

**KIRIBATI ADAPTATION PROGRAMME (Stage II)**

**PILOT BASELINE STUDY REPORT**

**SURVEY OF PUBLIC AWARENESS OF AND  
ATTITUDES TOWARDS CLIMATE CHANGE ISSUES  
AND CHALLENGES**



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Kiribati Adaptation Programme Stage II

## Abbreviations

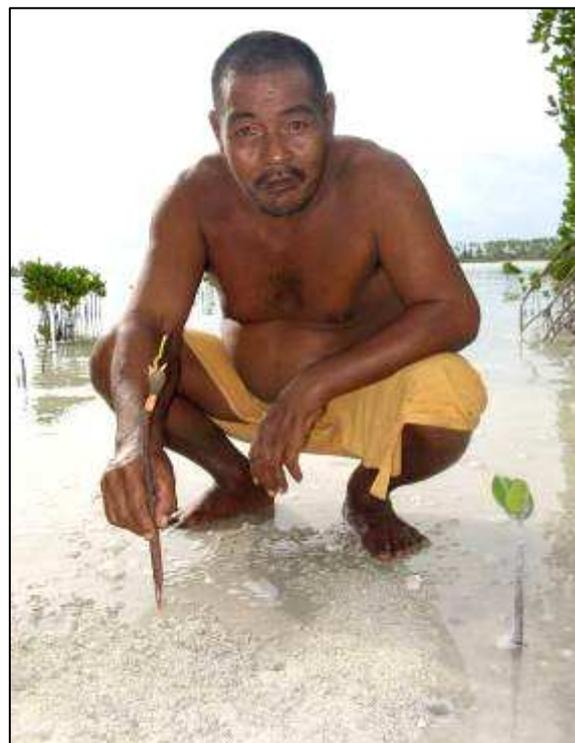
KAP	Kiribati Adaptation Programme
OB	Office of Te Beretitenti
SA	Situation Analysis
MELAD	Ministry of Environment, Lands and Agriculture Development
MISA	Ministry of Internal and Social Affairs
MFED	Ministry of Finance and Economic Development
MFMRD	Ministry of Fisheries and Marine Resources Development
PUB	Public Utilities Board
MOE	Ministry of Education
USP	University of the South Pacific



**It is important to have women on the interview team to interview women and to document women's as well as men's views on the world.**

## Terms

<b>Adaptation</b>	Adaptation means doing something new or different to what you or your community did in the past in order to adapt to climate change
<b>Berm</b>	The first ridge of land on a coastline
<b>Climate change</b>	Climate change is the gradual warming of the earth's atmosphere caused by emissions of heat-absorbing greenhouse gases, such as carbon dioxide and methane. The term is generally used to reflect longer-term changes, such as higher air and sea temperatures and a rising sea level. WB 2000
<b>Climate variability</b>	Climate variability reflects shorter-term extreme weather events, such the El Niño Southern Oscillation (ENSO) and the La Niña Southern Oscillation (which results in drought conditions in Kiribati). While there is some evidence that climate variability will increase as a result of climate change, many uncertainties remain. WB 2000
<b>Gender desegregated data</b>	Data that can be separated into male and female. This is now required in all surveys.
<b>Peri-urban</b>	Areas and villages adjoining towns ie the rest of S Tawara not including Betio, Bairiki and Bikenibeu



**“I take a brown seed pod from the mangroves and plant it in the mud like this”, said a villager from Nabeina. Some villagers in Nanikai were not as successful as this man and need advice.**

## **EXECUTIVE SUMMARY**

This report summarises the development, design and testing of a Pilot Baseline Survey on public attitudes and awareness of Climate Change Issues and Challenges for the Kiribati Adaptation Programme (KAP) Phase II (Component 1.2.4). It describes work by the Adviser on Participation and Awareness Processes from 26 October to 29 January and the National Consultant from 28 November to 29 January. KAP Phase II is co-funded by the Government of Kiribati, the Global Environmental Facility (GEF), AusAID and NZAID and administered by the World Bank.

### **Output 1**

Successful design and use of a survey instrument to measure Public Attitudes and Awareness of Climate Change Issues and Challenges, including an assessment of the effectiveness of the instrument and survey process and recommendations for improvements for future surveys.

A baseline survey is a description (using both quantitative and qualitative data) of the current status of a particular situation ie in this instance, public knowledge of and attitudes towards climate change issues and challenges in Kiribati in 2008.

The design phase of the Baseline Pilot comprised the following activities:

- desk review of previous studies in Kiribati and elsewhere in the South Pacific
- a preliminary situation analysis
- observational learning at the First National Consultation, KAP II, December 2007
- interviews with key government stakeholders and KAP staff to gain input regarding the content and phrasing of the questions and selection of islands to be visited (Appendix 1).

As a result the number of questions in the first draft expanded to 55. However, the TOR for the Baseline sought only an overview and many of the original questions were too detailed and need to be the subject of separate surveys by the agencies concerned. The final questionnaire was reduced to 36 questions by the amalgamation and simplification of some whilst others were eliminated.

The survey was designed as a quantitative study using stratified random sampling according to age and occupation. The questionnaire was designed to enable it to be replicated in years to come. Additionally, a comprehensive “Instruction manual for the national consultant and deputy coordinator” and “Instruction manual for interviewers” were developed to support the training of new interview teams in future years.

A Daily Log was developed and tested to enable the survey teams to monitor progress towards the stratified targets on a daily basis. Excel spreadsheets were developed for data collection. It has been designed to automatically generate tables and graphs for the Baseline Final Report to be written by the National Consultant. Both the Daily Log and the Excel spreadsheets were tested and modified during the Pilot phase. The use of Excel rather than more sophisticated statistical analysis programs such as SPSS

minimised that amount of staff training required. The use and availability of such programs and associated skills in Kiribati is minimal.

Statistics were taken from the 2005 *Census of population. Vol 1 & Vol 2*, from the National Statistics Office, Ministry of Finance and Economic Development, Tarawa and were used as the basis for the stratified target design.

The questions were piloted (by the Adviser on Participation and Awareness Processes and the National Consultant) initially with members of the Kiribati Climate Change Action Group<sup>1</sup>. Revisions were made before testing the questions in the field in Nanikei, S. Tarawa and Nabeina, N. Tarawa (December 2007-January 2008).

As a result of the pilot changes were made to layout, sequencing and quantity of questions. The results also assisted in identifying questions which could be amalgamated or eliminated. The rationale for this is documented later in this report

In addition to this report the following documents are also submitted to KAP II, both hard copy and computer files:

- “Manual for Interviewers”
- “Manual for National consultant and Deputy Coordinator”
- “Managing grief and loss caused by climate change & sea level rise” (Hogan 2007b)

Computer files submitted include:

- Excel data input spreadsheets
- Excel data output spreadsheets

### **Recommendations**

It is recommended that:

- the National Consultant makes careful note of any organisational or cultural issues encountered in the field in the final report so that they may be:
  - avoided in future years
  - added to training in future years
- the survey in 2009 be conducted towards the end of that year to give as much time as possible for the GOK and KAP Public Awareness programmes to have some impact
- the same National Consultant used in 2008 be re-employed to conduct the next survey in 2009. If this person is not available, it is necessary to employ an additional Consultant, if necessary International, who is knowledgeable in survey design and who is able to train the National Consultant and Deputy Coordinator.

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<sup>1</sup> The Kiribati Climate Change Action Group was formed in November 2007. It comprises a group of young people supported by the Good Samaritan sisters of the Catholic Church who work to raise awareness about Climate Change and Sea Level Rise.

- one to one training is repeated next year for a minimum of one week for the Deputy Coordinator in advance of the “Training Workshop for Interviewers”
- interviewers in future years be given the same training as was used in 2008 ie allow seven working days for preparation and practice in and outside the training room utilising the “Instruction manual for interviewers”
- if seconded government workers are employed it is essential that there be a guarantee of commitment by the GOK and by the employees themselves for the full duration of the contract. It is important to recognise the need to recruit reliable people who are available for the whole period of interview time (ie 11 weeks).
- the survey team leaders ie the National Consultant and Deputy Coordinator report weekly to Kautuna Kaitara, Project Coordinator in 2008 and 2009 giving details of progress in writing. The monitoring of progress is vital to the successful completion of the Surveys in the allotted time.
- both Team Leaders back up their lap top files every evening to the Flash Drives provided to them
- both Team Leaders back up their files to the Master computer (Asu’s computer) in the KAP office every week

**Note: The International Consultant may need to review and/or amend these recommendations following completion of the 2008 survey.**



**Members of the Kiribati Climate Change Action Group who were the first to answer the pilot questions and give feedback. Sister Claire on the left and four other young people travelled to Bali in Indonesia to represent the youth of Kiribati and present a workshop at the UNFCCC Conference in December 2007.**

## **INTRODUCTION**

Kiribati is one of the most vulnerable countries in the world to the effects of climate change and sea level rise. Most of the land in urban Tarawa (the capital) is less than three meters above sea level; the island has an average width of only 450 meters against a length in excess of 30 Km. It is home to 50,000 people ie approximately half the total population of Kiribati.

To reduce Kiribati's vulnerability to climate change, climate variability and sea level rise resulting from Climate Change, the Government of Kiribati (GOK) is undertaking an Adaptation Program in three stages:

- **Phase I: Preparation** (2003-2005, completed). This phase began the process of mainstreaming adaptation into national economic planning and identified priority pilot investments for Phase II. It also involved an extensive process of national consultation. The project was closely linked with the preparation of the 2004-07 National Development Strategy and Ministry Operational Plans.
- **Phase II: Pilot Implementation** (2006-2009). This current phase is the focus of this TOR. Its objective is to implement pilot adaptation measures, and consolidate the mainstreaming of adaptation into national economic planning.
- **Phase III: Expansion** (2009-2015). This phase is planned to gradually scale up the investments piloted under Phase II to cover all major islands and vulnerable sectors of Kiribati.

The current stage ie Phase II is co-funded by the Government of Kiribati, the Global Environmental Facility, AusAID and NZAID and administered by the World Bank. The key objective of this Phase is to systematically diagnose climate-related problems and design and promote, through public awareness and consultation strategies, cost-effective adaptation measures. At the same time KAP II will continue the integration of climate risk awareness and responsiveness into economic and operational planning within the Government of Kiribati.

## **BACKGROUND RESEARCH FOR THE PILOT STUDY**

### **Induction to Kiribati**

Dr Temakei Tebano (National Consultant on Consultation & Participatory Risk Assessment) inducted the author and Dr Tim O'Meara to current Climate Change issues in S. Tarawa through arranging:

- meetings with key officials in Ministries
- field visits to key sites in S. Tarawa illustrating the impact of climate change on the landscape and the behaviours of people as a result.

This orientation was invaluable.

### **Desk review of previous studies**

A number of recent surveys conducted in Kiribati were analysed including:

- *The Social Assessment Study* conducted Dr Ueantabo Mackenzie for KAP I (2003)
- *The Kiribati Technical Report. 1. Extent of household aggregate mining in South Tarawa 2*, conducted by South Pacific Geo-Science Commission (SOPAC) (Pelesikoti 2007 )
- *The Over the Waves Assessment Report* conducted by The Foundation of South Pacific (FSP)” (Kahiro, Kiata & Tabwea 2003)
- *The 2005 Census of Population* (Tekaieti 2005).

### **Information matrix**

An Information Matrix was developed to gain a clearer picture of what was required and the cultural context (see Appendix 2). The resulting data was used to plan the design of the questionnaire with respect to context, cultural values that need to be taken into account, key players and potential issues.

### **National consultation KAP II**

The “First National Consultation, KAP II” was held December 2007 in South Tarawa and included three representatives from each island and also from church groups. During this workshop, naturally feelings of concern were generated with regards to the impacts of Climate Change. Observations of the feelings displayed at this workshop led to the writing and circulation of “*Managing grief and loss caused by climate change & sea level rise*” (Hogan 2007b). This report on feelings generated by climate change adaptation issues is only partly completed since the results of the Baseline Survey will give more data on the feelings of I-Kiribati at this time ie 2008.

### **Cultural values card sort**

Cultural values underpin behaviours. A card sort was conducted on I-Kiribati cultural values on a wall planner. Beside it a card sort was conducted on Anglo-Australian values (Hogan 2007a). This enabled exchange of cultural information and learning between the National Consultant and the Australian Adviser.

### **KEY LEARNING FROM BACKGROUND RESEARCH**

Key learning from the Induction, Desk Review of Previous Studies, Information Matrix, the National Consultation and the Cultural Values Card Sort led to the following conclusions:

- awareness and attitudes to CC will be constantly changing because:
  - risk assessment workshops
  - previous visitors etc
- some people may have difficulty understanding the concepts & questions in the questionnaire, especially in the Outer Islands
- a sample of islands is sufficient & practical ie it is not necessary to sample every island.
- that most people will respond truthfully
- that some people may respond to give the answers they think the interviewers want to hear

- attention span of some respondents may be short
- some respondents may make jokes if they get bored
- jokes may need to be clarified and may lead to a better understanding of the respondent's ideas
- focus groups in maneabas as a strategy were rejected as they may be difficult to survey individual opinions especially those of women and youth
- it is important to include female interviewers to interview women independently of their husbands.

As a result of lessons learned from these studies it was decided that Baseline Survey must be:

- simple
- short
- quantitative rather than qualitative as it needs to be easily replicable
- easy to repeat in future years to monitor change in public awareness
- computed using Excel rather than SPSS (or similar)
- based on data from *The 2005 Census of Population*
- designed taking into consideration cultural values
- designed to include feelings, behaviours as well as thoughts about climate change.

The design of the survey was based on guidelines on baseline surveys published by the UN Food and Agriculture Organisation (UN FAO): *Participatory rural communication appraisal: Starting with the people. A Handbook* (Anyaegbunam, Mefalopulos & Moetsabi 2004).

### **QUESTIONNAIRE DESIGN**

The questionnaire was designed in November-December 2007. There was a significant amount of input into questionnaire. Information regarding the focus and content was obtained from:

- discussions with KAP staff
- observations and discussions at the KAP National Consultation (December 2008)
- discussions with ministries (see Appendix 1)
- other questionnaires from around the world on Climate Change obtained from members of the International Institute for Sustainable Development (IISD) internet discussion group.

Climate Change is a complex problem. The questionnaire brief was for an overview of attitudes and awareness of CC. It was difficult to gauge the depth of detail required (now and in the future) by the different Ministries of the Kiribati government. The first draft include 55 questions, subsequently refined to 36 by the amalgamation and elimination of some questions.

### **Coding of responses**

The questions were designed to be simple and short.

All potential answers were given a code number to speed up data entry into an Excel spread sheet and to minimise staff training, eg.

[A1] Tamana      [A2] Makin      [A3] Kuria      [A4] N. Tarawa  
 [A5] Betio      [A6] Bairiki      [A7] Bikinibeu      [A8] Other location in S Tarawa\_\_\_\_\_

### Sample size

Surveys normally cover only a sample of the population. The sample size is a compromise between the ideal size to be statistically representative and the realistic size based on the resources available in terms of money, time and personnel.

### Figure 1 Sample size

(Anyaegbunam, Mefalopulos & Moetsabi 2004)

Group size	Sample %	Number of people
100	15	15
200	10	20
500	10	50
1,000	5	50

### Household<sup>2</sup> survey

A survey interview questionnaire was considered to be the most appropriate method to generate baseline information required for this study and allow respondents to reply independently to sensitive questions about climate change without the influence of others. Interviewers were asked to only interview one person per household.

### The scope of the survey

It was decided that the Baseline Survey should omit:

- young people under 15 years of age
- sick people in hospitals
- people in prison
- ianena (I-Matangs as well as people from other islands who are non residents of Kiribati).

Mitigation measures were not asked for in the ToR and were therefore scoped out.

### Stratified random sampling

Everyone in Kiribati are/will be affected by sea level rise resulting from climate change and global warming.

It is neither necessary nor are there resources to interview everyone in Kiribati, it was decided to use “stratified random sampling”. This involved dividing the population of Kiribati as recorded in the census into distinct subgroups according to important characteristics ie age, occupation and gender and then selecting a random sample out of each subgroup.

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<sup>2</sup> A “household” in Kiribati is defined as a small group of persons who share living accommodation, who pool some or all of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food (2005 Census Report)

The questionnaire cannot be entirely random as according to local cultural protocols, the questionnaire is preceded by radio announcements, contacts with local councils etc. The island councillor was asked to help the interviewers to identify individuals who conform to the stratified target populations for the Pilot Study.

The actual stratified target sample sizes for the surveys are given in the tables in Appendix 3. They broadly comply with the UN FAO guidelines modified slightly to conform to the available time and resources.

The target numbers in each subgroup were used in a Daily Log in order to monitor progress towards the targets described above (see Example of a Daily Log for Tamana in Appendix 4).

### **Selection of islands to be visited**

Factors influencing decision making for islands to be studied was aided by an Island Decision Making Grid, see Appendix 5. Under the KAP I guidelines, North Tarawa and Tamana in the south are pilot islands for KAP II work. It was considered vital to measure community awareness of climate change in S. Tarawa as half of the population of Kiribati live there. Makin (together with N. Tarawa and Tamana was chosen as it was also the target for the KAP Community Risk Assessment Surveys. Kuria was chosen as an example of small island which was not being targeted by any KAP programmes in 2008 to see if there was any difference in information distribution on this island.

### **Back translation of questionnaire**

The original questionnaire was written in English. Before commencement of the Pilot Study it was translated into I-Kiribati by the National Consultant. Then another KAP staff member “back-translated” the I-Kiribati version into English. The two English versions were then compared and the I-Kiribati version adjusted where necessary. This process was very useful and highlighted some needed fine tuning to the translation.

During the pilot study, some villagers were interviewed in English by the International Adviser and others in I-Kiribati by the National Consultant. This enabled both to gain an understanding of the time taken to undertake the questionnaire and time taken between interviews.

### **Questions about environment**

The primary drivers of climate change are the winds, rain, ocean currents etc. Ideally a mix of data should be collected over time including both local wisdom and knowledge and scientific measurements focusing on at least three elements of each driver:

- direction
- strength
- variability.

In the mainstream scientific community, it is recognised that data relating to climatic trends needs to be measured over a minimum of 30 years. An ideal time span would be considerably longer than this.

At the time of the Pilot Study ie January 2008, individuals' perceptions of trends inevitably focussed on recent events which are simply the result of year to year fluctuations in climate as opposed to long term trends. Villagers in North and South Tarawa were experiencing drought due to the La Niña Southern Oscillation<sup>3</sup> (which started mid 2007) and as a result it was difficult for them to answer questions on "trends" since they were pointing to wells, trees, crops and describing their state "now" which understandably was their immediate main concern. As a result the data collected was meaningless so it was decided to delete these questions (See Appendix 6).

This area could be the focus of a whole study in itself. Indeed such detailed gathering of local wisdom about the environment could be more easily and accurately achieved through Participatory Risk Assessment Processes (Nakalevu T. et al 2006; Taito Nakalevu et al 2006) or selected Participatory Rural Appraisal techniques. In fact Participatory Risk Assessment Processes will be part of KAP II work in 2008 to the islands of N. Tarawa, Tamana, Makin, Onotoa, Tabiteuea North and Beru.

In Nabeina, North Tarawa, some villagers reported problems with dying babai crops. At first this was thought perhaps to signal increasing salination of the fresh water lens. However, further questioning led to the information that this was due a beetle pest. Here again, information about crops required more detailed and lengthy workshops to gain useful data.

The designers had to keep asking:

- What data is required?
- Who is it useful to?
- What quality of information was forthcoming during the Pilot Phase?
- What workshops etc will follow the baseline questionnaire and what appropriate division of labour is required?
- What length of questionnaire is suitable for interviewees?

However, the brief for this questionnaire was to give an overview of perceptions about climate change over time. Additionally, the Pilot Study indicated that if interviews are too long respondents get bored, concentration wanes and the quality of their responses deteriorated as a result.

Regarding media used to gain information about climate change, it was noted that video technology appears to have overtaken by DVDs so this option in Question xxx was omitted from the questionnaire. It was noted in Nabeina in North Tarawa that

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<sup>3</sup> There was a strong La Niña episode during 1988-1989. La Niña also formed in 1995, and in 1999-2000. The last La Niña was a minor one, and occurred 2000-2001. Currently, in Kirbati, there is a moderate La Niña, which began developing in mid-2007.

some people had TVs but could not afford TV licenses. But they do watch DVDs. Also that others who could not afford a TV/DVD made good use of the TV in the maneaba. DVDs may be used as a very useful form of “edutainment” ie educate as you entertain. However, it appears there is a problem with safe storage of DVDs and retrieval on Outer islands.

A final review of the questionnaire was made after the pilot testing in Nanikai, S Tarawa and Nabeina, N Tarawa in January 2008.

### **Awareness raising strategies**

Awareness raising about the Baseline Survey started at the end of December 2007 through:

- meetings with leaders of government departments for feedback (see Appendix 1)
- newspaper advertisements to the general public about the pilot questionnaire and main questionnaire
- radio announcements.

Awareness raising is desirable, and culturally polite, but it also raises expectations. This means that the Public Awareness Programmes have to follow through with positive help to enable the people of Kiribati to undertake proactive and informed adaptation strategies soon after the questionnaire is administered.

### **PILOT SURVEY**

The Pilot Questionnaire was administered in the last week of December 2007 and first three weeks of January, 2008 by the Regional Adviser on Participation and Awareness Processes and the National Consultant. Respondents were drawn from:

- Nanikai a village designated as “urban” in South Tarawa (close to Bairiki)
- Nabeina, a village designated as “rural” in North Tarawa.

According to cultural protocols, briefing interviews were held with Mr Maraki Bokai of the Teinainano Urban Council (TUC) and Mr Aboo Timeon, the Councillor from Nanikai and Mr Baobu Mikaere, the Councillor from Nabeina.

After the pilot test, the completed questionnaires were processed in an Excel spreadsheet to check for any data entry issues or problems.

The pilot survey was useful in gaining information on the:

- content and wording of the questionnaire
- length of time to administer the questionnaire
- time spent between households
- time spent computing Daily Logs
- time spent entering a questionnaire into a spreadsheet.

This data was recorded to ensure the number of households required for each interviewer in the field work was sufficient. A copy of the final questionnaire is attached in Appendix 7.

## **LESSONS LEARNED FROM THE PILOT SURVEY**

### **Negative questions**

I-Kiribati people are predominantly Catholic or Protestant. Some people believe the Bible literally ie that according to the story of Noah and the flood that God promised Noah after the flood waters had subsided that “there will be no second flood”. This expression was raised at the First National Consultation KAP II in December 2008. Indeed some participants commented that they were reassured by this statement from the Bible. However this in part signalled being in “denial” about climate change and to continue with life as if nothing is changing.

Negative questions and statements are always a problem in questionnaires. Many people believe this and interviewers heard people say “Our God is a loving God; therefore he will not let a flood happen to Kiribati people”. The following question was tested during the pilot study:

According to the Bible “There will not be a second flood” do you agree, disagree or are you unsure?”

As this was a negative question it understandably caused some confusion for respondents. As a result it was deleted because:

- respondents were confused and answers were potentially inaccurate
- we did not want to reinforce this message which reinforces denial.

### **Giving the answers you want to hear**

During the Pilot Survey the interviewer tested different approaches to questioning:

- showing respondents the list of possible answers
- not showing respondents the list of answers.

There was a dilemma. On the one hand there was concern that if you show respondents potential answers they may wish to say “yes” to all the options. On the other hand, if you do not show respondents the answers they may not know what options exist or they may forget owing to the strangeness and stress of the interview situation. Having tried both options, it was noted by both the Adviser and the National Consultant that respondents did not say “yes” to all options, especially when assured clearly at the beginning that it was necessary to hear their truthful response and that the survey is anonymous. (Respondents are asked for their first names merely for identification and to ensure that they are not interviewed on a following day).

As a result the Adviser and the National Consultant decided to show respondents lists of options except for Question 35 “What do you think are the causes of climate change?” This was because it was already established that there were many myths in the community (as in other countries) and it was better to find out what they are by

asking an open ended question in order to better inform the KAP and GoK Public Awareness staff.

Respondents often give the answer they think the interviewer wants to hear or what is considered correct. The statement:

“We need to *cooperate* to look after the coastal area (matanwin te aba) do you agree disagree or are you unsure?

always received a positive response so it was deleted. However, this message is important for the Public Awareness campaign in the future since there needs to be cooperation to protect this vulnerable zone especially in South Tarawa<sup>4</sup>.

### **National Disaster Plan**

The question “Is there a national disaster plan in place on your island?” was kept in the questionnaire even though at the time of writing the Adviser knew that there was no plan in place as yet. Discussions with Ms Tarsu Murtoch, Secretary, Office of Te Beretitenti (OB) indicated in meetings that this was a priority for the OB and that she and another staff member had recently received related training. She indicated that South Pacific Geo-Science Commission (SOPAC) also offered to assist in the design and implementation of a National Disaster Plan. As a result the question was added so that in future years monitoring could take place about public awareness of this most important safety issue.

### **INITIAL FINDINGS ABOUT ADAPTATION FROM PILOT STUDY**

Meeting with people during the pilot enabled the Pilot Team to gain some understanding of issues facing people in S Tarawa in particular.

Some people are digging up mangrove shoots from healthy mangroves and planting them in inappropriate areas (thus inadvertently mining mangroves in a similar way to mining aggregate from beach and building ineffective walls).

Some people showed proudly their walls built from aggregate from the neighbouring reef. There is a pressing need for increased public awareness on the:

- care of berms
- planting of trees and bushes to bind soil together along the coastline
- successful planting and care of mangroves
- desirable shape and construction of walls if their money is not going to be lost.

Regarding dissemination of accurate knowledge and skills in short and long term adaptation measures, DVDs are a welcome form of “edutainment” ie entertainment with an educational message. However as observed safe storage and filing of DVDs is a problem.

Others commented that they knew mining of aggregate and decimation of local reefs was wrong, but had no alternative. There is a pressing need for the Government and

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<sup>4</sup> Currently the coastal zone in South Tarawa is under severe pressure due to the mining of aggregate, pollution and people erecting dwellings on the edge of berms as well as erosion and longshore drift.

SOPAC to mine aggregate from areas identified under the lagoon in South Tarawa.

Notable quotes include:

“People are willing to get aggregate from other, safer sources if they are available”

“Something has to be done we can’t waste time”

“The government MUST enforce rules to stop waste and pollution on beaches”

“Climate change is happening; people are not believing it and not responding. Hopefully through your survey, people will have to believe it and what will happen to Kiribati in 50 years time.”

“Will we be arrested from anything we say here?”

“Older people are saying that ‘God is loving and he will find a way to solve the problem but we cannot depend on God alone”

The Pilot Survey and the Baseline survey promote public awareness about Climate Change. One villager in Nabeina, N Tarawa commented “We had heard about climate change, but from your questions we now realise how serious it is”.

The Pilot Survey brought to the fore a number of pertinent issues that will provide good starting points in developing the Public Awareness campaigns of the GoK and KAP.

### **RECRUITMENT OF INTERVIEW TEAM**

Recruitment of interviewers was undertaken with assistance from Mrs Wiriki Tooma, Secretary, Human Resources, Public Service Office. To ensure consistency of information and skills, interviewers were recruited in Tarawa and are to be trained together.

Problems encountered included the loss of the Deputy Coordinator on the day he was due to start work with KAP II due to a job placement within the Public Service. This caused problems as:

- the five team members had been interviewed and selected
- roles had been allocated
- contracts were being prepared
- a planned training day for the Deputy Coordinator was lost
- additional time was spent contacting, interviewing and selecting replacement staff.

See Terms of Reference in Appendix 8

### ***Supervisors***

The interview team comprises six people in total. They will be divided into two teams of three who will focus on different islands and areas in South and North Tarawa.

The National Consultant, Mr Tatoa Kaiteie will be in charge of the:

- data collection overall
- two teams of three overall (ie six people in total including him) and will lead one team (of three people)
- end of survey report.

The Deputy Coordinator, Ms Turang Teuea will supervise one team of three in South Tarawa and on Outer Islands. It was agreed that they should report weekly to Mr Kautuna Kaitara, KAP II Project Coordinator.

### **Training of interview team**

One-on-one tuition has been given to the National Consultant and the Deputy Coordinator. The skills and knowledge required are fully documented in the:

“Manual for Interviewers”

“Manual for National consultant and Deputy Coordinator”

In summary the training for the interview team includes:

- strategies to be effective and efficient as a team (ground rules established by the team members themselves)
- practice in questionnaire delivery in a controlled classroom environment and in the field
- practice in completing Daily Logs
- standards of courtesy and respect to obtain the cooperation of Island Councillors, village heads and respondents etc
- practice in entering data into Excel spreadsheets
- a field excursion to widen knowledge of impact of climate change and adaptation strategies
- revision and a final test and re-teaching if necessary.

The Interview Planner: dates & destinations table is attached in Appendix 9.

## APPENDIX 1 QUESTION DESIGN CIRCULATION LIST

Key stakeholders consulted with regard to the content, phrasing of the questions and the choice of islands during the Baseline Pilot planning period November 2007-January 2008. Thanks to those marked \* who gave us specific feedback.

Name	Role	Department	Date	
Mr Tekautu Ioane	Director, Cultural Museum	MISA		*
Mrs Aritita Tekaieti	Senior Statistician Census training & co-ordinator	MFED	Nov 30 2007 21 Dec	*
Mr Tekena Tiroa	Acting Republic of Kiribati Statistician			*
Ms Titeem Auatabu Ms Reenate Willie	Resource Information Officer Acting Minerals Officer	MFMRD	6 Dec	
Ms Wiriki Tooma	Secretary, HR Resources	Public Service Office	11 Dec 28 Dec	
Mr Kauaba Ibutuna Sr Kakare Biita Mr Toani Benson Ms Tanaki Aukitino Mr Teariki Antonio Ms Tiribo Tawita Sr Teuua Kanono Ms Baiki Ngatau	Chair/Treasurer Vice Treasurer Member Member Member Member Member Member	Kiribati Climate Change Action Group	11 Dec	all *
Mr Riibeta Abeta, Ms Tererei Abete-Reema Mr Nakibae Teuatabo	Acting Climate Change Planning Officer Director, Environment and Conservation Division Climate Change Consultant Biodiversity	MELAD	28Nov 5 Jan 13 Dec & 29 Dec	*  *
Mr Tienang Timona	Water Engineer	PUB	13 Dec	
Mr Rikiau Takeke Mr Teata Teau	Secretary Director of Rural Development	MISA	13/27 Dec 12 Dec	*
Ms Tarsu Murdoch	Secretary	OB	14 Dec	
Ms Tekoa Ietaake Ms Akka Rimon,	Secretary Senior Assistant Secretary	MED	14 Dec	
Mr Tebutonga Ereata Mr Andy Sheehan Ms Reei Tioti	Chief Land Administration Officer Senior Land Planning Officer Senior Land Information Officer	Land Management Division, MELAD	24 Dec	* *
Dr Ueantabo Neemia-Mackenzie	USP Centre Director Adviser, KAP I	USP	28 Dec	*
Mr Martin Puta Tofinga	Private Consultant	Tofinga M. P. & Associates	28 Dec	
Dr Robert Kay, Ms Carmen Elrick	KAP II, Risk Assessment/ Coastal Management Consultants	Coastal Zone Management (Australia) Pty Ltd	Various dates	*

**Villagers of Nabeina, North Tarawa have built breakwaters of local materials to prevent long shore drift (erosion and movement of materials along the shoreline).**



**We need to look after the reefs that protect the shoreline and are habitats for fish and other marine organisms.**



## APPENDIX 2 INFORMATION MATRIX

PURPOSE: To develop an Annual Survey of Public **Attitudes** to and **Awareness** of **Climate Change Issues and Challenges**.

cc=climate change K= Kiribati

What do we want to know?	Why?	What do we already know?	Where do we go to find out?	What are the limitations? What don't we know?	Who do we ask?	What kind of information is needed/ not needed?	How do we find out?
<p><b>TOR stage 1</b></p> <ul style="list-style-type: none"> <li>Awareness of CC</li> <li>Attitudes to CC</li> </ul> <p><b>Not in TOR</b></p> <ul style="list-style-type: none"> <li>Types of adaptation</li> <li>Mitigation measures.</li> </ul> <p>Is there any change in :</p> <ul style="list-style-type: none"> <li>Attitudes</li> <li>Awareness of CC over time</li> </ul> <p>resulting from Public Awareness Strategies by KAP and GoK?</p>	<ul style="list-style-type: none"> <li>To inform government &amp; future KAP consultants &amp; about the perspectives of the people</li> <li>To enable people of Kiribati to make informed choices</li> <li>To help GoK &amp; KAP design appropriate public awareness campaigns to change behaviour to enable people to adapt to CC in the short term &amp; to make plans for the long term</li> </ul>	<ul style="list-style-type: none"> <li>CC is happening</li> <li>Information on CC is very mixed</li> <li>Some people understandably angry at countries who have caused cc</li> <li>Dr Mackenzie's report</li> <li>Youth forum on CC in Tarawa, July</li> <li>4 youth represented K at United Nations Framework Convention for Climate Change in Bali Dec 2007</li> <li>SPREP/PROE Pacific Island Climate Change Film Project to train 1 K youth in filmmaking in Fiji to present his/her</li> </ul>	<ul style="list-style-type: none"> <li>Design a decision making grid of Outer Islands to inform choice decision of where to visit with Baseline Study</li> </ul>	<ul style="list-style-type: none"> <li>Time to undertake in depth analysis of issues</li> <li>Island profiles not completed yet (only Makin)</li> <li>No contour maps of islands to identify low areas &amp; areas at most risk</li> <li>Lack of air photo coverage at moment</li> </ul>	<p>Everyone is affected by CC</p> <p>Stakeholder groups with different interests</p> <p>TOR specifies "public attitudes &amp; awareness"</p> <p>Use a "Stratified Random Sample" based on:</p> <ul style="list-style-type: none"> <li>age</li> <li>occupation</li> </ul> <p>One person per household.</p> <p><b>Opinion leaders:</b></p> <ul style="list-style-type: none"> <li>Government</li> <li>Island councils/ committees</li> <li>Church</li> <li>Unimwane, unaine</li> <li>Rorobuaka</li> <li>Cooperative</li> </ul>	<p><b>Needed</b></p> <ul style="list-style-type: none"> <li>People's perceptions/ ideas/feelings/ myths</li> <li>Responses to adaptations necessary</li> </ul> <p><b>Not needed</b></p> <ul style="list-style-type: none"> <li>Responses to aggregate mining because study already completed</li> <li>Responses regarding waste disposal because study already completed</li> </ul>	<ul style="list-style-type: none"> <li>Baseline &amp; regular surveys</li> <li>Some opened ended interviews/ general discussions with people first to inform the questionnaire design</li> <li>Quantitative, easy to collate and replicate in future years</li> <li>Qualitative examples stories ie the "other" responses need to be collated</li> <li>Photos sets to stimulate dialogue (to be developed in</li> </ul>

What do we want to know?	Why?	What do we already know?	Where do we go to find out?	What are the limitations? What don't we know?	Who do we ask?	What kind of information is needed/ not needed?	How do we find out?
		<p>documentary at the Film Festival in March 2008)</p> <ul style="list-style-type: none"> <li>• One video on CC by NTK sent out to islands (needs updating)</li> <li>• Myths abound eg causes of CC are nuclear power</li> <li>• Good Samaritans are supporting CC awareness for youth. “Kiribati CC Action Group Formed” in Nov 2007. Showing “an inconvenient truth video in parishes</li> <li>• Mining of aggregate will continue until it is mined commercially by the GoK</li> </ul>			<p>leaders</p> <ul style="list-style-type: none"> <li>• Aia Maea Ainen Kiribati (AMAK)</li> <li>• KANGO</li> </ul> <p>Who do we not ask?</p> <ul style="list-style-type: none"> <li>• Children under 15</li> <li>• Non-resident foreigners</li> <li>• People in hospitals, jails</li> </ul>		<p>second visit) and used in facilitation training</p>

<b>What kind of help do we need for the Pilot Study?</b>	<b>Why?</b>	<b>Who do we need to get help from?</b>	<b>How do we approach them?</b>
<ul style="list-style-type: none"> <li>• Previous experience here of questionnaires etc</li> <li>• Census</li> <li>• Advice regarding research tools what worked and what didn't work?</li> <li>• Advice in deciding who to interview?</li> <li>• Advice in deciding which islands to visit</li> <li>• Advice in culturally acceptable ways of finding informants</li> </ul>	<ul style="list-style-type: none"> <li>• Advice</li> <li>• Learn from mistakes of previous surveys</li> </ul>	<ul style="list-style-type: none"> <li>• Ms Wiriki Tooma, Secretary Public Service Office</li> <li>• Mr Riibeta Abeta, Acting Climate Change Planning Officer in MELAD</li> <li>• Mr Nakibae Teuatabo, NAPA Advisor, MELAD</li> <li>• Ms Tererei Abete-Reema, Director, Environment Con Div., MELAD</li> <li>• Mr Tianuare Taueuea, Chief Health Inspector</li> <li>• Ms Titeem Auatabu, Resource Information Officer, MFMRD</li> <li>• Mr Tekena Tiroa, MFED (Census)</li> <li>• Mr Teata Terubea Acting Director Rural Planning Division (MISA)</li> <li>• Members of the “Kiribati climate change action group”</li> <li>• Mr Tekautu Ioane, Cultural Affairs Division MISA</li> <li>• Clerk at TUC</li> <li>• Ms Tarsu Murtoch, Secretary, Office of the President (in charge of disaster relief)</li> </ul>	<ul style="list-style-type: none"> <li>• Radio</li> <li>• Newspapers</li> <li>• Meetings</li> <li>• Visits</li> <li>• Phone calls</li> <li>• Church maneabas get better attendance than village maneabas. Ask to announce after service</li> </ul>

### APPENDIX 3 STRATIFIED TARGET SAMPLE SIZES BY ISLAND

Other = peri-urban areas of South Tarawa

<b>Male - by age group</b>	<b>Targets</b>				
<b>Island</b>	<b>Makin</b>	<b>Tamana</b>	<b>N.Tarawa</b>	<b>S.Tarawa</b>	<b>Kuria</b>
Total male target	45	34	87	202	35
15 to 17	5	3	12	20	3
18 to 49	31	22	60	149	24
50 or over	9	9	15	33	8
<b>Breakdown of S.Tarawa</b>	<b>Total</b>	<b>Betio</b>	<b>Bairiki</b>	<b>Bikenibeu</b>	<b>Other</b>
Total male target	202	64	14	31	94
15 to 17	20	6	1	3	9
18 to 49	149	47	10	23	69
50 or over	33	10	2	5	15

<b>Female - by age group</b>	<b>Targets</b>				
<b>Island</b>	<b>Makin</b>	<b>Tamana</b>	<b>N.Tarawa</b>	<b>S.Tarawa</b>	<b>Kuria</b>
Total female target	45	38	93	218	37
15 to 17	5	3	13	22	3
18 to 49	31	25	63	160	26
50 or over	9	11	16	36	8
<b>Breakdown of S.Tarawa</b>	<b>Total</b>	<b>Betio</b>	<b>Bairiki</b>	<b>Bikenibeu</b>	<b>Other</b>
Total female target	218	68	15	33	101
15 to 17	22	7	2	3	10
18 to 49	160	50	11	25	74
50 or over	36	11	2	5	16

<b>Male - by employment group</b>	<b>Targets</b>				
<b>Island</b>	<b>Makin</b>	<b>Tamana</b>	<b>N.Tarawa</b>	<b>S.Tarawa</b>	<b>Kuria</b>
Total male target	45	34	87	202	35
Cash employee	10	7	18	79	7
Village work	26	19	50	51	20
Unemployed	6	6	8	45	5
Student (15 or over)	3	2	11	28	3
<b>Breakdown of S.Tarawa</b>	<b>Total</b>	<b>Betio</b>	<b>Bairiki</b>	<b>Bikenibeu</b>	<b>Other</b>
Total male target	202	64	14	31	94
Cash employee	79	25	5	12	37
Village work	51	16	3	8	23
Unemployed	45	14	3	7	21
Student (15 or over)	28	9	2	4	13

<b>Female - by employment group</b>	<b>Targets</b>				
<b>Island</b>	<b>Makin</b>	<b>Tamana</b>	<b>N.Tarawa</b>	<b>S.Tarawa</b>	<b>Kuria</b>
Total female target	45	38	93	218	37
Cash employee	5	4	10	50	4
Village work	22	19	46	61	18
Unemployed	14	13	20	77	13
Student (15 or over)	3	2	16	30	2
<b>Breakdown of S.Tarawa</b>	<b>Total</b>	<b>Betio</b>	<b>Bairiki</b>	<b>Bikenibeu</b>	<b>Other</b>
Total female target	218	68	15	33	101
Cash employee	50	16	3	8	23
Village work	61	19	4	9	28
Unemployed	77	24	5	12	35
Student (15 or over)	30	9	2	5	14



## 2. Female – S.Tarawa – Peri-urban

	Total	15-17	18-49	50+	Daily Total	Cash Work	Village Work	Unemployed	Student 15 or +	Daily Total
Date ↓										
Target →	101	10	74	16		23	28	35	14	
Balance										
Balance										
Balance										
Balance										
Balance										
Balance										

## APPENDIX 5 ISLAND DECISION MAKING GRID

Information to determine which islands to visit for baseline study

Islands north to south	Popn -- neg growth + significant popn increase	General information	No lagoon	KAP community risk assessment workshops planned for 2008	Senior secondary schools	GoK designated growth centres	SDGIK UNDP * workshop # short visits by participatory planning counterpart
<b>GILBERT GROUP</b>							
Banaba	301	Raised reef island with water in limestone core; bad water shortages; phosphate mining	*				
Makin	2385+	Big storm waves on a fine day as a result of a hurricane many hundreds of miles to north. Higher rainfall more lush vegetation	*	*(small)			*
Butaritari	3280--	KAP coral monitoring images EU \$ SOPAC 1964 North higher rainfall and lush veg				*	
Marakei	2741						
Abaiang	5502--				x 2 senior sec sch	*	
Tarawa N	5678+	* KAP pilot		*		*	#
Tarawa S	40311+						
Maiana	1908--						
Abemana	3404+	KAP images under KAP \$ centre				*	*
Kuria	1082						
Aranuka	1158						#

Nonouti	3179				x1 senior sec sch		
Tabiteuea N	3600	KAP		*UNDP	x1 senior sec sch	*	*#
Tabiteuea S	1298	KAP					*
Beru	2169--			* Requested impact assess on causeway & sea walls	x1 senior sec sch		
Nikunau	1912		*				
Onotoa	1644--			* Requested impact assess on causeway & sea walls			
Tamana	875--		*	* (small)			
Arorae	1256		*				#
<b>LINE &amp; PHOENIX GROUP</b>							
Teeraina	1155						
Tabuaeran	2539+	inland freshwater lake					
Kiritimati	5115+					*	
Kanton	41--						
Total popn	92533						

## APPENDIX 6 DELETED QUESTIONS

This question relates to changes over time, not just this year.

Have you noticed any changes in your environment (weather, tides and oceans) over the past 10-20 years?

[21.1] yes (see specific questions below) [21.2] no (go to section E) [21.3] not sure (interviewer to elaborate)

22. If “yes”, can you tell me what changes you have noticed in the RAINFALL?

[22.1] no change [22.2] less rain [23.2] more rain [23.3] rainy season erratic

[23.4] other\_\_\_\_\_

23. If “yes” can you tell me what changes you have noticed in the TEMPERATURE?

[23.1] no change [23.2] hotter [23.3] cooler [23.4] other\_\_\_\_\_

24. If “yes”, can you tell me what changes you have notices in the WIND?

[24.1] no change [24.2] stronger [24.3] weaker [24.4] winds from different direction to usual

[24.5] other\_\_\_\_\_

25. If “yes” can you tell me what changes you have noticed in the SEA?

[25.1] no change [25.2] stronger waves [25.3] waves different direction

[25.4] higher tides [25.5] currents different [25.6] coral dying/bleaching

14. Have you observed any significant increase in COASTAL EROSION over time?

[14.1] yes If “yes” where? \_\_\_\_\_

[14.2] no

\*15. Changes to the FISH over time?

[15.1] less pond fish [15.2] less lagoon fish [15.3] less shell fish [15.4] less ocean fish [15.5] no change

[15.6] don't know

\*17.Changes to the TREE CROPS (damaged/dying) over time?

[17.1] coconut trees [17.2] pandanus [17.3] te bero fruit

[17.4] breadfruit trees [17.5] bananas [17.6] papayas

[17.7] no change [17.8] don't know

\*18. Changes to VEGETABLES & ROOT CROPS (damaged/dying) over time?

[18.1] babai [18.2] sweet potatoes [18.3] pumpkin

[18.4] no change [18.5] don't know

\*19. Changes in WELLS, PIPED WATER & WATER LENSES over time?

[19.1] wells became brackish [19.2] wells dry up

[19.3] piped water became brackish

[19.4] no change [19.5] don't know

**APPENDIX 7 BASELINE QUESTIONNAIRE**

**EXCEL NO** \_\_\_\_

**CLIMATE CHANGE BASELINE SURVEY**

**KIRIBATI ADAPTATION PROJECT (PHASE II)**

14 Jan 2008

\* indicates more than one response      N/A indicates not applicable

**Interviewer** \_\_\_\_\_ **Date** \_\_\_\_\_ **Start time:** \_\_\_\_\_ **Finish time:** \_\_\_\_\_

[A1] Tamana      [A2] Makin      [A3] Kuria      [A4] N. Tarawa  
[A5] Betio      [A6] Bairiki      [A7] Bikinibeu      [A8] Other location in S Tarawa \_\_\_\_\_

**Interviewee** \_\_\_\_\_ [B1] **M**      [B2] **F**      **Village** \_\_\_\_\_

**Location**      [C1] lagoon side      [C2] ocean side      [C3] middle of island

**A. ABOUT YOU: It helps to know a few things about your background**

**1. How old are you?**

[1.1] 15-17      [1.2] 18-33      [1.3] 34-49      [1.4] 50-65      [1.5] over 65

**2. What is your highest completed level of education? (ie passed)**

[2.1] no formal      [2.2] primary      [2.3] secondary      [2.4] college/university

**3. What is your main employment? (ie things you get paid for?)**

**Cash work**

[3.1] government      [3.2] education staff      [3.3] church  
[3.4] business (yours)      [3.5] business (someone else)      [3.6] NGO/development

**Village work**

[3.7] housewife/home duties      [3.8] village work fisherman/farmer (subsistence)

**Unemployed**

[3.9] unemployed      [3.10] retired

**Student**

[3.11] student over 15

**\*4. Do you have any leadership position/s?**

[4.1] government      [4.2] church      [4.3] women/AMAK      [4.4] youth      [4.5] cooperative  
[4.6] union      [4.7] rorobuaka      [4.8] unimwane      [4.9] unaine      [4.10] no

**5. How many years have you lived on this island?**

[5.1] less than one year      [5.2] 1-19 years      [5.3] 20-39 years      [5.4] over 40 years

**B. THOUGHTS ABOUT CLIMATE CHANGE**

**6. Before this interview, had you heard about climate change?**

*(explain in case the terms are unfamiliar)*

[6.1] yes                      [6.2] no                      [6.3] don't know

**\*7. What have you ALREADY heard about the possible FUTURE effects of climate change in Kiribati?**

[7.1] sea level rise      [7.2] increased erosion  
 [7.3] intrusion of salt into water lens, wells & babai pits  
 [7.4] more storms      [7.5] more rain              [7.6] less rain              [7.7] hotter temperatures  
 [7.8] more disease      [7.9] trees may die              [7.10] warmer surface ocean temperatures  
 [7.11] coral bleaching/dying              [7.12] fish stocks may decline  
 [7.13] government public utilities may get damaged eg buildings, roads, causeways, ports, airports  
 [7.14] private businesses and houses may get damaged  
 [7.15] don't know      [7.16] other \_\_\_\_\_

**8-10. What are your thoughts about the following statements about CC? I will read a sentence, then please tell me whether you agree, disagree or are unsure**

	Agree	Disagree	Unsure
<b>8. Climate CHANGE is happening</b>	8.1	8.2	8.3
<b>9. CC is affecting the people of THIS island already</b>	9.1	9.2	9.3
<b>10. Every individual can do something to ADAPT to climate change</b>	10.1	10.2	10.3
<b>11. Living for today is more important than worrying about the effects of Climate Change in 50 years time (N na katia)</b>	11.1	11.2	11.3
<b>12. CC will reduce the quality of life of my children &amp; grandchildren in the future</b>	12.1	12.2	12.3

**C. FEELINGS ABOUT CLIMATE CHANGE**

**\*13. How do you feel about climate change?**

[13.1] fearful/afraid              [13.2] disbelief              [13.3] confused  
 [13.4] angry                      [13.5] powerless eg I can't do anything  
 [13.6] hopeful ie we can do some things to adapt  
 [13.7] sad ie we might lose our culture & lands  
 [13.8] don't know              [13.9] other \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## D. HOW PEOPLE LEARN ABOUT CLIMATE CHANGE

### \*14. Do you make use of any of the following media at home/maneaba/church/school?

- |              |                 |                          |
|--------------|-----------------|--------------------------|
| [14.1] radio | [14.2] CB radio | [14.3] newspaper         |
| [14.4] TV    | [14.5] DVD      | [14.6] computer/internet |
| [14.7] none  |                 |                          |

### \*15. Through which media have you heard about CC?

- |                                      |                              |  |
|--------------------------------------|------------------------------|--|
| [15.1] radio Kiribati AM (Gov)       | [15.2] radio FM (commercial) | [15.3] overseas radio (BBC/ABC)        |
| [15.4] CB radio                      | [15.5] TV Kiribati           | [15.6] overseas TV channels            |
| [15.7] DVDs                          | [15.8] computer/internet     | [15.9] local newspapers                |
| [15.10] church                       | [15.11] NGOs                 | [15.12] maneaba meetings               |
| [15.13] street theatre/drama         | [15.14] posters              | [15.15] newsletter eg KAP              |
| [15.16] island development committee |                              | [15.17] people (family, friends, kids) |
| [15.18] none                         | [15.19] other_____           |  |

### \*16. By which of the following methods would you like to receive information about Climate Change and adaptation methods?

- |                                |                              |                          |
|--------------------------------|------------------------------|--------------------------|
| [16.1] radio Kiribati AM (Gov) | [16.2] radio FM              | [16.3] CB radio          |
| [16.4] Kiribati TV             | [16.5] DVDs                  | [16.6] computer/internet |
| [16.7] local newspapers        | [16.8] church                | [16.9] NGOs              |
| [16.10] maneaba meetings       | [16.11] street theatre/drama | [16.12] posters          |
| [16.13] newsletter eg KAP      | [16.14] other_____           |                          |

### 17. Have you recently attended a consultation, workshop or school lessons on Climate Change or biodiversity (fisheries/agriculture/water linked to CC)?

- |            |                        |                                |
|------------|------------------------|--------------------------------|
| [17.1] yes | [17.2] no (Go to Q 21) | [17.3] don't know (Go to Q 21) |
|------------|------------------------|--------------------------------|

### \*18. If "yes" who organised the events?

- |                   |               |               |                   |
|-------------------|---------------|---------------|-------------------|
| [18.1] MFMRD      | [18.2] MELAD  | [18.3] MISA   | [18.4] MPWU       |
| [18.5] KAP        | [18.6] church | [18.7] school | [18.8] don't know |
| [18.9] other_____ |               | [18.10] N/A   |                   |

**\*19. What did YOU learn about ways to adapt to CC? (Repeat “adaptation” definition)**

- [19.1] must plant mangroves/trees/bushes along coast
- [19.2] must look after mangroves/trees/bushes
- [19.3] must avoid damaging the reefs when fishing (using crowbar for octopus/eels)
- [19.4] how to build sea walls with concrete and sand bags
- [19.5] importance of maintaining sea walls
- [19.6] importance of sea walls having sloping sides/wide bases
- [19.7] must not mine aggregate (reef, shells, sand)
- [19.8] should not build on the berm (first sand dune closest to beach)
- [19.9] everyone needs to cooperate in adapting to CC
- [19.10] nothing
- [19.11] other \_\_\_\_\_
- [19.12] N/A

**\*20. What did you do as a result of the workshop to adapt to CC?**

- [20.1] held/attended meetings with Island Council/government departments about CC adaptation strategies
- [20.2] held/attended meetings to enable villagers to identify projects to adapt to CC
- [20.3] held/attended meetings with police/rangers/constables on how to enforce the Environment Act ie enforce environmentally friendly fishing/farming/building strategies
- [20.4] held/attended training courses to teach new skills to villagers
- [20.5] built new buildings away from shoreline (first berm)
- [20.6] gave talks in schools about CC adaptation strategies
- [20.7] had informal talks with friends/others
- [20.8] nothing
- [20.9] other \_\_\_\_\_
- [20.10] N/A

**\*21. If funding is NOT available and you needed help (physical and skills) to adapt your environment that are too difficult to do or solve alone, how would you go about it?**

- [21.1] seek help from own family
- [21.2] form a cooperative/group with different families
- [21.3] seek help from the church
- [21.4] discuss & plan within the village maneaba
- [21.5] go to government/island council/island development committee for advice
- [21.6] don't know
- [21.7] other \_\_\_\_\_

**\*22. If you learnt new information/skills about adaptation to CC, would you be prepared to share with others outside your family?**

- [22.1] for nothing ie to enable everyone to adapt together
- [22.2] for money
- [22.3] in exchange for goods/services
- [22.4] no
- [22.5] not sure

## E. ADAPTATION TO CLIMATE CHANGE SHORT & LONGER TERM

### Read out:

“Adaptation means doing something NEW or DIFFERENT to what you or your community did in the past in order to adapt to climate change”

### \*23. What have you done ALREADY to adapt to climate change?

- [23.1] planted mangroves                      [23.2] planted trees and bushes along shoreline  
[23.3] stopped cutting mangroves              [23.4] looked after trees/bushes eg watering during drought  
[23.5] built traditional sea walls of coral/driftwood/rubbish  
[23.6] built sea walls of cement/sand bags/rocks  
[23.7] stopped mining aggregate  
[23.8] built new buildings inland from the berm (first dune)  
[23.9] installed rain water tank              [23.10] conserved/rationed water  
[23.11] stopped damaging the reefs when fishing (using crowbar for octopus/eels)  
[23.12] nothing  
[23.13] other \_\_\_\_\_

### \*24. Have you already planned to do any of these things in the FUTURE ie next 5 years to adapt to climate change?

- [24.1] plant mangroves                      [24.2] plant trees and bushes along shoreline  
[24.3] stop cutting mangroves              [24.4] look after trees/bushes eg watering during drought  
[24.5] build sea walls of coral/driftwood [24.6] build sea walls of concrete/sand bags  
[24.7] maintain existing sea walls              [24.8] stop mining aggregate  
[24.9] build new buildings inland from the berm  
[24.10] install rain water tank              [24.11] conserve/ration water  
[24.12] stop damaging the reefs when fishing (using crowbar for octopus/eels)  
[24.13] nothing                                  [24.14] other \_\_\_\_\_

### \*25. If necessary, in the long term, would you be prepared to move with your family to?

- [25.1] a place further away from the beach    [25.2] another island in Kiribati  
[25.3] another country                      [25.4] no                                  [25.5] not sure

## F. EXTREME OR UNUSUAL WEATHER EVENTS

### 26. Have you recently experienced any extreme/unusual weather events for example, freak storms, wave washing over walls and causeways?

- [26.1] yes      [26.2] no (Go to Q 31)    [26.3] don't know/can't remember (go to Q 31)

### 27. If “yes”, please describe the most recent significant event:

When did it happen? \_\_\_\_\_

What happened? \_\_\_\_\_

**\*28. How did you get a warning (through which media)?**

- [28.1] radio      [28.2] CB radio      [28.3] TV      [28.4] friends  
[28.5] observed changes in the sky/sea      [28.6] none      [28.7] other \_\_\_\_\_  
[28.8] N/A

**29. What did YOU do DURING the event?**

- [29.1] stayed put (ie where you are)      [29.2] went to a safe location  
[29.3] other \_\_\_\_\_      [29.4] N/A

**\*30. What did YOU do as a result of the event? (in the long term)**

- [30.1] built a sea wall  
[30.2] dismantled house & moved to a safer location  
[30.3] abandoned house and moved to a safer location  
[30.4] moved to another island      [30.5] covered wells  
[30.6] planted mangroves along coast      [30.7] planted trees/bushes along coast  
[30.8] nothing  
[30.9] other \_\_\_\_\_  
[30.10] N/A

**\*31. What do YOU do if there is a lack of water/DROUGHT?**

- [31.1] go to the next nearest potable well      [31.2] cover wells  
[31.3] dig new wells      [31.4] repaired leaking taps and pipes  
[31.5] ask to use church rainwater tank      [31.6] get water from government  
[31.7] buy desalinated sea water      [31.8] buy imported bottled water  
[31.9] never experienced a drought

**32. Is there a “disaster management plan” in place in your village/island?**

- [32.1] yes      [32.2] no      [32.3] don't know

**G. THE CENTRAL GOVERNMENT & LOCAL GOVERNMENT**

Please indicate whether you agree, disagree or don't know with regards to the following statements.

	Agree	Disagree	Don't know
<b>33. The central/local government ARE doing things to help us to ADAPT to CC locally ie on this island. If "agree" please give examples</b> a. _____ b. _____	33.1	33.2	33.3
<b>34. The central/local government has ALREADY CONSULTED us to enable us to identify our areas of concern about CC on our island. If "agree" please give examples</b> a. _____ b. _____	34.1	34.2	34.3

**H. CAUSES OF CLIMATE CHANGE**

**\*35. What do you think are the causes of climate change? (do not show answers)**

[35.1] burning fossil fuels eg coal, oil, gas, petrol

[35.2] deforestation ie cutting down large forests and burning off

[35.3] don't know

[35.4] other (please note all ideas)\*

a. \_\_\_\_\_ b. \_\_\_\_\_ c. \_\_\_\_\_ d. \_\_\_\_\_

**36. Do you have anything you would like to add about any climate change issues?**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## **APPENDIX 8 TERMS OF REFERENCE FOR INTERVIEW TEAM**

### **KIRIBATI ADAPTATION PROGRAMME (PHASE II)**

#### **BASELINE SURVEY OF PUBLIC AWARENESS AND ATTITUDES TOWARDS CLIMATE CHANGE ISSUES AND CHALLENGES**

##### **TERMS OF REFERENCE**

### **1. INTERVIEWERS/DATA COLLECTORS**

#### **Tasks**

Data collectors will be required to do the following tasks under the direction of the National Consultant or Deputy Supervisor:

1. Train with a team of 4 others in interview techniques and data collection
2. Interview the public using a pre-designed baseline questionnaire on awareness of and attitudes towards climate change in South Tarawa and/or Outer Islands
3. Assist in data entry into computer
4. Other related duties as required by the National Consultant

#### **Qualifications and experience**

##### *Essential*

- good interpersonal skills
- must be mature (if young, must be able to handle responsibility)
- must be physically fit and of an even temperament
- willing and able to work evenings and weekends
- willing and able to work in a team
- fluent in I-Kiribati
- willingness to learn
- able and willing to travel extensively in Kiribati
- must be available full time for the data collection
- must be a good time-keeper and punctual for work/meetings

##### *Desirable*

- computing skills eg Word and Excel
- some previous experience in the administration of surveys
- must be able to translate I-Kiribati phrases into English and vice versa

## **KIRIBATI ADAPTATION PROGRAMME (PHASE II)**

### **BASELINE SURVEY OF PUBLIC AWARENESS AND ATTITUDES TOWARDS CLIMATE CHANGE ISSUES AND CHALLENGES**

#### **TERMS OF REFERENCE**

## **2. DEPUTY SUPERVISOR AND INTERVIEWER**

### **Tasks**

The Deputy Supervisor will be required to undertake the following tasks under the direction of the National Consultant:

1. Train with a team of 4 others in interview techniques and data collection
2. Interview the public using a pre-designed baseline questionnaire on awareness of and attitudes towards climate change in South Tarawa and Outer Islands
3. Supervise a team of 2 people to conduct interviews
4. Assist in data entry into computer
5. Other related duties as required by the National Consultant

### **Qualifications and experience**

#### *Essential*

- good interpersonal skills
- mature and able to supervise team of two members
- must be physically fit and of an even temperament
- fluent in I-Kiribati
- must be able to translate I-Kiribati phrases into English and vice versa
- willing and able to work evenings and weekends
- willingness to learn
- willing and able to work in a team
- must be a good time-keeper and punctual for work/meetings
- able and willing to travel extensively in Kiribati
- must be available full time for the data collection
- computing skills eg Word and Excel.

#### *Desirable*

- some previous experience in the administration of surveys.

**APPENDIX 9 INTERVIEW PLANNER: DATES & DESTINATIONS**

	1	2	3	4	5	6	7	8	9	10	11
	Jan 28	Feb 4	Feb 11	Feb 18	Feb 25	Mar 3	Mar 10	Mar 17	Mar 24	Mar 31- Apr	Apr 7
All	Training week	Practice									
<b>Team A 3 people</b>	ALL	ALL	<b>Tamana</b>	Data entry translation	Data entry translation <b>North Tarawa</b>	<b>North Tarawa</b>	Data entry translation	<b>South Tarawa</b>	<b>South Tarawa</b>	<b>South Tarawa</b>	Data entry translation x 2 interviewers
			8 working days 6 interview days			8 working days/ 6 interview days					
			Thursday-Thursday	Fri/Mon off							
<b>Team B 3 people</b>	ALL	ALL	<b>Kuria</b>	Data entry translation	Data entry translation <b>North Tarawa</b>	<b>North Tarawa</b>	Data entry translation	<b>Makin</b>	Data entry translation	<b>South Tarawa</b>	
			8 working days 6 interview days			8 working days/ 6 interview days		8 working days/ 6 interview days			
			Friday-Friday	Mon/Tues off				Sunday-Sunday or Tuesday to Tuesday	2 days off		

## REFERENCES

- Anyaeibunam, C., Mefalopulos, P. & Moetsabi, T. 2004, *Participatory rural communication appraisal: Starting with the people. A Handbook*, 2 edn, SADC Centre of Communication for Development & Communication for Development Group Food And Agriculture Organization Of The United Nations, Rome, Italy.
- Hogan, C. F. 2007a, *Facilitating multicultural groups: A practical guide*, Kogan Page, London.
- Hogan, C. F. 2007b, *Managing grief and loss caused by climate change & sea level rise*, Kiribati Adaptation Programme, Tarawa, Kiribati.
- Kahiro, L., Kiata, R. & Tabwea, T. 2003, *Over the waves needs assessment report (Data analysis)*, Foundation of the Peoples of the South Pacific, Tarawa, Republic of Kiribati. December.
- Mackenzie, U. N. 2003, *Social assessment final report*, Kiribati Adaptation Project Stage I, Tarawa, Republic of Kiribati.
- Nakalevu T. et al 2006, *CV & A: A guide to community vulnerability and adaptation assessment and action*, SPREP, Suva, Fiji.  
[http://www.sidsnet.org/docshare/other/20031230154545\\_Fiji\\_NAR\\_2003.pdf](http://www.sidsnet.org/docshare/other/20031230154545_Fiji_NAR_2003.pdf).
- Pelesikoti, N. 2007 *Kiribati Technical Report. 1. Extent of household aggregate mining in South Tarawa 2. Proposed integrated monitoring framework for Tarawa Lagoon*, EU EDF 8-SOPAC Project Report 72 Suva, Fiji. February.
- Taito Nakalevu et al 2006, *CV & A: A guide to community vulnerability and adaptation assessment and action*, SPREP, Suva, Fiji.  
[http://www.sidsnet.org/docshare/other/20031230154545\\_Fiji\\_NAR\\_2003.pdf](http://www.sidsnet.org/docshare/other/20031230154545_Fiji_NAR_2003.pdf).
- Tekaieti, A. 2005, *2005 Census of population. Vol 1 & Vol 2*, National Statistics Office, Ministry of Finance and Economic Planning, Tarawa, Kiribati.