But while the census management and the actual operation have been undertaken by locals, the Secretariat of the Pacific Community (SPC) continues to provide assistance, mainly in the area of data processing and analysis. Not only that but SPC was also instrumental, especially in the last census, in mobilizing and securing funds for the Kiribati censuses from overseas donors, such as AusAID and UNFPA. Interestingly, assistance from UNFPA has been quite substantial in the 1980s but then declined in the 1990s but picked up again in the 2000 round of population censuses.

As explained above some funding towards the population census do come from overseas donors, like AusAID and UNFPA, however the bulk of the funding comes from the Kiribati government. For instance, in the last population census (2005) the Kiribati government provided around \$300,000 while UNFPA and AusAID together provided more than \$100,000. Over the years the census budget has steadily gone up, for example in the 1990 the census budget was \$300,000 but in the last census (2005 Census) the budget has gone up to over \$400,000. The census commissioner is directly responsible for managing this fund but the recording and reporting of the expenses still goes through the normal government accounting system.

⁶ Now the ministry is called 'Ministry of Internal Affairs'

5. Census preparatory activities

Generally census planning in Kiribati starts two years before the actual enumeration takes place however the bulk of the preparatory activities takes place the year preceding the enumeration date. The first important task of course is the selection of the census commissioner—this is typically done by the Republic Statistician. The nomination of the Republic Statistician, however, has to be approved and endorsed by the Minister of Finance and once the census commissioner has taken the oath, then all the legal authority of the census is invested in him or in her.

The next important task is to secure funds for the census. This requires drawing up a census project document that outlines the objectives of the census, its activities, and the amount of funds required. This document goes to the Planning Office which then made the normal appraisal on the project before sending the prodoc to the DCC⁷. From the DCC the prodoc goes to Cabinet for final approval. The prodoc has to go to Cabinet because the funding required is quite substantial.

In the case of the last census (i.e. the 2005 Population Census) SPC assisted in mobilizing funds from AusAID and UNFPA. All the census funds are deposited in the Development Fund Account (No 4 a/c)⁸ because the population census is considered as a project, i.e. not as a routine or an ongoing activity of the NSO, especially when it comes to the budgeting exercise. This in a way creates extra work for the NSO because it means a detailed prodoc has to be drawn each time a census will be conducted, which is every five years. Furthermore, funds will have to be sought each time a census is to take place. In some instances, the census preparatory activities would be on hold until very close to the enumeration date because of the funding problem—this could undermine the accuracy and reliability of the census results.

6. Recruitment and training of census staff

Once the census commissioner is in post, and the money is available, the recruitment of the census staff will commence. First is the recruitment of the deputy census commissioner—this could be somebody from outside the Statistics Office or a senior staff of the NSO. In the past two censuses the deputy was taken from within the NSO whereas in the previous censuses the deputy was recruited from outside the NSO—often a mature person who has worked in the government service before. One reason for using a mature person with extensive experience in government service is that he or she has to deal with island councils which are often staffed by mature and respected people from the islands. Furthermore, having a mature person in the census

⁷ This is the Development Coordinating Committee comprised of all permanent secretaries.

⁸ This is the account for development projects. The other main government account is the Consolidated account (No 1 a/c) which is reserved for government recurrent activities.

project gives the project itself an image of integrity and responsibility—and this is important as the census is an activity that involves visiting and talking to household members. It is useful to note here that most of the staff in the census project are generally young, in particular the census enumerators who are mostly secondary school leavers.

Next is the recruitment of census coders and computer operators. These, numbering around ten, will be in the office for at least a year as they will be involved right from the start of the census project up to the publication of the census report. Initially they will be involved in the household listing and in the pre-testing of the census questionnaires but subsequently they will become coders and then data entry operators. With respect to the census field officers, the census supervisors will be recruited from each island, two from the bigger islands and in the case of Tarawa, there will be around ten supervisors given the large population on S.Tarawa. These will be recruited six months prior to the census enumeration date and will be trained on S.Tarawa on the census procedures and in the way the questionnaires should be properly filled in by enumerators during the census. After the training the supervisors are expected to return to their home islands and train the selected enumerators a month before the actual enumeration takes place. The selection of the supervisors as well as the enumerators is done by the island councils on each island, but the selection criteria is provided by the Census office. The total number of census staff is about 400 in all, i.e. including the field officers.

7. Census users committee and questionnaire design

One of the first preparatory activities is the setting up of a census users committee comprised of key ministries, such as the Ministry of Agriculture and Fisheries, Ministry of Education, Ministry of Labour, etc. This committee will decide on the scope and coverage of the census questionnaires however the design of the questionnaires is left with the Census staff. The committee is fairly busy in the beginning of the census project but once the questionnaires have been agreed on, the committee ceased to meet and effectively has no more part in the subsequent census activities.

In the design of the questionnaires, the intention is to follow closely what was done in the previous censuses so that comparisons can be made. Another practical reason for keeping the questions and format fairly similar is that it would be much easier and faster for the respondents to complete the questionnaires having seen it in the previous census. It is useful to remember that one of the key strategies of a population census is to do the actual enumeration within a very short time period because people are very mobile and double counting could easily occur, especially if the timing drags on for some time. There would be, however new questions or issues entered in the questionnaires depending on the submissions of those in the census users committee. In deciding whether or not to take on board the new questions depends very much on the nature of the question and on the space in the A3 questionnaire. In terms of the nature of the questions, those that are

considered very sensitive and potentially could jeopardize the quality of the other census questions, would be excluded. Likewise, those that are considered as difficult or not possible to extract from individuals given the nature and timeframe of the census, would also be excluded, such as income or expenditure questions—these are more suitable for surveys.

To ensure that the questionnaires are reasonable and people are comfortable with them, a pre-testing is often made. This involves census staff going out to selected households to conduct interviews based on the draft questionnaires. The interviewers would ask all the questions in the questionnaires and they are expected to take note of those questions that respondents seem to have difficulty in answering. From the answers provided on the census forms, and from the observations or comments of the interviewers, changes or modifications would be made on the questionnaires.

8. Census area demarcation and household listing

One very important preparatory activity is the delineation or demarcation of the enumeration areas. In the case of outer islands, where the villages are not very densely ‘packed’, i.e. the houses are more spread out, the delineation exercise is fairly straightforward. However in the case of S.Tarawa, the exercise is more complex as a lot of residences or homes are so packed together that delineating them into ‘manageable’ census areas is quite difficult. The ideal number of households in each area should be around sixty⁹ but these households should be within some physically distinguishable boundaries so that enumerators do not double-count some households or miss some of them. As far as practically possible the enumeration areas of the past censuses are used however if an enumeration area has increased substantially since the last census, in terms of the number of households, then the area may be split into two enumeration areas. Each enumeration area is designated a number because they are supposed to be unique within each island. It is important to note that the enumeration boundaries are drawn in such a way that they conform to the village or town boundaries or some known important area boundaries. This requires consultations with the Island Councils¹⁰ but in some cases, old people who know the exact boundaries of the villages are also consulted. The intention behind the delineation exercise and the formation of enumeration areas is to collect and produce individual household information that adds up to useful aggregates, such as villages, islands, and then to the national totals.

The household listing is carried out mainly to see whether the previous census enumeration areas are still holding roughly sixty households or not. If the number of households has increased significantly it may be necessary to split the enumeration area into two or three, but if on the other hand the number has declined, it may be necessary to combine the enumeration areas,

⁹ The number of sixty households has been determined in the past as ‘manageable’ in the sense that one enumerator can enumerate or cover these within two or three days.

¹⁰ The Ministry of Health has also important ward boundaries in the villages but these have not been considered or incorporated in the population census enumeration areas.

especially the adjacent ones. Numbering of households is done at this stage also—this exercise is crucial in Kiribati because houses in Kiribati are not numbered as in most developing countries. That is, there is no street number nor house number in Kiribati so to differentiate and separately identify each household during the census it is necessary to put in the number plates on the houses. Within each enumeration area the household number would be unique, i.e. different houses cannot have the same number within an enumeration area. The name of the head¹¹ of the household, as well as the total number of people in the household, are also collected during this household listing exercise. The number of enumerators can only be determined once this enumeration area demarcation and household listing exercise has been carried out.

9. Census field operation

In Kiribati the field operation is quite ‘stretched’ because of the isolation and the distance of some islands. For instance, Kiritimati island, and two other inhabited islands of the Line Group, are more than a thousand miles to the east of S.Tarawa. This requires sending the deputy census commissioner to stay and conduct the census there for an extended period of time¹²—in all, the total duration of the stay could reach three months or more. And to reach the other two islands, the deputy commissioner has to go on any vessel or a passing-by yacht that happens to go that way—i.e. there is no flight to the islands and no regular shipping schedules.

Then we have the small islets in some islands which are inhabited by a few households and which need to be enumerated during the census period. This requires some means of mobility such as a motor boat or a local canoe and if there is rough weather, then the visit may be postponed—there is always a risk the census questionnaires may fall in the sea, if not the enumerator himself/herself! After the census enumeration all the questionnaires have to be collected from these small islets and isolated settlements and taken to the main island where the first manual checking of the questionnaires will be made by the census supervisor. If there are serious mistakes or omissions in the questionnaires, the supervisor may have to go back to the particular islet to correct the entry or get the right information. Once the questionnaires are all completed to the satisfaction of the supervisor, the next thing to do would be to wait for a plane or a ship to take the questionnaires back to S.Tarawa—it could take a few days, a few weeks, or even months, for the ship or the plane to arrive.

The other two islands that are also difficult to reach are Banaba island and Canton island in the Phoenix Group. There are no flights to these islands and are rarely visited by ships and therefore reaching these islands during the census period often requires advance planning and negotiations with shipping

¹¹ The ‘head’ of the household is the person who actually looks after the welfare of the people in the household—usually the person working and getting some form of income.

¹² This is quite expensive to the census project because a subsistence allowance has to be paid to this deputy census commissioner (roughly A\$ 200 a day).

companies. In some instances, a ship would be chartered but this is quite expensive so the alternative is to send interviewers on a vessel going to the islands some time before the census date or some time after the census date—whichever is closest to the census date. Obviously this would mean that the simultaneity idea of conducting a census may not be the case for these isolated islands.

Because of the distance of some islands to the census office on S.Tarawa, and given the very rudimentary nature of the inter-island transport service, there is very little the census staff on S.Tarawa can do to assist in the enumeration exercise on the outer islands during the actual census period, apart from giving advice on the phone or radio to the census supervisors on the islands.

10. Census enumeration date

The census enumeration date is usually decided on the basis of having a five year period between population censuses. For instance, in the last couple of censuses the census date was set to 7th November, which means that every five years since the last census, on the date of 7th November, the enumeration will be conducted throughout the entire Kiribati. The last census was taken on the 7th November 2005 therefore the next one is due on the 7th November 2010. There were times however in the past when censuses were not conducted on a quinquennial basis because of staff or budget constraint.

In principle the count or the enumeration of all the people should take place simultaneously, i.e. the enumeration should be at exactly 12 midnight of the census date. In practice however it is difficult to count people when they are sleeping or out in the ocean fishing so the enumerators would commence their household visit on the morning of the census date. They will continue on to the next day or two days but the idea is to finish within a week, preferably within two or three days. The longer they prolong their enumeration the more likely people would have moved risking the possibility of double counting or total omissions. The reference date however will be maintained during the interviews, even days after the census designated date (i.e. 7th November).

For some islands that are very difficult to reach the enumeration could take place a few days before the actual census date or some days after the census date, whichever is more convenient. This would mean that the simultaneity concept of taking the census in the country would not be met in this case—fortunately, only two or three islands fall in this category.

Kiribati, like most Pacific islands, poses a fairly unique enumeration problem due to the very mobile population. The high mobility of the population in a way is facilitated by the tradition of the 'extended family'¹³ which allows people to move easily from one household to another or from one island to another.

¹³ In Kiribati the 'extended family' tradition is very obvious. For instance, in a typical household, there could be parents, their own children, their nieces, nephews, cousins, and so forth.

11. Data entry and processing

Prior to the arrival of questionnaires from the outer islands the census coders and computer operators would have been given adequate training on the coding procedure and data entry work using CSPro software.

The census questionnaires would start arriving in the Census office some two weeks after the census period and could continue on for a month or two depending on the flight and shipping schedules. It is the responsibility of the census supervisors to send the questionnaires back to S.Tarawa after checking that all the villages and the enumeration areas have been covered and enumerated. Once the questionnaires arrive on S.Tarawa they will be manually checked by the Census office staff to ensure that indeed all the villages and households have been covered and enumerated. After the manual checks, the coding exercise would begin. The purpose of the coding exercise is to have a more concise and compact computer datafile which takes less memory and easier to store and manipulate. For instance, instead of the lengthy island names we would have only a few numbers instead, for example for S.Tarawa we would have just a code of '7', and likewise, instead of 'Nonouti' name we would have '12'. It should be appreciated that there is a huge amount of information collected in the census and to store them in their original characters would take a considerable amount of computer memory and storage space, and in most cases, will be difficult to manipulate.

Before the census data are actually entered in the computers using the CSPro computer program, the census staff enter first all the names of the people enumerated, their age, and their place of residence during the census in computers using ACCESS database¹⁴. The idea behind entering the names in the ACCESS database is basically to have a 'fast' means of checking that everyone has been enumerated. This is not really a 'foolproof' system of checking for full coverage of the census but given that Kiribati is relatively small with many people knowing other people, one can easily type in the name of any person to see if indeed that person has been enumerated. There have been instances in the past when people phoned to say they were not interviewed and the census office did not have the means to verify the claims. However, with the ACCESS database it is quite easy to check if the person or persons have been enumerated or not.

The design of the computer data entry form (using CSPro) is assisted by SPC staff but the actual data entering are all done by the census staff. Once the coding has been completed, then the entering would commence using CSPro program. This may take several months but once all the information has been entered then the next step would be simply to tabulate the required census tables, like population by island, by age, by occupation, etc. At this stage it may be possible to detect some obvious errors like: too many presidents, or too many post graduates, etc. If this is the case then it may be necessary to go back to the original census datafile and correct the entries. The idea is to

¹⁴ This is a 'local' idea and it has proved useful in the past censuses.

have a 'clean' datafile that can be stored and used by planners, policy-makers, and any other interested users.

The format and the contents of the census tables produced for the census report follow closely those of the previous reports, however there may be slight changes or additions depending on the new questions incorporated in the census questionnaires. Generally the first census report is one that contains only the census tables, with no analysis apart from the administrative chapter at the beginning of the report. This report usually comes out a year after the census designated date.

Generally the census report produced by the census office pertains to the country as a whole however there was one year when tables for each island were published in addition to the country report. The island reports proved very useful for island councils and for the Ministry of Home Affairs but unfortunately this is quite expensive and therefore the practice has been discontinued. The information of the individual islands, however, is available and can be provided upon request. In fact, because the census datafile has been created and now stored in the NSO, it is quite easy to produce any table requested by users, in particular users who want more than what the census report shows.

12. Data analysis

Once the census results are ready, the next important task is to do the analysis. Traditionally the analysis (mainly by SPC) was quite detailed and focused mainly on the demographic aspects, but now there is a move to simplify the analysis and make it broader in scope, i.e. covering the migration, labour force, etc. in addition to the demographic section. The underlying philosophy is that policy-makers are generally not keen in very detailed and complicated analysis—they'd rather see simple and very straightforward highlights of the population census. However, this approach needs to be reviewed given that the reasons or the underlying causes for some 'abnormal' figures or conclusions, are very important for planning and policy makers.

Despite the wealth of information available in the census reports and in the census datafile, the number of analyses up to now is fairly limited. There could be many reasons but the NSO needs to promote the census results and their possible uses otherwise the huge financial costs of a census would not be justified.

13. Dissemination of census information

The office disseminates the census results through hard copies of the census reports but it can also provide information on ad hoc basis to special requests. The office also puts on the SPC Prism website the census information. However, because of confidentiality reason, the NSO does not give the census raw datafile to people outside the office. It could give the census

datafile, however, to some selected agencies which have close ties with Kiribati or those who have signed the 'memorandum of understanding (mou)' with Kiribati.

Seminars to members of Parliament are also organized to explain the main findings of the census. In some instances, when there is sufficient funds, similar seminars for government officials and representatives from the private sector and the communities would be held as well.

14. Major issues needing further consideration

As explained in one of the sections above, having two separate legislations could pose some problem in the future, in particular because there is no specific clause that gives the Republic Statistician the power to supervise the Census Commissioner. This is despite the fact that the census operation is effectively under the overall responsibility of the Republic Statistician given that the Republic Statistician is the person who actually decides on and makes the nomination of the census commissioner to the Minister. Furthermore, most of the works of the census commissioner is guided by the Republic Statistician so in effect the census operation is a function of the Statistics Office therefore it is only proper that a single Statistics legislation be put in place that incorporates the census operation as well. A real concern now is if the nominated Census Commissioner decides to do things that the Republic Statistician thinks are not right—can the Census Commissioner abide by the Republic Statistician directive? Unfortunately under the existing legislations the answer is 'No'.

Another constraint often faced by the census staff is the lack of up-to-date maps of the islands. With the rapid urbanization and high mobility of the population it is important that recent or up-to-date maps of the islands are available in order to do a proper demarcation exercise before the census enumeration.

In the selection of the census enumerators, the island councils have a very 'strong' voice and sometimes their selected enumerators do not perform satisfactorily. What is needed is for the island councils to understand that the census supervisors should be given a role in the selection process, especially given that the supervisors had a thorough training on the census procedure.

There is a need also to standardize the definition, coverage and scope of employment/unemployment questions in the census and in the analysis. For instance, in some censuses copra cutters and seaweed growers, as well as local smoke preparers, are included while in others, they are not. This has resulted in some years having high number of employed people while in some years it is low. This could give a misleading or wrong conclusion which in turn could lead to irrelevant and unsustainable policies. For instance, some analyses claim the unemployment rate as 6% while some suggested more than 60%! The low unemployment rate is derived on the assumption that people doing 'village works' (like fishing for own consumption, or collecting

coconuts) are 'employed'! The fact is that the unemployment rate in Kiribati is very high—around 60% or more—and to say otherwise will only hide the reality.

Another important issue is the printing quality of the census reports. In cases where the printing is done in Kiribati, the printed tables are not very clear and certainly not very easy to read. If the census project is to have a positive impact on the people then one way is to have a very nice and readable output otherwise the census report would just gather dust on the shelves with very little use made out of it. Either the NSO looks for a better printer in Kiribati or else the manuscripts, including the census tables, should be sent to Fiji or New Zealand for printing purposes. It is quite frustrating to have a final output that is difficult to read, especially after all the efforts and the resources that have gone into its production. Also more analyses should be undertaken on the census results so that people are more appreciative of the census project.

15. Concluding remarks

Census taking in Kiribati has seen a lot of changes in the past decade or so, both in terms of the management structure and the data processing aspect. Whereas the activity was largely reserved to overseas consultants, now the activity has become a routine program within the NSO with local staff supervising the entire census operation. In terms of the data processing, gone are the days when producing a census table is a tedious and difficult task—today it takes only five minutes or so to produce any required table. But while advanced technology has really changed the way the census information is being processed and used, Kiribati will continue to rely on the 'interview' mode of enumeration because many people are still having difficulty in understanding the questions and there are also those that would deliberately provide inaccurate or false answers. In view of this the NSO will continue to educate and make people aware of the importance and usefulness of a comprehensive and accurate population census.