

for a living planet



Climate Witness Community Toolkit

WWF - South Pacific Programme



Introduction

limate Change is perhaps the greatest threat to the viability of Pacific Island economies and communities in the 21st century. Climatologists have shown that due to the ever increasing consumption of fossil fuels, global temperatures are predicted to rise by up to 5.8° C by 2100. This will result in a sea level rise of up to 88 cm and disrupt global weather and rainfall patterns. This will place greater pressure on our Pacific communities as it will have a detrimental impact on the availability of food and water resources, our health and on our unique and fragile island ecosystems and biodiversity.

Although the Pacific region is an insignificant emitter of greenhouse gases that drive global warming, the region is faced with the predicament of being amongst the most vulnerable to the impacts of climate change. This is partly due to limitation in our land area, our largely coastal dwelling populations and almost complete dependence on natural resources for subsistence living and economic development.

With the reality of climate change in the Pacific, it is imperative that we work to prepare Pacific communities to deal with adverse impacts that it will bring about.

This Climate Witness Toolkit is the result of a process undertaken on Kabara, Fiji, (the first Climate Witness site in the Pacific) to document local impacts of climate change and to devise appropriate adaptation measures that local communities can implement themselves. The methodologies within the toolkit are an adaptation of participatory techniques WWF South Pacific has used over the years in community resource conservation and development projects' which should give facilitators a clear sense of process when trying to illicit information specific to impacts of climate change and developing appropriate community response.

The WWF South Pacific Climate Change Team hopes that you find the methods in the toolkit useful and wishes you success when applying them!

WWF South Pacific - Climate Change Team

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CLIMATE WITNESS COMMUNITY TOOLKIT

DAY ONE

- 1 Mapping
- 2. Seasonal Calendar
- 3. Time Line
- 4. Animal and Plant Inventory
- Presentation
- Re-look at results generated from earlier activities/identifying climate related changes

DAY TWO

- 1. Concerns and Opportunities
- 2. Community Values
- 3. Priority Values
- 4. Root Cause Analysis
- 5. Sun Ray Exercise
- 6. Two Way Vision
- Assessment on Adaptation
 Options
- 8. Community Action Plan



Mapping

Mapping is a very useful tool in determining the spatial distribution of certain aspects of our environment, may it be traditional boundaries, homesteads, agricultural areas or fishing grounds. This tool is useful in aiding the community to develop, record, organise and present information about their surroundings. Maps can be a simple and quick way of illustrating an issue and may be used as a planning tool. They are also particularly useful because all community participants can take part and check the information is accurate.

Purpose: To collect information and develop a Kabara community map of resource availability,

infrastructure and areas of cultural significance.

Materials: Butcher Paper, Tape or push pins, pentel pens (permanent markers), coloured

pens/crayons, topographic map of Kabara, aerial photographs.

Method: 1. Form three mapping teams whose task will be to develop the following:

a. Village map

b. Land Use Map

c. Fishing Ground Map

- 2. Explain to all participants that they will draw a map from their knowledge of their land, in their own way. Be clear about what the participants need to record.
- 3. Ask everyone to collect piles of objects such as sticks, stones, leaves, seeds and petals of different colours, to form about 10 piles of different objects.
- 4. Find a clear piece of ground in the village on which the map can be drawn.
- 5. Ask the more knowledgeable people to use a stick to draw important landmarks on the bare soil. This will form the framework of the map onto which other items will be added. Landmarks may include the coastline, roads or tracks, villages, mountains or hills.
- 6. The Mapping Team should think of other items that could be added to the map, for example hunting camps, spirit sites, airstrips and petrol stores.
- 7. Choose a symbol from one pile collected in step 3, to represent the item. For example, a hibiscus petal might represent sago groves; a white stone might represent the fishing hut. Place one of these symbols at each location where it is found. Allow the team time to check and discuss the accuracy of placements and to amend the map as necessary until everyone is happy with it.
- 8. Ask the team to transfer the map onto a piece of butcher's paper.
 They will need to devise alternative symbols to represent the mapped item and these should be drawn as a key down one side of the sheet of paper. The paper might then be drawn initially with a pencil to allow for correction, and later with coloured pens.
- 9. Where necessary, add names to places e.g. towns and name features such as rivers and reefs.

Time: 1-2 hours

Seasonal Calendar



KABARA ISLAND SEASONAL CALENDAR (Generated by the communities of Naikeleyaga, Tokalau, Lomati and Udu- 2004)													
	Communal Observations		February	March	April	May	June	July	August	September	October	November	December
Weathe	er Rainy Period												
II .	Dry period												100000000000000000000000000000000000000
II .	Hot period												
II .	Cold period												
II .	Sporadic showers												
II .	Hurricane Season												
II .	Weather changes												
II .	Northern winds dominate											l	
II .	Winds come from all directions (unstable)												
I∟	Southern winds dominate												
Marine	Time for the tave												
II .	Turtles breeding/nesting period												
II .	Time for the tuka (crabs)												
II .	Nuga (rabbitfish) in sesson												
II .	Breeding period for kanace (mullet)												
II .	Time for baloio (marine worms)												
II .	Kawakawa (cod) in scason- breed/abundant		l									l	1 1
II .	Migrating Whales sighted												\square
II .	Time for Jiji												$\overline{}$
II .	Time when octopus breed and is abundant												-
II .	Fish in general is abundan@breed on reef												
	Breeding period for sharks												
	Breeding period for seqs (trevally)						\perp						
	Time for sisidi/vivili (shaliffsh)				l								1
I	Time for the tabace (surgeonfish)						\vdash						-
Land Fauna	Time for mosquitoes												
H	Time when the Golden Plover visit Kabara												
H	Breeding period for Bobbies (Tavunasici)												
	Tropicbird visit and breed on island	1	1	ı	ı	I	ı 1		1	I			

A seasonal calendar is a tool for documenting regular cyclical periods (ie seasonal) and significant events that occur during a year and influence the life of a community. It provides a general picture of important environmental, cultural and socio-economic periods throughout the year. The seasonal calendar is of particular value as it allows local people to represent their understanding of seasons from their culture. These are often different from 'official' seasons and the International calendar.

Purpose: To develop local community seasonal calendar for the Island of Kabara.

Materials: Butcher Paper, Tape or push pins, pentel pens, coloured pens/crayons

Method:

- 1. Form Seasonal Calendar teams into 5 groups, a mix of old and young people. Provide each team with pentel pens and coloured pens.
- Draw a large circle onto the butcher paper provided to each group. Mark the top of the circle to represent the beginning of the year, and then explain that the bottom of the circle is half way through the year and the top is back to the start and a new year.
- Have the groups divide the circles into 12 sectors and for each sector have participants discuss, identify and mark with different coloured pens (key) their local observations with regard to the following:
 - a. Marine environment- spawning of fish types, migration of whales etc
 - b. Forests/Birds- flowering of trees/migration of birds
 - c. Agriculture- ripening of fruits/planting and harvesting of root crops
 - d. Weather- rainy periods/dry periods/hurricane season/droughts
 - e. Social Events- major village functions/celebrations
- 4 Once completed, have each group discuss their calendar and have the other groups comment and add onto the chart.
- Draw a copy of the finished calendar on to paper with coloured pens. Use local symbols to represent each item. Draw the key on one side and place the authors' name on the sheet.

Time: 1-2 hours

Community Time Line

A time line is a chronological listing over many years of key events in the history of a community or area. The time line facilitates community discussion and examination of past trends, actions, problems and achievements. It is useful in resource planning and decision making to think back on these past events and experiences and look at how they influence present attitudes and actions.

The events which are recorded on the time line may include spiritual and cultural events, movements of people, introduction of new technology, natural disasters, political events or decisions, development projects and so on.

In developing a time line community members record back as many generations as villagers can recall. Group discussions of the time line provide a good opportunity to ask elders about previous happenings and traditional community responses.









Purpose: To help the community better understand what natural and human events have influenced the lives of the communities on Kabara

Materials: Butcher Paper and pentel pens

Method:

- 1. Organise the participants composed of elders, males, females and young adults. Have each group construct time lines.
- 2. Explain the purpose of community time lines. Ask the community to identify the events that shaped and influenced individual and community activities. Start the timeline by someone in the group identifying an important event in history on the community and the year it occurred. It does not have to be the earliest activity remembered. Record the year and event. Ask for another event. Record this and the year above and below the first. Help the group to work back to the earliest events they can remember.
- 3. Discussion may start off slowly but the following prompt questions may be used to speed the process along:
 - When did people first settled in the village and where did they come from?
 - Have there been any serious cyclones, floods, periods when the gardens have failed or other natural disasters?
 - What are some of the development activities the community has done?
- 4. Record the events by year on long sheets of paper. Write in large letters in the local language for the entire group to see and understand.
- 5. If there is difficulty in establishing dates for particular events, try to relate them to more well known events such as World War II, independence, establishment of the church, death of an important person.
- 6. Once timeline is established, get participants to validate and present.

Time: 2-3 hours

Community Animal and Plant Inventory

Communities often build up an intimate knowledge of the plants and animals with which they share their land. In addition to recognising animals, people often know a lot about the way plants and animals relate with other aspects of their environment. The inventory provides for a quick method of obtaining what plant and animal types are known to be within a community's boundary.

Purpose: To collect information on biodiversity present on Kabara

Materials: Butcher Paper, Books of Plants and animals of Fiji, pentel pens

Method: 1. Divide participants into 5 groups-

- Forest trees and plants
- Agricultural plants
- Birds and animals
- Fish/shellfish/sea plants
- 2. Ask each group to fill out the following in column format on the butcher sheet:
 - Name of plant/animal/fish in Lauan
 - Uses/Significance
 - Abundance or Loss
 - Locality
- Once each group has finished entering their results, swap with the next group and continue until they have had a chance to fill all five butcher charts.
- 4. Get the group to present their results and discuss.

Time: 2 hours



Review of Results and linking to Climate Change

Purpose: To identify changes to the environment and community life on Kabara that is linked to

climate change

Materials: Butcher Paper, Results from earlier activities, pentel pens

Method:

Mapping

Ask the participants to review the sketch map developed from tool 1 and mark changes that have occurred over the last 5, 10 or 20 years. The changes should be in terms of coastal erosion, relocation of houses, changes in fishing and agricultural areas. As the participants mark of these changes on the map, ask them to elaborate on the changes. Record results

Seasonal Calendar

Ask the participants to review the seasonal calendar developed from tool 2. Discuss changes or uncommon events that have been observed with regard to seasonality of their environment in recent years. This can be events such as prolonged drought, increased rainfall, early fruiting/flowering of trees etc. Record observed changes and discussion. Trend Lines can also be used for selected aspects on the seasonal calendar for example- fish catch, agricultural productivity, water availability.

Time Line

Get the participants to divide the information generated from tool 3 into categories such as environmental/natural changes (e.g. occurrence of natural calamities) or human made events (e.g. economic activities). Select certain highlighted environmental aspects such as hurricanes or water shortage and get participants to determine whether intensity and frequency is increasing or not and record results.

Community Animal and Plant Inventory

Get the participants to look at the inventory and identify those plants and animals that are now in low abundance. Ask them to discuss and record possible causes for their decline and the likely impact of its loss on community life.

Time: 2 hours





Concerns and Opportunities

It is always important to allow communities to identify its own needs and arrive at possible solutions. This tool provides a simple but systematic way to help the community to identify and refine the specific issues. It helps them to define the problems or conflicts that concern them most (concerns) and to look for possible ways to solve or address these (opportunities).

By listing 'Concerns' and 'Opportunities' on a sheet (or sheets) of paper, this tool provides an effective framework with which a community can determine its priorities





Purpose: To organize community climate change related issues and consider options

that should help address them.

Materials: Butcher paper, pentel pens

Method: A list of Concerns and Opportunities can be generated in several ways. The list might include items generated from many sources, including meetings, brainstorms, individual discussions, small group exercises, transects or theatre sessions. The list should be retained in the community and continually revised to include more information as it

comes forward.

1. Prepare a sheet of butchers' paper with a line down the centre. Title the left-hand column 'Concerns' and the right-hand column 'Opportunities'. Keep the sheet in a safe but accessible place.

- 2. Record Concerns and Opportunities as they are expressed by the community. Be as specific as possible. Do not discount ideas generated even if they seem strange at first, and try to be open about your suggestions for Opportunities. Leave plenty of space for more to be added later.
- 3. Review and update the sheet regularly; it is important that a community as a whole checks and confirms the list. Try to make items more concrete. Add any new information and ideas to the columns.

Time: Ongoing

Community Values

Before a community can begin to discuss what their vision is for the future, they need to think about what is important to them and what they wish to maintain or develop within the community. In situations of rapid change, this activity of thinking about community values is often overlooked.

To encourage discussion and consideration within the community about what is **Purpose:**

important to community members lives and what they wish to maintain into the future.

Materials: Butcher paper, pens

Method: Explain the importance, when trying to solve problems or developing a vision for the community, of thinking hard of what is important in our lives. To start the discussion, ask each participant to individually go outside and collect an object s/he feels represents something that is important to them. The group should be quiet while individuals collect their thoughts.

Allow 15 minutes for this.

- 2. After everyone has returned, invite individuals to present their object. Ask them to explain:
 - What their object represents
 - Why it is important to them
 - What is its' importance to the community
 - What is its' importance to the province and nation
- 3. Select one person to record the responses of individuals on butchers' paper.
- 4. Discuss the different values presented with the group. Some possible questions-"Are some sets of values in conflict with others?", "Are some values shared by all; are some only held by a few?", "Are any of the values under threat from current development activities or trends?", "Are there any values that may be potentially affected by climate change?"

1 Hour Time:



Priority Values

Community values once identified may be broad as values vary from participant to participant, it is therefore important to prioritise values that are appreciated more by the collective group rather than by the individual.

Purpose: To assist community members to determine which values are of great importance to

them and would like to see maintained.

Materials: Butcher paper, pentel pens

Method:

- 1. Ask each participant to think of three things that are important to them and the reasons why they are important (they will be asked to justify their choices).
- 2. Ask each person to take a partner and to share their three choices and the reason for their selection. Each pair should discuss these and select just three which they think are the most important.
- 9. When all the pairs have completed the task, combine pairs into groups of four members. Ask each group to repeat the task, with each pair explaining their three's, each foursome discussing these and then selecting a new set of three.
- 10. Combine the groups of four into groups of eight and repeat the task, then form groups of 16 and so on until the group is down to one.
- 11. Finally ask the larger group to present their three choices and the reasons for their selection. Review the choices that were given less importance. Ask "How did they make the choices?", "Were there major disagreements?", "What do you do when there are disagreements in the community over values?"

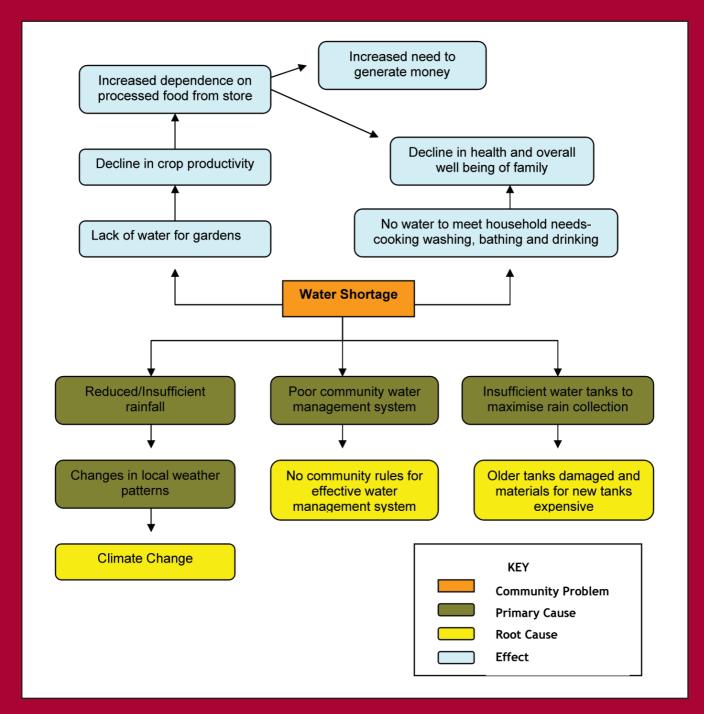
Time: 1 hour





Root Cause Analysis

A clear understanding of a problem is essential when trying to determine what effective actions to take to resolve it. Gaining that clear understanding can be difficult. Root Cause Analysis is a useful tool that will enable the community to identify the many parts of a problem, the dominant causes and the most effective areas for action. Climate change is a very tricky topic and to remove the possibility of bias that community problems are the direct result of it, one has to have a broad overview of all the contributing factors to the problem and whether climate change is the dominant factor.



Purpose: To determine whether identified community problems are directly related to

climate change

Materials: Butcher paper, pentel pens, sample problem tree, coloured cards.

Method: 1. Ask the participants to form five groups and generate a listing of problems.

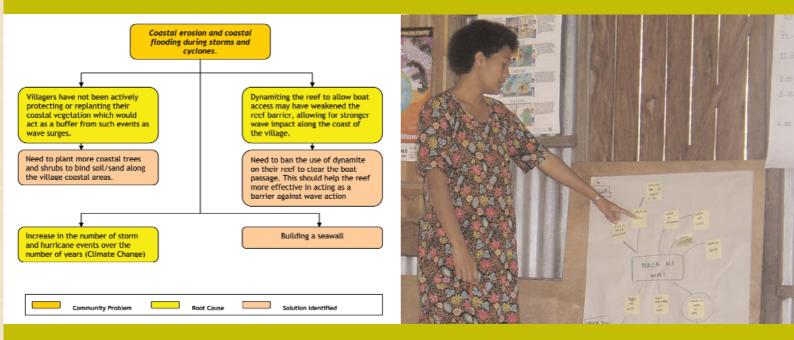
- currently faced by the community. Cross check and compile their results onto one sheet. Ask the communities to prioritise their listed problems by a show of hands.
- 2. As an example using one of the prioritised problems define clearly what is "problem", "cause" and "effect". Using the sample chart show a tree with leaves. Written within the trunk of the tree is a problem. Explain that your tree is sick. Point out the problem it is suffering from. Point out that often a tree is sick, because there are problems in the roots from which it feeds. Explain that to understand why the tree is sick, we must follow the problem back to the roots. Let the participants brainstorm over the causes of the problem by asking the question "why?" Draw a root for each cause and write a cause on the root.
- 12. Repeat the question "why?" for each cause mentioned in step 3 to identify secondary causes. Write these lower down the roots, below the primarys causes identified. Allow participants to continue until they can identify no more secondary causes.
- 13. Then ask participants to identify effects or impacts of the problem by asking "what happened?" Draw a branch for each effect, and write the effect on the branch.
- 14. For each effect identified, repeat the question "what happened?" to reveal secondary effects. Place these higher up the branch above the primary effects. Allow the participants to continue until they can identify no more effects of the problem.
- 15. After this example demonstration give each group one problem from the prioritised list and ask them to follow the same process, identifying the root cause of the problem and the effect on their community.
- 16. Once the groups have completed their problem trees, have them present the results and discuss.

Time: 2 hours



Sun Ray Exercise

The sun ray exercise allows for a community to brainstorm ideas for solving a problem in an ordered and logical form. It is a visual method of developing solutions and breaking them into achievable activities. The name of the exercise comes from the form of the result, which resembles the rays of the sun.



This exercise can be used to break down problems as well as to develop solutions. It may be used in much the same way as the Root Cause Analysis.

Materials: Butcher paper, pentel pens, coloured pens, post-lt (sticky pads)

Method:

- 1. Form sun ray exercise teams
- 2. Ask the teams to draw the outline of the sun and rays coming out of it. Write the root cause of a problem within the face of the sun.
- 3. Ask the team to brainstorm and come up with the general solutions needed to address the root cause of the problem. Write the solutions on pieces of paper and stick them at the end of the rays.
- 4. Ask the team to think of how to achieve each of the general solutions at the end of the rays. Write the answers on separate pieces of paper and place them on the rays under the solution. Add new rays if they are needed.
- 5. Where the team has identified large or complex activities for achieving the general solutions, break them down into smaller activities by adding more ideas off the rays. Keep working at these until all possibilities are exhausted.
- 6. Check that all the rays add up to a full solution to the problem. Take out what is not needed and add new solutions if more in needed. Rearrange items if necessary.
- 7. Nominate one person from the group to draw up the final Sun ray on paper.

Time: 1 hour

Two Way Vision

Purpose: To determine how communities perceive Climate change will impact their lives and how

they would like their future to be instead.

Materials: Butcher Paper, pentel pens, coloured pens

Method: 1. Ask everyone to sit quietly and spend the next ten minutes imagining the future of their community and their place.

2. Divide the participants into groups using one of the following themes-

 Impacts of climate change on access to fresh water (for drinking, health or agricultural reasons)

 Impacts of climate change on food security (either on agriculture, or marine based food)

Impacts of climate change on home security (looking at sea level rise, coastal erosion on houses, roads, schools etc)
 Ask each group to develop a mural on the impacts of Climate change affecting Kabara showing that climate change affects not only the natural environment, but rather the very survival of people and future generations.

3. Once each group has completed its mural ask a member to present their result and explain what they have drawn.

4. Divide participants back into their small groups.

5. Within their small groups, ask each person to describe and share their vision for the future (that is, how they would like it to be).

6. Ask each group to develop a mural on a sheet of butcher paper which shows the group's vision for the community. This will require building on similar visions among group members and addressing differences. Ask each group to select one person to present the mural.

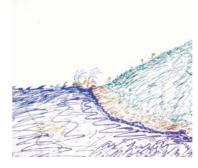
7. After each group has completed their mural have everyone return to larger group.

8. Each group should present their mural.

9. Discuss the murals. What similarities are there? What differences? How did groups deal with differences between individuals? Record the groups' responses and the important elements of the visions, which are shared. Include their vision into the Community Action Plan.









Assessment of Adaptation Options

This activity may help the Kabara community decide on a range of actions which they could undertake to either address issues relating to impacts of climate change or meeting community development objectives. Central to this activity is compilation of a table of 'options'. Down the far left hand column of the Table, list either impact issues (coastal erosion, water scarcity, food security) or integrity enhancement objectives (for example, maintain a certain reef area in good condition, protect a certain forest area, etc). Across the table, other columns are actions (or options) which can be taken to address the issue or meet the objective. Systematically, the community assesses the appropriateness of each of these possible actions for each issue or objective listed. The list of issues or objectives should be recorded in the order of priority the community has given them.

Purpose: To assist communities in deciding which specific actions will be taken by the communities on Kabara to adapt to the impacts of Climate Change.

Materials: Butcher Paper, Pentel Pens, Post Its, Blank Options Assessment Table prepared before hand and coloured markers

Method:

- 1. Explain the purpose of the activity.
- 2. Present the blank
 Options Assessment
 Table and explain
 how it is to be used.
- 3. Decide on and write the issues or objectives in the far left column
- 4. Discuss possible solutions or actions arising out of the sun ray exercise and put them in as column headings

Tokalau Village

Community		Level of Effectiveness		
Problem	Adaptive Solution	Low	Moderate	High
	Develop and Implement village rules on			
	the proper utilization of collected			
	rainwater and maintenance of			
	community water tanks			*
	To obtain more community water tanks			
W-4 Ch4	to increase the community's water			.
Water Shortage	storage capacity			*
	Plant more coastal trees and shrubs to			
	bind soil/sand along the village coastal			
Constal Floodings	area		·	
Coastal Flooding/ Coastal Erosion	Build a seawall along the coast of			
Coastal Erosion	Tokalau village			
	To implement village rules that will			
	forbid dumping of village wastes into			
	the sea and to find a proper village dump site for their rubbish.			
	To ban the use of destructive harvesting			
	practices that harm live coral on the			
	reef for example the use of crowbars to			
	pry free shellfish from coral heads, use			
Coral Bleaching	of traditional toxins to fish etc.			
21 21 21 21 21 21 21 21 21 21 21 21 21	Determine how existing agricultural			
	pests/diseases can be controlled			
	effectively with pesticides			*
	Encourage village men and youths to be			
Decline in	more active in planting their traditional			
Productivity of	crops and crop varieties in their village			
Food Gardens	gardens.		*	

- 5. Divide participants into small groups. Have each group select one or two of the issues or objectives which they will work on.
- 6. Ask each group to go through each of the solutions or actions on the Options Assessment Table and review the appropriateness of each action. Have each group copy the table on a separate piece of butcher paper.
- 7. Explain that where an action seems highly appropriate for a particular issue or objective, mark that square with a '+'. If the action will not work then mark it as '-' and if its appropriateness is unknown mark it as '?'. Specific details or information on how that action will work should also be recorded in the square or off to the side. Appropriateness may also be marked with a high, medium or low value, ask the villagers to explain the reasons behind the chosen value as sometimes options may have been applied in the past and their may have insight into its effectiveness.
- 8. After the small group work is complete ask everyone to return to the large group.
- 9. Ask each of the small groups to present their assessment and recommendations. At the end of each presentation discuss the results.
- 10. Record the specific actions which the large group has agreed to. Include these actions in the Community Action Plan.
- 11. Repeat steps 3 through 9 again if time allows for another set of issues or actions.

Community Action Plan



Purpose: To organise tasks and resources that the community is able to implement the identified climate change adaptation options suited to Kabara.

Materials: Butcher Paper, Pentel pens, Post It

Method:

- 1. Ask community members to list the actions or adaptation options that the community has agreed to. Record them on a large piece of butcher paper in view of everyone.
- 2. Ask the group to rank these from the highest to lowest priority in terms of putting them into action.
- 3. Start and focus on the action of highest priority. Divide into groups and brainstorm

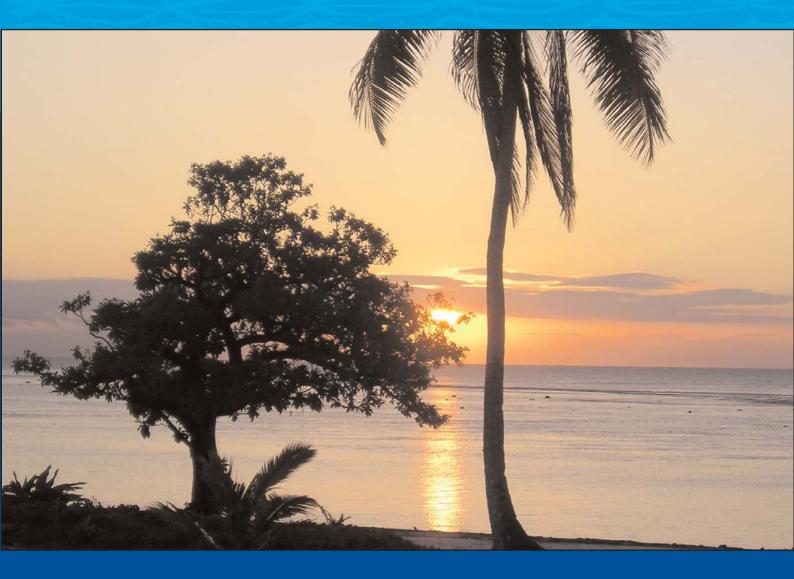
a number of tasks which need to be undertaken to make that action work or to be put in place (the task listed will be in no particular order). As tasks are suggested write each onto a separate index card or Post - It.

- 4. Draw a horizontal line across a long separate piece of butcher paper. Ask the group to set a date on when the community wants all the tasks to be completed and the adaptation action in place. Write the date at the far end of the line. Place today's date at the opposite end.
- 5. Ask the group to review and evaluate the tasks listed. As they agree to them, have them post them up along the time line. As they are posted, the group should check to see that they are placed in logical sequence.



- 6. If there are fixed times for completion of certain tasks write them above the tasks on the time line.
- 7. After the tasks are all posted go through the cards asking who will be responsible for each task. Write their initials on the card. Ask again for each card (task) what resources are required to carry out this task. List the resources needed on a separate card and attach to the 'task' card. If gathering those resources requires special tasks, then make additional cards and place them along the time line.
- 8. Go to the next adaptation action and repeat the process.
- 9. When all the adaptation actions listed have been completed, review the action plan. If everyone agrees that the list of tasks is complete and in order, transfer the information to a simple table listing WHAT the task is, WHO will be responsible for it, WHAT resources will be needed and by WHEN it will hopefully be completed.

Time 2 Hours



Acknowledgement

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