



Assessing adaptation options for climate change:
A guide for coastal communities in the Coral Triangle of the Pacific
3. Impact and adaptation assessment workshop



Scoping



Identifying
options



Evaluation
of options



Planning
implementation

Introduction

Assessing options for adapting to climate change is an important part of building resilient fishing and farming communities.

This brochure is part of a series that collectively detail how a community-based assessment of climate change was used in partnership with coastal communities and provincial and national-level stakeholders in Timor-Leste and Solomon Islands. The assessment contains four distinct, but related, steps (Fig 1) focused on supporting community-level decision-making for adaptation through a series of participatory action research activities. Each brochure in this series details a specific activity in the four-step assessment.

This series of eight brochures is primarily aimed for use where resources are limited or where it is more appropriate to use a rapid, qualitative and non-data intensive method of assessment. Community leaders, local NGOs and regional and national-level government representatives in developing countries may find this series useful.

In this brochure we provide details of an activity relating to the 'Identifying options' step of the assessment, namely a two-day impact and adaptation assessment workshop. This activity was conducted with fishers and farmers to consider the importance of climate change to their livelihoods.

More specifically, the following questions were posed:

- What are the likely impacts of climate change (including climate variability) on important livelihood activities?
- What does the community see as a desirable future and hence the focus of adaptation actions?
- What adaptation actions are likely to be useful in reducing negative impacts and taking advantage of any opportunities arising from climate change?

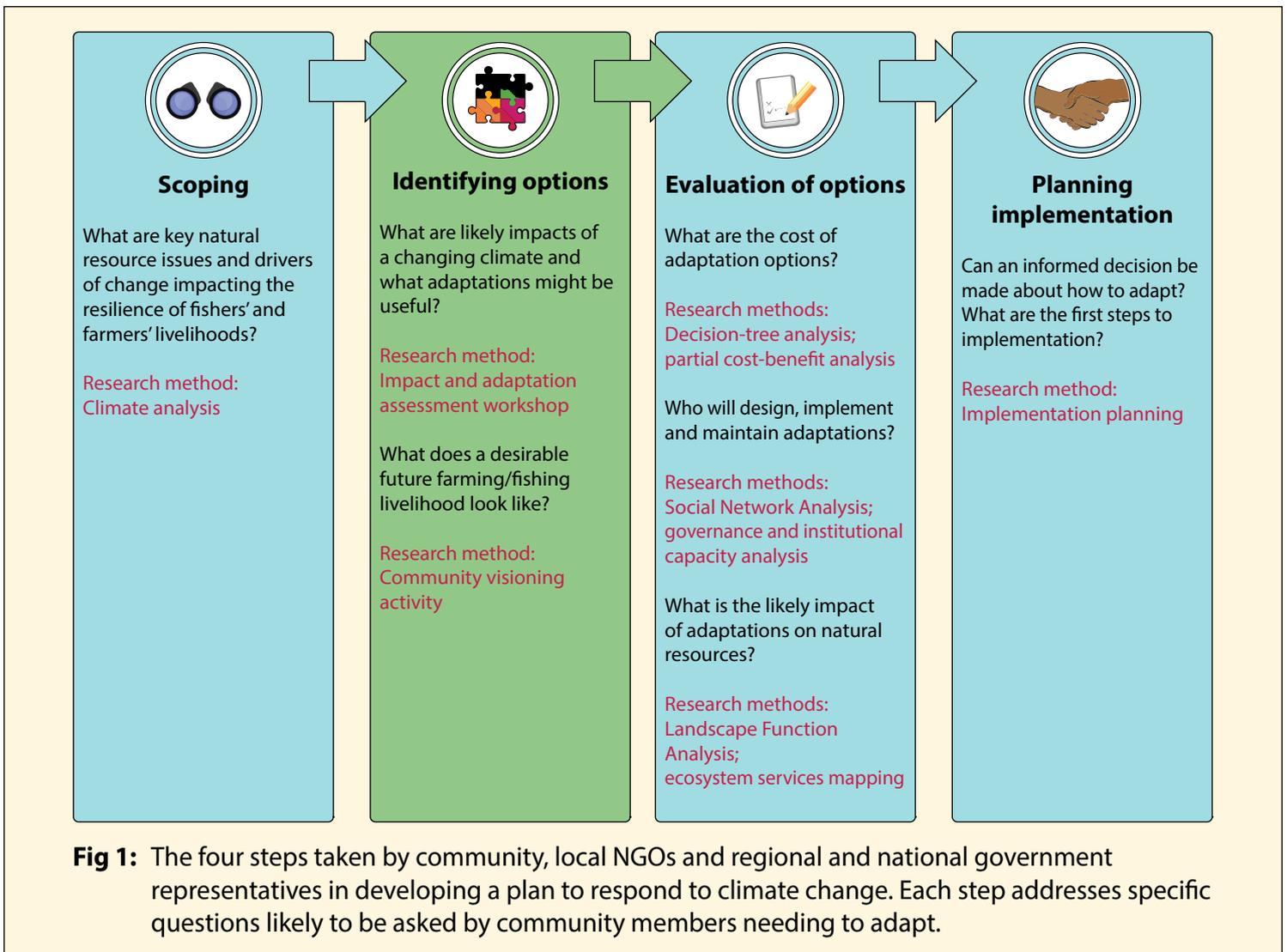


Fig 1: The four steps taken by community, local NGOs and regional and national government representatives in developing a plan to respond to climate change. Each step addresses specific questions likely to be asked by community members needing to adapt.

What Is an Impact and Adaptation Workshop?

Impact and adaptation workshops are useful activities to accomplish the following:

- building a working partnership and trust between the community members, project team and in-country partner institutions.
- providing a space for collectively exploring the issue of climate change in relation to fishing and farming livelihoods; participants share their own experiences of past climate and explore the impacts of possible changes in the future.
- envisioning how community members can individually and collectively plan and implement their response to any challenges and opportunities that climate change may bring.
- bringing together knowledge from science, development practitioners, government and community domains (Fig 2).
- building capacity in local partners in terms of skills, knowledge and networks.

Impact and Adaptation Workshop Objectives

The workshops held in communities in Timor-Leste were conducted over two days. In-country partners translated between the project team and the community members and much of the material used in the workshop was produced in advance in Tetum, the local language. Similar workshops, specifically focused on aquaculture, were conducted in Solomon Islands.

The specific aims of the workshops were to facilitate the community members to do the following:

- Understand past trends in climate, particularly temperature and rainfall.
- Identify which livelihood activities are sensitive to climate and discuss how they have needed to adapt these in the past to respond to observed trends in climate.
- Consider if these activities are likely to need further adaptation given projections of future climate changes and consider if any other livelihood activities are likely to be impacted by climate change.
- Identify visions of a desirable future to guide them when thinking about how they will adapt to climate change.
- Identify specific adaptation strategies and actions needed to address future changes in climate and therefore requiring further evaluation.



Fig 2: Impact and adaptation workshops can bring together knowledge from science, development practitioners, government and community domains.

The Impact and Adaptation Workshop Method

1. Collectively understanding past climate trends and projections of future climate, in the context of livelihood activities

- Participants analyzed the past climate trends and seasonal calendars in relation to important fishing and farming activities. Participants explored their own experiences of a changing climate and identified climate-sensitive livelihood activities (Fig 3).
- Projections of climate change were then considered in light of climate-sensitive livelihood activities and discussions explored the likelihood of negative and positive impacts.

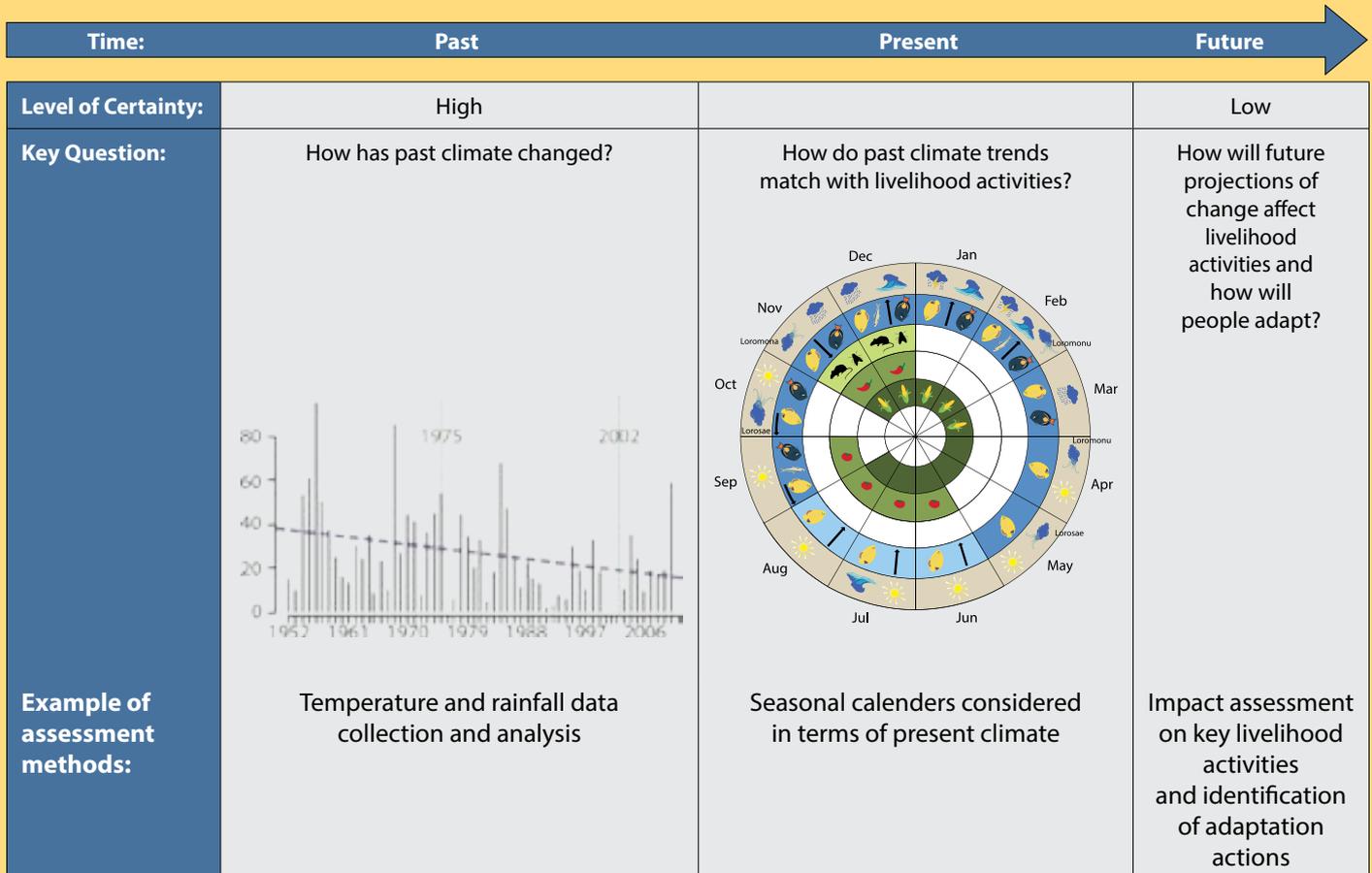


Fig 3: A discussion in the workshop guided participants in thinking about how their climate had changed during the past decades and how this had impacted their livelihoods. The discussion then considered possible changes required to fishing and farming if the climate continues to change.

2. Focus group assessments of climate change impacts

- The participants were asked to form focus groups according to their main livelihood activities, such as fishing or farming. Groups were also split by gender (where there were enough female participants; Fig 4).
- The focus groups were asked to discuss how climate change may impact their specific livelihood activities. The groups were encouraged to think about both negative impacts and opportunities that might result from climate change. The impacts identified by each group were recorded in relation to each potential climate issue; for example, increased rainfall intensity or longer dry season.
- Each focus group presented their findings to the other participants and discussions enabled ideas to be shared (Fig 5).



Fig 4: Female farmers formed a focus group to discuss the impact of a changing climate on their livelihoods.



Fig 5: A spokesperson from each group presented their ideas on how future changes in climate would impact their fishing and farming activities.

3. Visioning the future of communities

- Younger participants at the workshops were asked to draw a picture of their community, including the special things that made it a good place to live and the features they would like to remain in the future (Fig 6).
- They were then asked to make notes on their pictures to describe the special features. The pictures were shown to all the workshop participants to promote a shared vision of what adaptation should aim to achieve (Fig 7).



Fig 6: Younger members of the community working on drawing the special aspects of their communities that they would like to keep into the future (visioning).



Fig 7: Notes attached to the drawings of how one young member of the community hopes his village will look when he is an adult. Many elements of life were depicted, including large-sized fish, new crop species and abundant plants and trees.

4. Focus group identification of adaptation actions

- Livelihood focus groups were then asked to reassemble and discuss what actions they could take to respond to each of the impacts they had identified. These actions (adaptations) were again recorded and presented back to all the workshop participants by each focus group spokesperson.
- Further discussions between the participants and the project team identified additional ideas on how to adapt.

5. Identifying adaptation actions for evaluation from environmental, social and economic perspectives

- The list of identified adaptations was grouped into themes such as agricultural sustainability, fish processing, and marketing by the project team and presented back to community members for validation and discussion (Fig 8).
- A number of adaptations were selected by the workshop participants as having potential to be effective in responding to climate change, and therefore worth evaluating further.

NOTE: For details of social, environmental and economic evaluation activities, see other brochures in this series.

Tips for Implementing Impact and Adaptation Workshops

- Choose a venue for the workshop that is familiar to the participants, comfortable for the number of attendees and has sufficient facilities for each activity.
- Use stakeholder analyses, or work with local partners (Fig 9), to identify who may benefit from attending the workshop.
- Involve an equal number of women and men and a broad representation of types of livelihoods.
- Be realistic about how much can be covered in a two-day workshop – keeping the aim clear and straightforward is more important than overloading the days with information and activities.
- Be realistic about how much time may be required for each activity and build in lots of time for rich discussions.
- Allow time for translation to take place and for questions to be asked and answered.
- Be prepared with an alternative plan if activities do not go as anticipated.
- Make sure scientific information is easy to understand, relevant and presented in a manner that is digestible.
- In focus group discussions, encourage all community members to have their say – provide the opportunity for quieter members to join in the discussion.



Fig 8: Community members reviewed the categories of possible adaptation actions to determine which ones are likely to be most useful, and hence worth evaluating further.



Fig 9: Working with local partners and individuals who are trusted by the community is essential for effective participatory research activities. They were able to put community members at ease, provide translation and help all parties interact quickly and comfortably.

Results From the Impact and Adaptation Workshops in Timor-Leste

A total of 69 impacts and 95 adaptation actions were identified for farming and fishing activities by participants in Timor-Leste. From these lists, the following adaptation themes were identified by community members for further evaluation from a social, environmental and economic perspective:

Fisheries

- Regulate to enhance condition of near-shore (coral; Fig 10) fisheries.
- Make more use of deep water fisheries through the use of echo sounders and fish aggregating devices.
- Increase the use of new technologies to fish for different species.
- Improve income and food production from non-fishing activities, such as aquaculture.

Agriculture

- Improve collection of water during the wet season, water storage and the delivery of water to crops and animals.
- Deliver more knowledge and training for improved agricultural production.
- Increase the production of trees, crops and animals using sustainable agriculture techniques (Fig 11).
- Improve income and food production through better management of water harvesting, storage and distribution (Fig 12).



Fig 10: Healthy coral reefs provide a range of ecosystem services and are vital for maintaining fish stocks.



Fig 11: Integrated rice and livestock production in Timor-Leste returns nutrients to the fields and enables crop residues to be used for animal feed and ground cover.



Fig 12: The capture, storage and transportation of rainwater enables crops to be grown, and animals to be raised, for extended periods throughout the year.



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For further details on this project, visit <http://www.ctknetwork.org/> and <http://www.worldfishcenter.org/ongoing-projects/adaptationpathways-responding-climate-change>

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