Module 3: Learning about Natural Resource Management Problems and Stakeholders

Module aims

This module will help you understand:

- how to help stakeholders to identify resource management issues of concern to them.
- how to facilitate a stakeholder analysis in relation to a resource management issue.
- how to facilitate a participatory problem analysis with stakeholders to identify the root causes of resource management problems.

Note: Modules 3 and 4 are closely related. Although they are presented as different topics in this resource kit, a clear understanding of resource management issues and problems requires you to learn about their social context. Please take the time to look also at Module 4.

Topics Cases Issues Activities Checklists Figures

The following topics are covered in this module:

Introduction

Gaining an understanding of resource management issues and stakeholders in the target area is an important starting point in developing a participatory NRM program is. These issues have social, economic and ecological dimensions, which need to be explored in an integrated way.

A lesson that has emerged from participatory projects is that the solutions to resource management problems often require the involvement of stakeholders at many different levels: for example by households, the lineage or clan, specific user groups, townships, provinces, national governments and even international agencies. These were represented as layers of an 'onion' in Figure 3 (see Module 2).

Using information from a range of different stakeholders and sources helps to build a rich picture of resource management problems and their causes, which prepares us to better target solutions. Modules 3 and 4 together provide you with methods to build such an understanding:

- Module 3 (this module) focuses on identifying key stakeholders and their interests, resource management issues of concern and their causes.
- Module 4 focuses on socio-economic assessment. The initial profile (outlined in Topic 4.2) would generally be undertaken before or during the activities discussed in this module.

Topic 3.1 Identifying Community Concerns

This topic outlines a 'brainstorming' activity, which facilitators can use in initial community discussions to help participants identify NRM issues of concern to them. Other ways of understanding community concerns include:

- Informal discussions with stakeholders.
- Observations (eg. some issues such as poor sanitation facilities or waste management systems can be quite visible)
- Background research in the initial community profile stage (see Topic 4.2).

The brainstorming activity below is useful to do before a stakeholder analysis (Topic 3.2) and Participatory Problem Analysis (Topic 3.3). The output of the brainstorm exercise is a list of issues; further discussion would be necessary to determine which of these issues are of greatest concern to stakeholders.

Activity: Facilitating a brainstorming session

Purpose:

Brainstorming is a free listing of ideas in which everybody's contribution is valued. Brainstorming can be used in many different ways, and basically involves generating a list of ideas relating to a problem or question. It can be used to generate a range of issues of concern to stakeholders. Later in the project process it may be used to identify potential solutions.

Participants:

To be used in workshops with stakeholders during the initial stages of problem identification, and can be used later in working out solutions.

Materials:

Blackboard, whiteboard or flip chart

Chalk or marker pens

Preparation:

Arrange the room so that everyone is facing the writing area.

Time:

Around 20 minutes

Steps:

1 Clarify and post the some ground rules for participant behaviour so that no one group or person dominates the session and so that we can ensure that the maximum number of ideas are generated. See Box 1 for some suggested 'ground rules' in the box below.

Brainstorming ground rules

- Anyone can put anything on the list that is relevant to him or her (even confusing and silly ideas).
- There should be no arguing about whether or not something should go on the list.
- There should be no discussion to flesh out ideas. Ideas should just be called out.

2 Post the group's task in the form of a question. Eg. "what resource management problems concern you when you think about the future of ….. (place)?"

3 Ask for volunteers to write on the board or flipchart. Ask them to record all the contributions clearly.

4 Start listing ideas one at a time. Remind people of the ground rules if they start to discuss or argue about ideas.

5 Continue until there are no more ideas. Sometimes it may seem that all the ideas have been raised, but it can be useful to wait until everybody has had a chance to contribute.

- One way to encourage final contributions is to let people know that there are only two more minutes towards the end of the allotted time.

6 The list of ideas generated can later be used to:

- Group ideas in clusters and name them [repeats activity above]
- Prioritise what is on the list

Source: (adapted from Braakman and Edwards, 2002)

Hints:

☺ Give the group time to think.

☺ Encourage turn taking. If the group needs time to think individually, give them a chance to write down some ideas before the brainstorm starts.

☹ Don't try to write and facilitate at the same time. Have one person facilitate and another write down the ideas at the same time.

☹ Don't show approval or disapproval of ideas as they come up ("good one" or "we have that one")

Topic 3.2 Stakeholder Analysis

For a definition of 'stakeholder' see the glossary and the discussion in Topic 2.1). Also recall the 'onion' diagram in Figure 3 (Topic 2.2), that showed us many levels of stakeholders and rules that may play a role in a resource management issue.

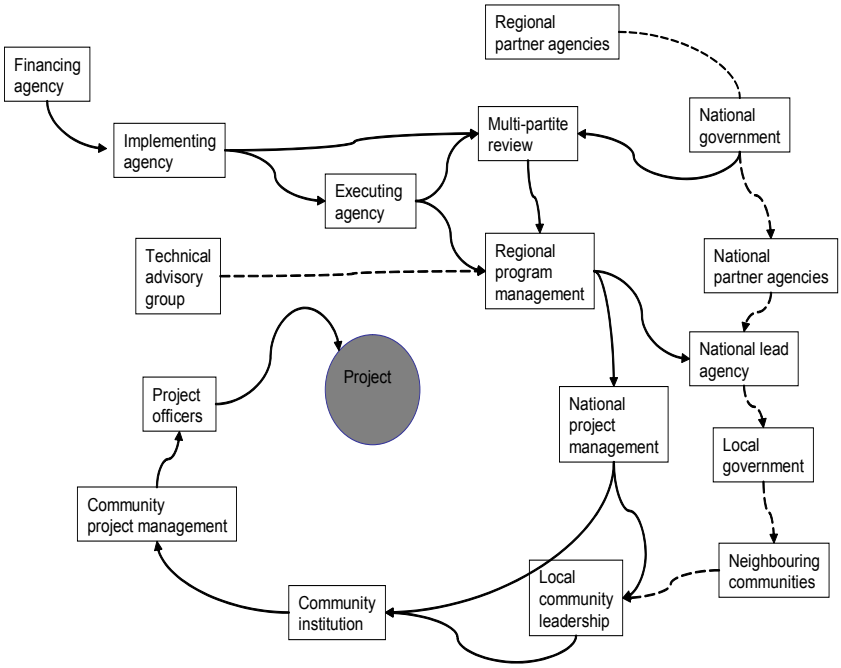
Stakeholders in NRM

Some examples of potential stakeholders in natural resource management programs include:

- individuals (e.g. owners of land/sea)
- families and households (e.g. long term residents)
- social groups (e.g. extended families and clans)
- local traditional authorities and leaders (e.g. village council of elders, a chief)
- religious and community-based organisations (e.g. industry groups such as fishing organisations, organisations of resource-users, neighbourhood associations, gender or age-based associations)
- local and/or international environmental non-government organisations
- political authorities (e.g. elected representatives at village or district levels)
- local government services (e.g. health, education, fisheries extension)
- relevant government ministries, departments or agencies such as marine resources, environment, works, health, education; environment; outer islands; internal affairs etc
- conservation/environment councils or committees
- businesses and commercial enterprises (local, national and international from local cooperatives to international corporations) (e.g. private sector interests such as the Chamber of Commerce, tourism operators and water utility companies)
- universities, colleges or training or research centres
- programme or project staff and environmental or resource management technical specialists or consultants
- regional organisations

The diagram below (Figure 5) illustrates the kinds of stakeholders often involved in internationally financed projects, and how they may have direct (solid arrows) or indirect roles (dashed arrows) in resource management.

Figure 5: Stakeholders in an internationally funded project



Source: IWP National Coordinators Meeting Materials, Apia, May 2002

Stakeholders are generally identified through a process of discussion, examining the various players in an issue or situation and their roles (see Activity below). Another approach is to consider the 'chain of custody' for goods and services (see Issue 10).

Issue 10: A chain of custody

The 'chain of custody' for a product refers to the location of a commodity at each stage of its development, from harvesting to processing, manufacture, sale and purchase/use. In a fisheries project, for example, people may be concerned about protecting stocks of crabs that are caught locally and sold. In this case, the chain of custody might include fishers who capture the crabs, local traders who buy them and wholesalers and retailers to distribute them (Lal and Holland, 2004)

Stakeholder analysis

Stakeholder analysis is a process of assessing which stakeholders are involved in a resource management issue and how. Stakeholder analysis can be used to find out different things about stakeholders in relation to an issue depending on your questions and needs in project planning, and where in the project cycle you do it (see Figure 6).

Stakeholder analysis can be conducted just by the project team. However, conducting stakeholder analysis in a participatory way enables a richer picture of stakeholders and their relationships (see Case 14). The activity presented here can be used in a participatory workshop to gain additional information on stakeholder groups, their interests and relationships.

Case 14: Using stakeholder analysis in Tonga

One facilitator comments on his experience with a participatory stakeholder analysis in a waste management project in Tonga (using the Venn diagram method in Annex 2):

'In stakeholder analysis, we found it useful for the participants to first understand what a stakeholder is, then followed with how each stakeholder's interest relates to the problem. At the end, most participants realised that they (participants) are at the very centre of the problem. They used to believe that the problems are mostly externally caused. The stakeholder analysis helped them to understand that they are one of the root causes and they should play a central role in carrying out solutions.

Source: Pers. Comm., Sione Faka'osi, IWP Tonga 17 November 2003

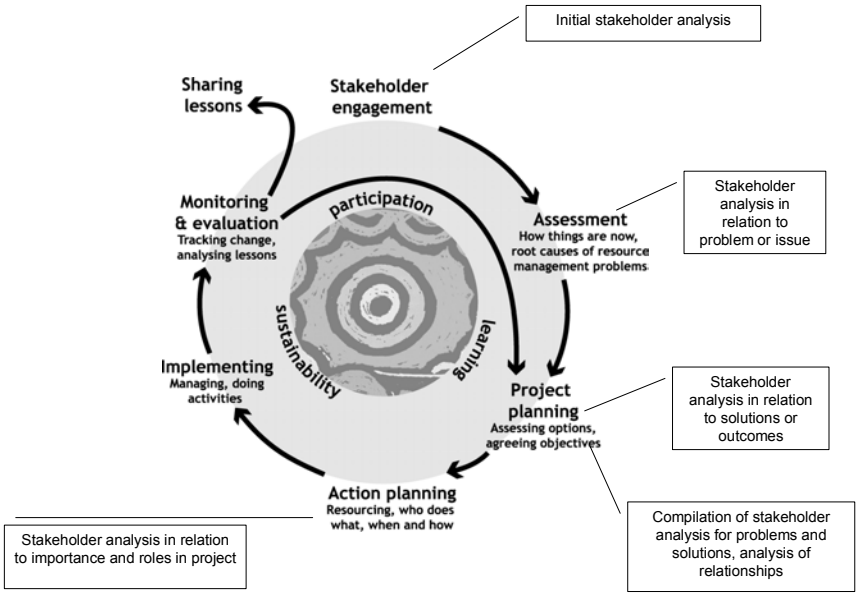
Stakeholder Analysis at different stages of the project cycle

Stakeholder analysis is undertaken at different stages in the the project cycle:

- Community engagement: project managers and other project staff need to consider who the stakeholders are at an early stage in the project cycle. However, they will need to revisit this question at different times and ask the question to different groups of people.
- Assessment: at this stage, project staff as well as stakeholders themselves can look at who the stakeholders are in relation to a problem or issue, and the nature of this relationship (eg. Their interests, contribution to the problem, impacts on them).
- Project Planning: at this stage, it is useful to look at how stakeholders relate to specific solutions or project options (eg. How specific options will impact on them, influence, their roles and their capacity to contribute).
- Project monitoring: mapping the relationships between stakeholders can help to plan partnerships and analyse risks during project planning. This is also a way of monitoring change during project implementation.

The ways in which stakeholder analysis can be used during the project cycle are shown in Figure 6 below.

Figure 6 Stakeholder analysis through the project cycle



Six stakeholder analysis activities are outlined here:

- Activity 1: identification of stakeholders
- Activity 2: Stakeholder analysis in relation to a problem or issue.
- Activity 3: Stakeholder analysis in relation to project outcomes or solutions.
- Activity 4: Compilation of stakeholder analysis in relation to problems and solutions (i.e. compilation of 1 and 2 above)
- Activity 5: Stakeholder analysis of importance and roles in a project.
- Activity 6: analysing relationships *between* stakeholders.

Remember, you do not have to do all of these kinds of stakeholder analysis at one time! Use them at different stages in the project. ☺

Each of these types of stakeholder analysis begins with the question: who are the stakeholders (Activity 1).

The activities use the case of a fisheries project in the imaginary place of Mombuka Bay (see Case 15) to provide examples of how each stakeholder analysis activity in this subsection works.

Case 15: Managing the marine resources of Mombuka Bay

There are 5,000 people living in Mombuka Bay area, spread out in two coastal villages Loli and Mali. The families of these villages have been fishing for generations. In the last two years most of the village men have started earning money by working for the fishing fleets that fish in Mombuka Bay and nearby reefs, and along the entire stretch of country's coast. The men are often away from home. The village women fish off the edge of the reefs and are dependent on the fish they catch for food and family nutrition.

In the last eight years the numbers of fishers have been increasing - through village population growth, increases in the number of fishing vessels, and most recently, increases in the number of men from town (about 50 kms away) visit on weekends for recreational fishing. Many people say that fish catches are declining.

The bay is also becoming a tourist attraction because of its reputation for a lovely reef and pristine natural resources. Over the last 5 years a guesthouse, Mombuka Lodge has been established on the bay. This has brought income into the area. The government is desperate to increase national revenue so is promoting tourism further. The lodge it is owned and managed by an expatriate who is keen to see the resources conserved.

Tourism is expected to increase.

The national government recognises that the patch and barrier reefs off Mombuka Bay have significant ecological value but that they are threatened by over fishing. The Mombuka Fisheries Agency is now working with the I Will Protect Programme (a GEF initiative) to prepare a management plan for fisheries in the Bay. The management plan will develop fisheries management rules, establish zones for use and put in place fisheries legislation.

(IWP Train-the-Trainer workshop materials 2003)

Activity 1: Who are the stakeholders?

Purpose:

To identify potential stakeholders in relation to a resource management problem or issue.

This is a starting point for the various forms of stakeholder analysis below.

Participants:

This activity can be used by a project manager on their own or together with other staff working for a project (the project team) and in a stakeholder workshop.

Materials:

Flip chart paper and marker pens.

Preparation:

Depending on the number of participants, the task can be undertaken in small groups.

Time:

Initial listing: 20-30 minutes.

Steps:

1. Ask the group to think about who the key stakeholders are in relation to a specific problem, issue or option.
2. They can use the following questions to help them in their thinking:
    - Who benefits from the situation?
    - Who is impacted on (positively or negatively) by the situation?
    - Who influences the situation?
    - Are there any other groups that may be involved? (Encourage participants to break down broad categories like: 'government' or 'community' into smaller identifiable actors and groups such as specific government departments, local committees or private organisations such as churches or schools. Also encourage them to think about the 'chain of custody' involved in particular resources.)

3. The outputs need to be recorded on a flipchart to be used for the stakeholder analysis below.

Case: Stakeholders in Mombuka Bay

Mombuka Lodge
Townie Fishers
Women fishers at Loli village
Women fishers at Mali village
Traditional Dory fishers at Mombuka Bay
Market traders
Mombuka Fisheries Division
Environmental Studies Institute
Mombuka Health Services
Global Environment Facility
Reef Conservation International
Mombuka Tourism office

Activity 2: Stakeholder analysis in relation to the problem or issue

Purpose:

To identify the interests of stakeholders in relation to a problem or issue, how they are affected by or influence the problem, and rank the extent to which they are impacted on or causing the problem.

Participants:

This activity can be used by a project manager on their own or together with other staff working for a project (the project team) and in a stakeholder workshop.

Materials:

Blackboard/whiteboard and chalk/marker pens, or flip chart and marker pens.

You will need the outputs of Activity 1 and a copy of the table provided with this activity.

Preparation:

Depending on the number of participants, the task can be undertaken in small groups of 5-6 people.

Time:

1-1 ½ hours

Steps:

Using the following stakeholder-problem matrix, work through these questions for each column:

1. Column 1: identify the stakeholder group (use the groups listed in stakeholder analysis activity 1).
2. Column 2: Describe how the stakeholder is affected by the problem or how they influence the problem.
3. Column 3: Rank the extent to which the stakeholders are affected by the problem. You can use the words: very low, low, moderate, high, very high.
4. Column 4: Some stakeholders may have an interest in addressing (solving) the resource problem while others may be stakeholders that contribute to the problem. Focus on the latter (those who may contribute to the problem) and describe in what ways these stakeholders may cause the problem (think about specific things they do that are contributing to the problem).
5. Column 5: Rank the extent to which the stakeholders contribute to the problem. You can use the words: very low, low, moderate, high, very high.

Activity 2 Worksheet

Stakeholder Group	In what ways are they affected by the problem?	The extent they are affected by problem	In what ways do they contribute to the problem?	The extent they contribute to the problem

Activity 2 Example: Stakeholder Analysis in relation to the Problem or Issue in Mombuka Bay

Stakeholder Group	In what ways are they affected by the problem?	The extent they are affected by problem	In what ways do they contribute to the problem?	The extent they contribute to the problem
Mombuka Lodge	Tourism business highly reliant on conservation of natural area No other location	High	Guests fish in reefs (small number)	Low
Townie Fishers	Come to fish on weekends – fishing for recreation not food or income.	Mod	Many urban fishers and each takes several eskies of fish back with them each time	High
Women fishers at Loli village	Fish off reef edge for family subsistence	Very High	Reef catch unknown (maybe low) but high number of families in settlement	Moderate
Women fishers at Mali village	Fish off reef edge for family subsistence	Very High	Reef catch unknown (maybe low) but low number of families in settlement	Low
Traditional Dory fishers at Mombuka Bay	Fish from Mombuka are required for sale at local markets Have many fishing sites available to them	Moderate	Reef catch unknown but thought to be high	High
Market traders	Buy fish from the Fishermen's Cooperative	Low	Buy from many sites not just Mombuka	Low
Mombuka Fisheries Division	They are responsible under the legislation for sustainable fisheries	Low	No information provided on management No surveys of reef	Mod
Environmental	Not affected directly but have interest in	Low	-	Very low

Studies Institute	studying reef systems			
Mombuka Health Services	Not affected directly but are concerned about families nutrition in Loli village and Mali village. Encouraging people to eat more natural food	Low	-	Very low
GEF	Fund govt reef and fisheries conservation programmes	Low	-	Very low
Reef Conservation Int'l	Have programme promoting conservation of tropical reefs in the region	Mod	-	Very low
Mombuka Tourism office	Encouraging tourism in the Mombuka Bay	Low	Encourage development of guesthouses	Low

Activity 3. Stakeholder analysis in relation to project outcomes or solutions

Purpose:

To:

- Identify the interests of stakeholders in relation to a potential solution or project outcomes.
- Identify how they may be affected by or influence the project outcomes or solutions.
- Rank the extent to which stakeholders are impacted by or influenced the project outcomes or solutions.

Participants:

This activity can be used by a project manager on their own or together with other staff working for a project (the project team) and in a stakeholder workshop.

Materials:

Blackboard/whiteboard and chalk/marker pens, or flip-chart and marker pens.

You will need the outputs of Activity 1 and a copy of the table provided with this activity.

Preparation:

Depending on the number of participants, the task can be undertaken in small groups of 5-6 people.

Time:

1-1 ½ hours

Steps:

Using the following stakeholder-solution matrix, work through these questions for each column:

1. Column 1: identify stakeholders (use the groups listed in the first exercise).
2. Column 2: Describe how the stakeholder is likely to be affected by the solution or project.
3. Column 3: Rank the extent to which the stakeholders are affected by the solution or project. You can use the words: very low, low, moderate, high, very high.
4. Column 4: Describe in what ways the stakeholders influence decisions about how the problem should be addressed.

5. Column 5: Rank the extent to which the stakeholders are likely to influence decisions about the solutions or project. You can use the words: very low, low, moderate, high, very high.

Activity 3 Worksheet

Stakeholder Group	In what ways will they likely be affected by project outcomes/ solutions?	The extent that they may be affected by the solution?	In what ways can they influence the decisions about how the problem should be addressed?	The extent that they may influence the decisions about how the problem should be addressed?

Activity 3: Example of Stakeholder Analysis in Relation to Project Outcomes or Solutions in Mombuka Bay

Stakeholder Group	In what ways will they likely be affected by project outcomes/ solutions?	The extent that they may be affected by the solution?	In what ways can they influence the decisions about how the problem should be addressed?	The extent that they may influence the decisions about how the problem should be addressed?
Mombuka Lodge	Management solutions may affect what guests can and can't do. This may affect how well the guests like the Lodge. Effectiveness of reef management will determine success of conservation goes and how well the Lodge attracts guests.	High	Government very supportive of tourism ventures and generating greater earnings	High
Townie Fishers	Management decisions may affect how much fish they catch on weekends and where they can fish	Moderate	Well-educated, good incomes and influence politicians Write letters to govt and in newspapers	High
Women fishers at Loli village	Management decisions may affect how much fish where they can fish and how much food they may have for their family	Very high	Pressure husbands to act on their behalf Low literacy and not organised – possibly through Dept of Health.	Low
Women fishers at Mali village	Management decisions may affect how much fish, where they can fish and how much food they may have for their family	Very high	Pressure husbands to act on their behalf Low literacy and not organised – possibly through Dept of Health.	Low

Traditional Dory fishers at Mombuka Bay	Management decisions may affect how much fish and where they can fish. They may be required to go elsewhere at a higher cost This can impact on earnings.	High	Fishermen's Cooperative is extremely well organised and powerful. Fish sales is a major source of export revenue	High
Market traders	Limits on Mombuka Bay unlikely to cause a decrease in fish supplies to market.	Low	Very strong lobby with government	Very High
Mombuka Fisheries Division	They will meet policy objectives in their 3 year plan. Solutions may require more enforcement staff and annual monitoring	High	No information provided on management No surveys of reef	Mod
Environmental Studies Institute	Not affected directly but have interested in measuring fisheries response to management	Low	Can lobby government based on views of need to conserve area	Mod
Mombuka Health Services	Not affected directly but are concerned about families nutrition in Loli village and Mali village. Encouraging people to eat more natural food.	Low		Very low
GEF	Fund govt reef and fisheries conservation programmes and would like to see success	Moderate	Offer funds to government to undertake conservation programmes	Very high
Reef Conservation International	Have programme promoting conservation of tropical reefs in the region and want to achieve more conservation (this will help them get continued funding).	Moderate	Offer funds to government for conservation activities	Very low
Mombuka Tourism office	Conservation success will bring more tourists to the Mombuka Bay	Moderate	Encourage development of guesthouses	Low

Activity 4. Compilation of Problem and Solutions Tables

Purpose:

To:

- Compare and analyse how stakeholders contribute to NRM problems and their potential solutions.

Participants:

This activity can be used by a project manager on their own or together with other staff working for a project (the project team) and in a stakeholder workshop.

Materials:

Blackboard/whiteboard and chalk/marker pens, or flip-chart and marker pens.

You will need the outputs of Activities 2 and 3 and a copy of the table provided with this activity.

Preparation:

Depending on the number of participants, the task can be undertaken in small groups of 5-6 people.

Time:

30-45 minutes

Steps:

1. Compile the outputs of the tables from Activity 2 and 3 into one table.
2. This provides an overall picture of how stakeholders relate to the issue and its management.

Activity 4 Worksheet

Stakeholders	The extent they are affected by problem	The extent they contribute to the problem	The extent that they may be affected by the solution	The extent that they may influence the solution

Activity 4 Example: Compilation of Stakeholder Ranking for Mombuka Bay

Stakeholders	The extent they are affected by problem	The extent they contribute to the problem	The extent that they may be affected by the solution	The extent that they may influence the solution
Mombuka Lodge	High	Low	High	High
Townie Fishers	Mod	High	Moderate	High
Women fishers at Loli village	Very high	Moderate	Very high	Low
Women fishers at Mali village	Very High	Low	Very high	Low
Traditional Dory fishers at Mombuka Bay	Moderate	High	High	High
Market traders	Low	Low	Low	Very High
Mombuka Fisheries Division	Low	Mod	High	Mod
Environmental Studies Institute	Low	Very low	Low	Mod
Mombuka Health Services	Low	Very low	Low	Very low
Global Environment Facility	Low	Very low	Moderate	Very high
Reef Conservation Int'l	Mod	Very low	Moderate	Very low
Mombuka Tourism office	Low	Low	Moderate	Low

Activity 5. Analysing the importance and roles of stakeholders in relation to a project

Purpose:

To analyse the roles that stakeholders may play in a project and their importance to outcomes. This may be used to analyse potential risks to the project. For example, a stakeholder who is crucial to project outcomes will need to be engaged in the project process. The table can also be used to clarify roles and responsibilities. It can also be used as a basis for identifying training and capacity issues amongst stakeholders in implementing a project.

Participants:

This activity can be used by a project manager on their own or together with other staff working for a project (the project team) and/or by stakeholders in a workshop/meeting.

Materials:

Blackboard/whiteboard and chalk/marker pens, or flip-chart and marker pens.

You will need the outputs of Activity 1 and the table provided with this activity.

Preparation:

Depending on the number of participants, the task can be undertaken in small groups of 5-6 people.

Time:

1 -1½ hours

Steps:

1. Identify stakeholders (stakeholder analysis activity 1).
2. Consider the results from Stakeholder Analysis Activities 2 and 3 and decide the relative importance of this group to the project outcomes.
3. Discuss the likely roles of these stakeholders and consider the strengths and weaknesses of each group in implementation of the project.

Variation: Categorise the stakeholders into primary, secondary and third level stakeholders (primary, secondary and third level stakeholders are discussed further in Topic 2.2). Briefly, primary stakeholders are those with a direct interest in the issue (eg. resource users), secondary stakeholders have an indirect interest in an issue (eg. buyers of the resource), third level stakeholders are key organisations with an interest in the issue (eg. a government agency).

Activity 5 Worksheet

	Stakeholder importance for project success	Role in Project	Strengths in carrying out implementation	Weaknesses in implementation
Primary Stakeholders				
Secondary Stakeholders				
Third Level Stakeholders				

Example of Activity 5: Analysis of Stakeholder Importance and Roles in Mombuka Bay

Primary Stakeholders	Stakeholder importance for project success	Role in Project	Strengths in carrying out implementation	Weaknesses in implementation
Mombuka Lodge	High	Partner	Provides meeting venue, transportation for stakeholders	Little time during the dry season (high tourist time)
Townie Fishers	High	Not represented by an organisation – Consult		
Women fishers at Loli village	High	Partner	Organised well in Women's Council Supportive of project	Little time available
Women fishers at Mali village	High	Partner	Organised well in Women's Council Supportive of project	Little time available
Traditional Dory fishers at Mombuka Bay	High	Consult		Widely distributed – poor communication
Secondary Stakeholders				
Market traders	High	Consult		
Mombuka Fisheries Division	Moderate	Partner/Owner	Office provided	Little skills in working with local communities or NGO
Third Level Stakeholders				
GEF	Very High	Owner		Not flexible on

				timing of deadlines
Reef Conservation Int'l	Low	Consult	Good knowledge and information on lessons from other projects	
Mombuka Tourism office	Low	Consult	Interested in publicity of conservation benefits	Little time to attend meetings
Environmental Studies Institute	High	Partner	Extensive materials Available research students with funds	Too academic in research methods
Mombuka Health Services	Moderate	Consult Partner?	Part of village women's network	

Activity 6: Mapping stakeholder relationships

Purpose:

To analyse the relationships between stakeholders in relation to a resource management issue or solution/project. This may be used to analyse potential collaborations, as well as risks to the project. For example, shaky relationships between two key stakeholders may require mediation for the project outcomes to be achieved. This picture can also be used to monitor change in relationships during the life of a project.

Participants:

This activity can be used by a project manager on their own or together with other staff working for a project (the project team) and in a stakeholder workshop.

Materials:

Flip-chart and marker pens.

You will need the outputs of Activity 1.

Preparation:

Depending on the number of participants, the task can be undertaken in small groups of 5-6 people.

Time:

1 -1½ hours

Steps:

1. Using the stakeholders identified in Activity 1, ask participants to draw a circle on a chart to represent each stakeholder or stakeholder group. Write the name of the stakeholder in the middle of the circle. (See the Example 1 for Activity 6 below).

Variation: a different sized circle may be used to indicate stakeholder influence or interest in the project. Make sure participants clarify which of these is shown by size before they start.

2. Invite participants to discuss the relationship between each of the stakeholders they have drawn.

   Is the relationship positive/cooperative or negative/conflicting?

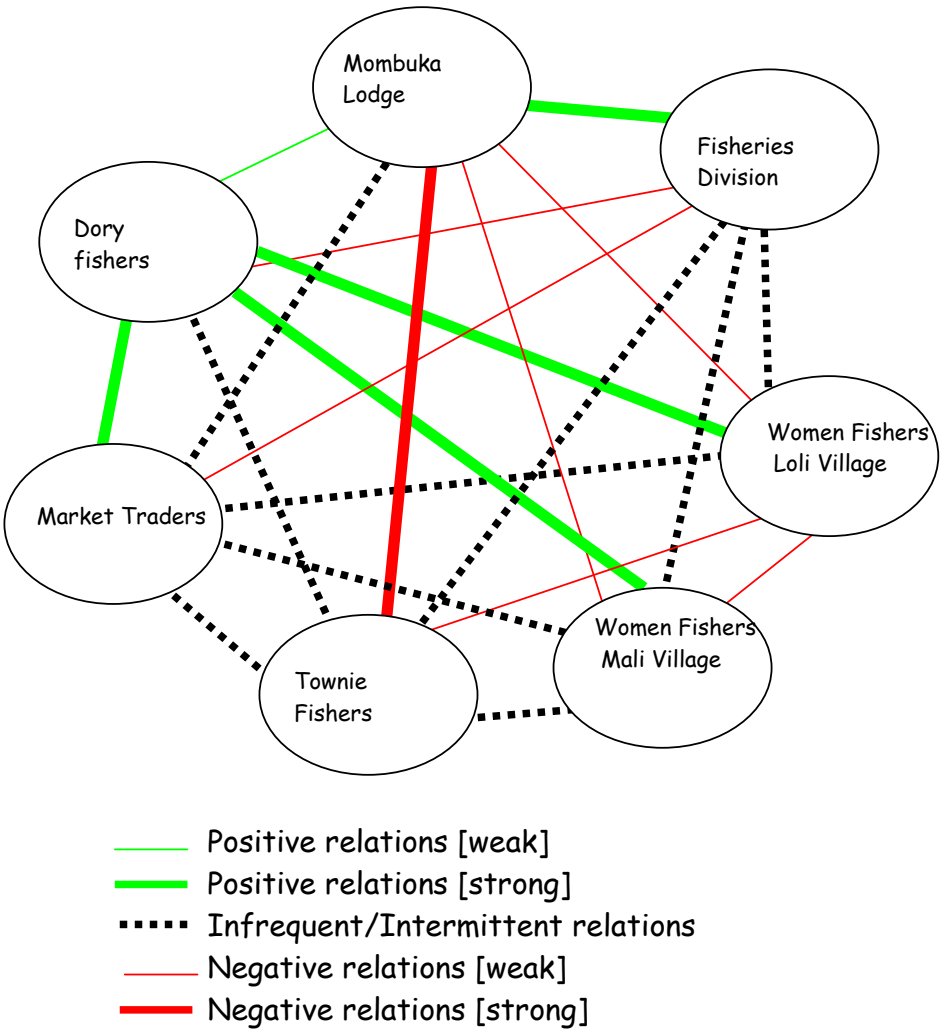
3. Invite participants to connect each stakeholder circle to the others, where relevant, by a line of varying width. The width of the line can show the strength of conflict or cooperation. Lines should be one of two colours: One colour (eg. Red) can indicate a conflicting or negative relationship while the other colour (eg. Green) can indicate a cooperative or positive relationship. There may also be stakeholders

who participants feel are not currently related to any other stakeholders, which will not be joined by any lines.

Variation: the chart information can be translated to a matrix showing relationships between stakeholders. See Example 2 for Activity 6 below

4. At the end, ask each group to post their map.
5. Discussion questions:
   - What are the similarities/differences in the results of the different groups?
   - What does the exercise show about stakeholder relationships (eg. Try to bring out any 'hidden' conflict.)
   - How can you use this information? (e.g. if there is conflict between stakeholders, does this need to be addressed?).

Activity 6 Example 1: Diagram of Stakeholder Relationships at Mombuka Bay



Activity 6 Example 2: Matrix of Stakeholder Relationships at Mombuka Bay

Stakeholders	Mombuka Lodge	Fisheries	W. Fishers Loli	W. Fishers Mali	Townie Fishers	Market Traders	Dory Fishers
Mombuka Lodge							
Fisheries Div	+++						
W. Fishers Loli	-	I					
W. Fishers Mali	-	I	+++				
Townie Fishers	---	I	-	-			
Market Traders	I	--	I	I	I		
Dory Fishers	+	--	++	++	I	+++	

Legend:

- negative relations (weak)
--- negative relations (strong)
+ positive relations (weak)
+++ positive relations (strong)
I infrequent relationship

Topic 3.3 Participatory Problem Analysis

Once resource management issues and stakeholders have been identified (Topics 3.1 and 3.2), you need to work with stakeholders to identify the symptoms and causes of the major problems.

Participatory Problem Analysis (or PPA) is a visual exercise that helps stakeholders analyse the 'root causes' (underlying sources) of problems. The activity has also been called 'root cause analysis' for this reason. Participatory problem analysis helps stakeholders to break a large NRM issue or problem into smaller interrelated problems. The method is best used during the early assessment stage of the project cycle, to gain a clear understanding of the resource management problem. The PPA provides a good basis for identifying solutions and developing project objectives and activities in the form of a project map (discussed in Module 5).

Why do Participatory Problem Analysis?

Gaining a clear picture of the underlying problems for an NRM issue gives the project a better chance to resolve the issue. In the past, many projects have focused on the wrong set of problems or solutions because they were developed on assumptions that did not hold true in a particular situation or place, or have only picked up on one part of the problem. The results of this problem can be seen in Case 16 below. A more thorough understanding of the root causes allows the project to pick up various aspects and issues in project activities. .

Case 16: Will improving community livelihoods decrease resource degradation?

In the 1990s, many resource management programs were based on the assumption that livelihood improvements tied to conservation would improve NRM outcomes. This turned out to be only part of the solution required.

An evaluation of the South Pacific Biodiversity Conservation Program found that programs to improve the sustainability of community livelihoods often needed to be supplemented by other actions, such as appropriate economic policy and regulatory frameworks at the government level. Examples of this kind of support may include: recognition of community level resource use rules by government, legislation to control the export of certain resources, enforcement of legislation, education and awareness programs. A similar lesson was learned in conservation and enterprise programs in the Asia Pacific supported by the Biodiversity Conservation Network.

So, an assumption that activities to improve community livelihoods would automatically encourage communities to refrain from overharvesting activities may be partially true. Yet a more detailed understanding of the issues would ensure that other linkages could be addressed, such as enforcement, education or coordination of activities at the national level. These other issues could be identified earlier in a PPA.

Source: (Hunnam, 2002, Salafsky et al., 1999)

Involving stakeholders in the problem analysis process has many benefits:

- They contribute knowledge to develop a rich picture of the nature of the problem and its sources, which can lead to a better project design.
- The process of creating a 'tree' – as you will see in the following activity – enables stakeholders to see the linkages between problems at a specific site and the practices and attitudes of various stakeholders, issues of awareness and education, village level management, and government policies and programs (see Case 17 from Niue).

Case 17: Feedback on using PPA in Niue

Participants in PPA workshops in Niue commented that it helped them to see other issues, points of views and different concerns that they had not considered before. Many of them felt that it showed them shared problems between villages, which they had not been aware of before. For example, Villagers on the western side of the island were surprised to learn that eastern villages, like them, were also concerned about depletion of marine resources. They found that the PPA activity encouraged participants and created enthusiasm for project activities.

Some cautions: Facilitators needed to clarify that the project may not be able to work in all the areas or on all the issues identified. Also, the assumptions about causes raised in the PPA may need to be investigated more thoroughly.

Source: Niue IWP Programme, 2003. Participatory Situation Analysis: summary report of village consultations in Niue, IWP, Niue.

The output of a PPA is a diagram that is also called a 'problem tree'. This can be used in many ways:

- Initially it can help us to identify assumed links and causes of the problem. It can thereby help us to identify any additional information we may need in order to validate or assess those causes. (See Topic 4.3 on baseline information collection, and Issue 11 on the importance of checking assumptions.)
- It can help us to later provide a framework to identify potential solutions to the causes of the problem. In other words, it can assist us to build a 'Solutions Tree' (See Topic 5.1), which can be used to create logical 'project maps' (see Topic 6.1).
- Develop monitoring plans for pilot project activities and help capture important learnings.

Issue 11: Remember to check assumptions!

It is worth reflecting here on the comment of a community participant in a PPA activity in Niue:

"There are absolutely lots of 'assumptions' on the possible causes of problems. At what stage of this project will we find out whether they are true or not?" (Niue IWP Participatory Situation Analysis Report 2003).

Doing a PPA does not mean we relax about probing further to understand the issues. Stakeholders may need help to question and interrogate their assumptions, just as we as project managers and facilitators need to constantly question our own beliefs and assumptions about a problem and its causes. This kind of questioning stance can lead to a richer and more comprehensive picture as a basis for project planning. The principle of *triangulation*, or gathering information from a range of sources, is also important. Social and economic baseline assessments, involving more detailed research, can also help verify and quantify causes and relationships.

Activity: Participatory Problem Analysis (PPA)

Purpose:
To help stakeholders examine the origins and underlying causes of natural resource issues or problems. To do this, you will invite stakeholders to illustrate the causes of the environment problem as a 'tree' with the roots of the tree representing the root causes of the problem. The further down the roots of the tree extend, the more fundamental the cause of the problem.

Participants:

This activity is used in a stakeholder workshop.

Materials:

Flip-chart paper

Post-it notes

Coloured marker pens.

Preparation:

Organise the work space to enable groups of up to 5-6 to work on the task at a time.

Time:

1 ½ to 2 hours

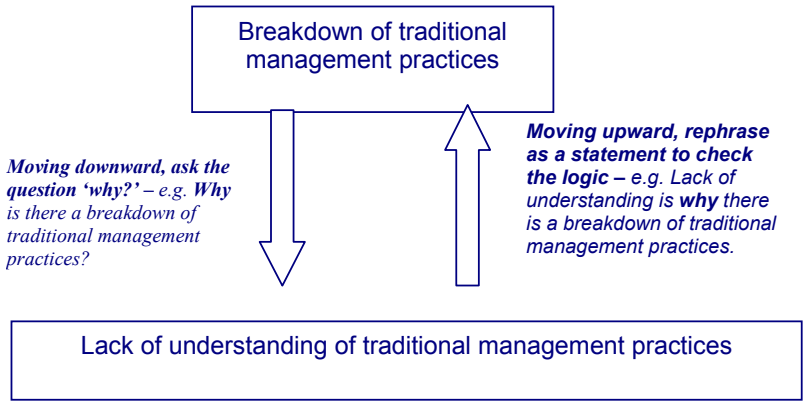
Steps:

Divide participants into groups. In each group:

1. Identify the resource degradation issue that you have identified as having a high priority.
2. Next, ask 'why' the problem has occurred, and identify the immediate causes of the problem. Think broadly in terms of social, political, economic and environmental reasons.
3. Phrase these causes as 'negative statements' about what people are doing. For example, if a cause of overfishing is that 'people do not realise how few fish there are', the negative statement might be written as 'lack of information'. Write these negative statements on a post-it note. Stick the post it note below the cause to which it relates below the main issue heading on the flip chart.
4. Next, working downwards, keep asking the question "Why does this problem occur?" for other of the immediate causes identified. You should discuss each and write each on a post-it. Then place the post it notes on the line below the causes to which they relate.

Hints:
Make sure you phrase the initial problem as a resource degradation issue.
List immediate causes at the outset then work your way down.
State/word each contributing cause as a problem (negatively).
Focus on identifying problems that are within your control (eg. You may leave out weather or practices that no longer happen)
Do a 'reverse logic' check from time to time to see you are on track.
Participants' ideas should not be excluded because they may not seem correct or true. The problem tree should capture everyone's perceptions of the problems. ☺

5. It is very important that each reason or cause is stated as a problem or change, and worded as a negative state.
6. These steps are repeated until it is not possible to break the problem down any further. At this point, you have identified potential root causes of the problem.
7. It is important not to draw links across the lines of post-its leading to a problem. If the same cause underlines several streams and write it separately for each. For example, if lack of information is a cause of overfishing and of problems with enforcing the fishing regulations, then this cause will appear twice in the diagram.
8. From time to time it will be constructive to check that the logic of your problem tree continues to apply. You can do this by reading the problem tree from the roots upwards – a 'reverse logic check' (the figure below). For example, a problem might involve the 'Breakdown of traditional management practices' and the cause of that problem ('Why?') might be identified as a 'Lack of understanding of traditional management practices'. To do a reverse check on these factors to see if the relationship is logical would involve checking that a 'Lack of understanding' apparently explains that a breakdown of traditional management practices' occurs.

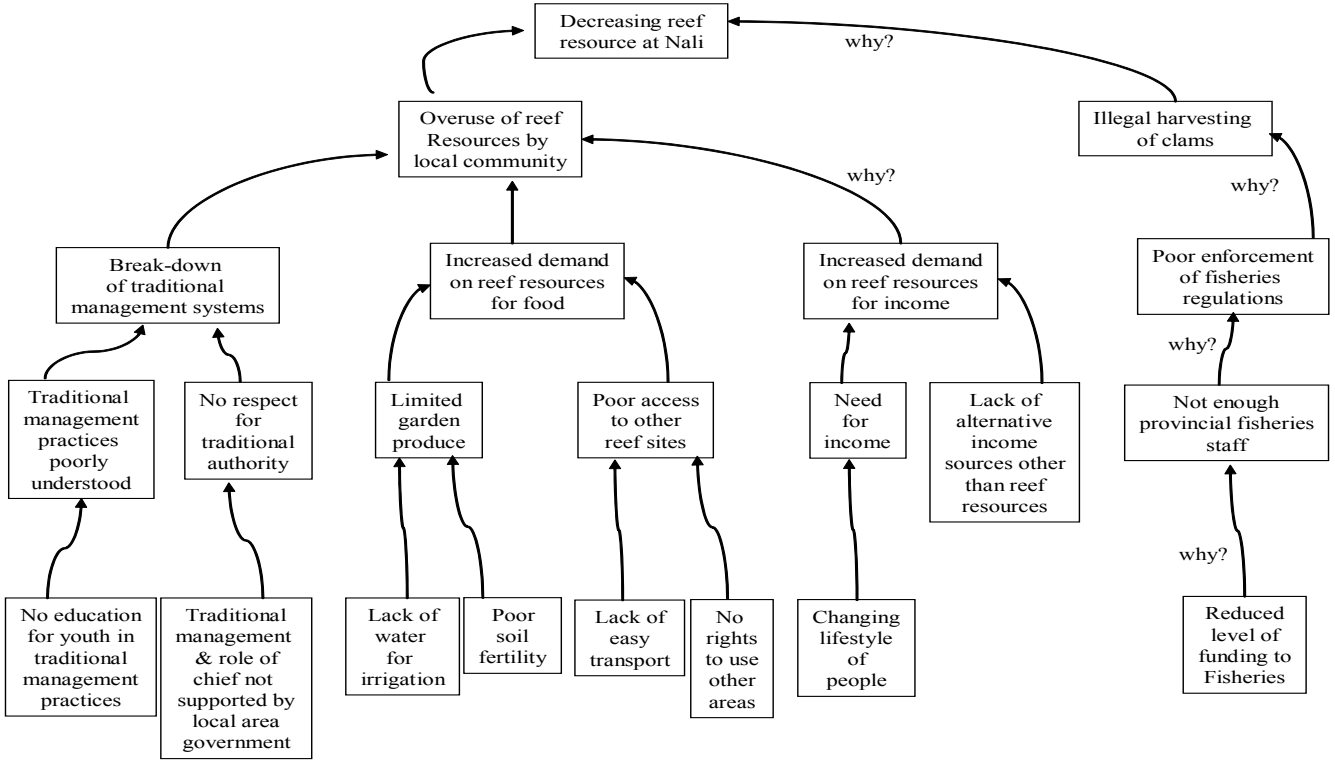


9. Move the post-it notes around if necessary, until you are confident about the logic of (relationship between) the causes and the problems.
10. Finally, you should connect the post-its with arrows to show the linkages between causes and effects. If arrows are inserted then they should ensure that they are heading upwards in the direction of the larger initial problem they are trying to break down. Do a final check on your logic by repeating the process of asking "Why?" down through the levels of causes, as outlined above.

Source: (adapted from Worah et al., 1999)

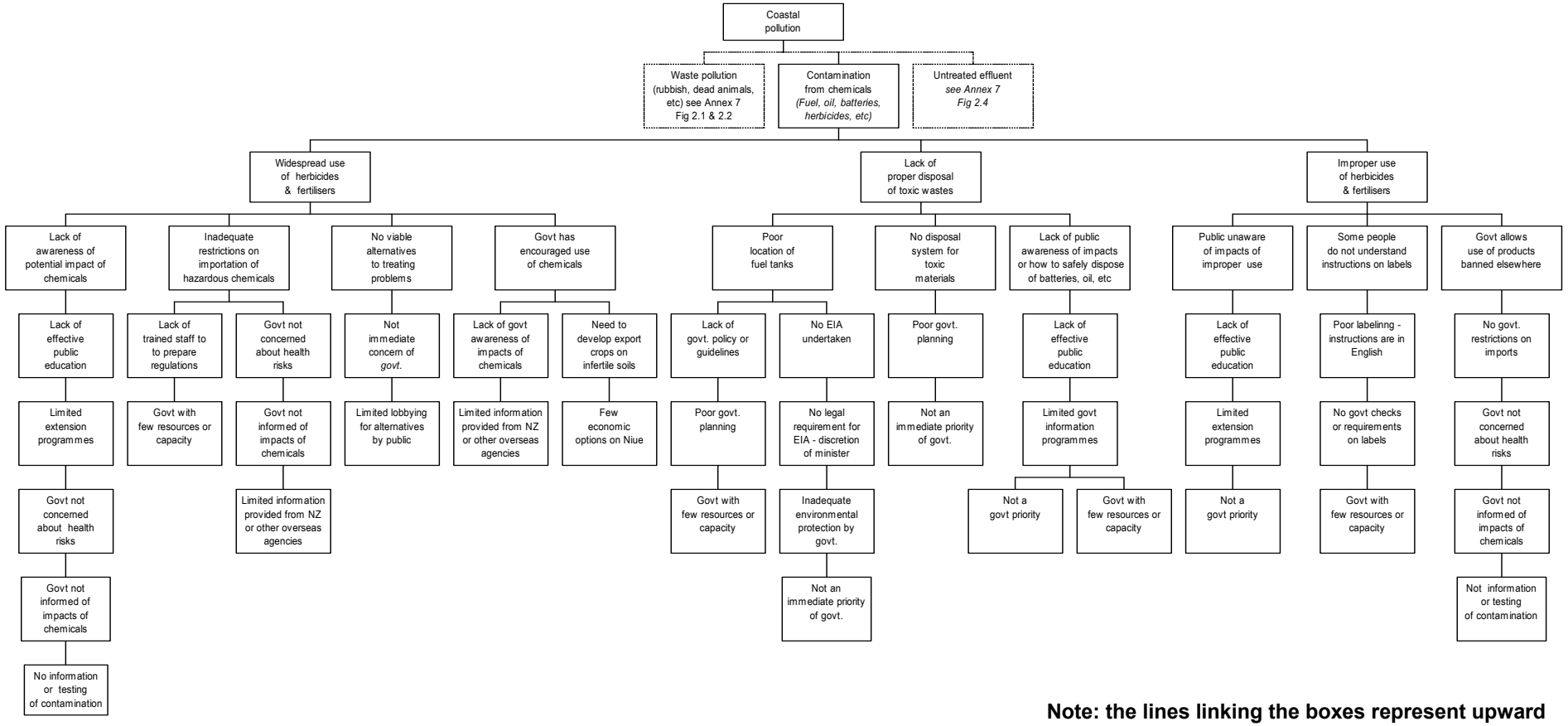
Participants in a training workshop learn how to do a participatory problem analysis, Niue, 2002

Example 1: Participatory Problem Analysis from Nali Village, Solomon Islands



Source: Niue Facilitator Training Workshop Materials, 2003

Example 2: Participatory Problem Analysis on contamination of water by chemicals in Niue

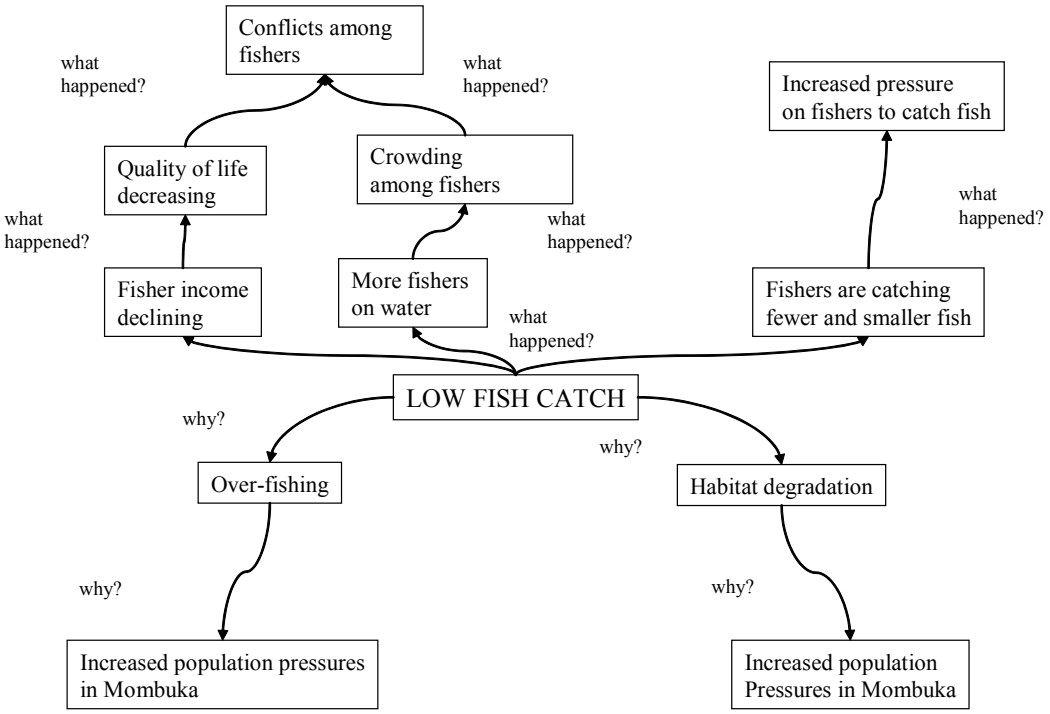


Note: the lines linking the boxes represent upward arrows

Variation on PPA Activity: Problem and Impacts Tree

This method can be used to analyse the impacts or consequences of the resource management issue in addition to the root causes. This may be useful in helping stakeholders think through the consequences of not taking action, and how these relate to different stakeholders

1. After identifying the root causes in the participatory problem analysis, work upwards from the problem to examine impacts. Ask the question: "what happens if…[insert problem here]?"
2. Following the same procedure as for the PPA, develop a tree of impacts of a key problem.



Source: (Bunce and Pomeroy, 2000)

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