MODULE 4

Planning and implementation of fisheries co-management in Indonesia

COMMUNITY ENTRY AND INTEGRATION IN FISHERIES CO-MANAGEMENT

WHY IS COMMUNITY INTEGRATION NECESSARY?

In view of the fact that a community is a key stakeholder, the integration of the community in fishery co-management is very important. In several experiential processes, community integration has typically been carried out by a facilitator who acts as mediator between government and the community. The facilitator may originate from a government agency, the community itself or be an external agent.

Generally, the integration of the community in co-management processes comprises a number of important activities, including (1) the formal introduction of a co-management programme, either via the internal community (internal beginnings) or via the external community (external beginnings); (2) providing answers if there are questions about the co-management programme; (3) participating in the life of the community, (4) identifying the roles of other stakeholders in the programme; (5) forming a core group in relation to co-management frameworks; (6) organizing a meeting, training session or seminar with the aim of improving the community's awareness of co-management programmes; (7) gathering basic data and information about the community; (8) identifying stakeholders; (9) holding meetings with local leaders and government officials; (10) getting approval from the government; and (11) initiating programmes together with the community (Pomeroy and Rivera-Guieb, 2006).

COMMUNITY INTEGRATION IN FISHERIES CO-MANAGEMENT

The integration of the community needs to be conducted within each element of co-management, as is described below (Adrianto, 2005):

(1) Social preparation and community organization. The integration process begins with the identification and analysis of the parties involved in the fisheries co-management process. In other words, social preparation is accomplished by the identification of the fisheries stakeholders and the design and development of their organization. This organization will not always take the shape of a physical group or a tangible institution, but will rather include the rules, norms and value systems (the "soft" institution) that are applied in fisheries co-management.

(2) Environmental education and capacity building. As was explained in Module 2, Topic 2.2, the process of organizing the community will not be effective without community education and improving the capacity of the fisher people. Given that fisheries resources are dynamic and often site specific, early identification of disruptions to a fishery system are important. Through

education and capacity building, fishing communities are well placed to monitor changes. Figure 4.1 describes a scheme for enhancing capacity in fisheries management.

FIGURE 4.1

Scheme for improving the community's capacity to participate in a fisheries co-management framework
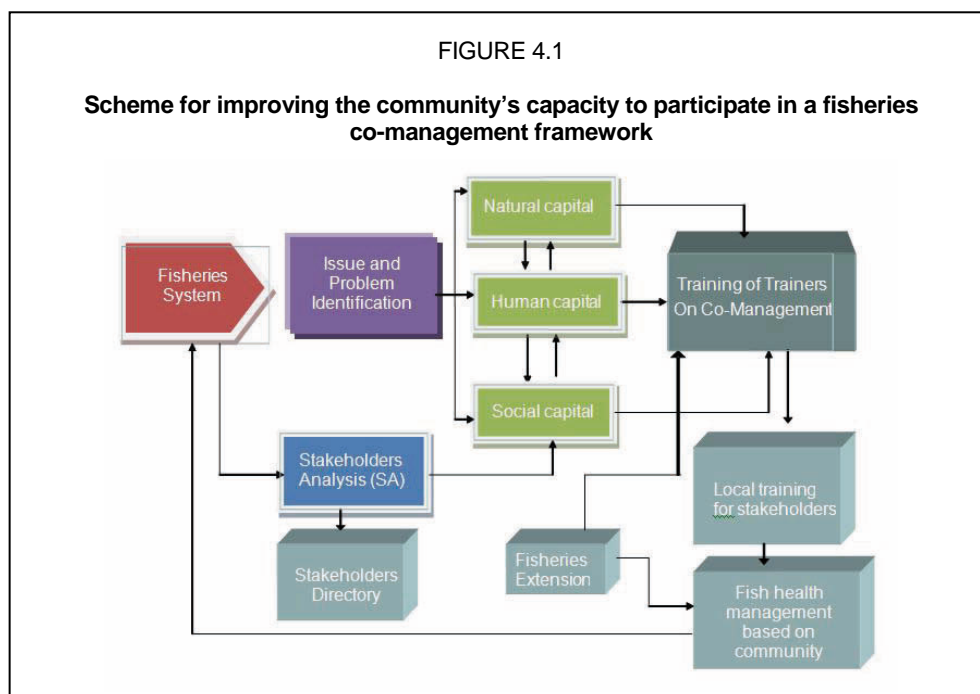
Figure 4.1 illustrates that building capacity is one of the most important elements in the planning and initiation of a co-management process. The capacity building process can be strategic. The community can complete their own assessment of their educational and capacity building needs because they relate to the local system, including its natural, social and human resources.

(3) Fisheries management planning. In this framework, solid planning of the fisheries management process is required to establish synergy between government and people. Community integration is very important for the planning process. Planning is conducted by identifying the role and function of each element of government and community, particularly where it is relevant to fisheries management. The planning process must be able to adapt to the requirements of the people involved. For instance, there may be a need to conduct training for fisheries extension officers in every centre of fisheries production.

(4) Defining an incentive system for the community. It is recommended that the identification of an incentive system is carried out according to the framework outlined in Figure 4.2 below.

FIGURE 4.2

An incentive scheme for people involved in fisheries co-management (adapted from Adrianto, 2005)
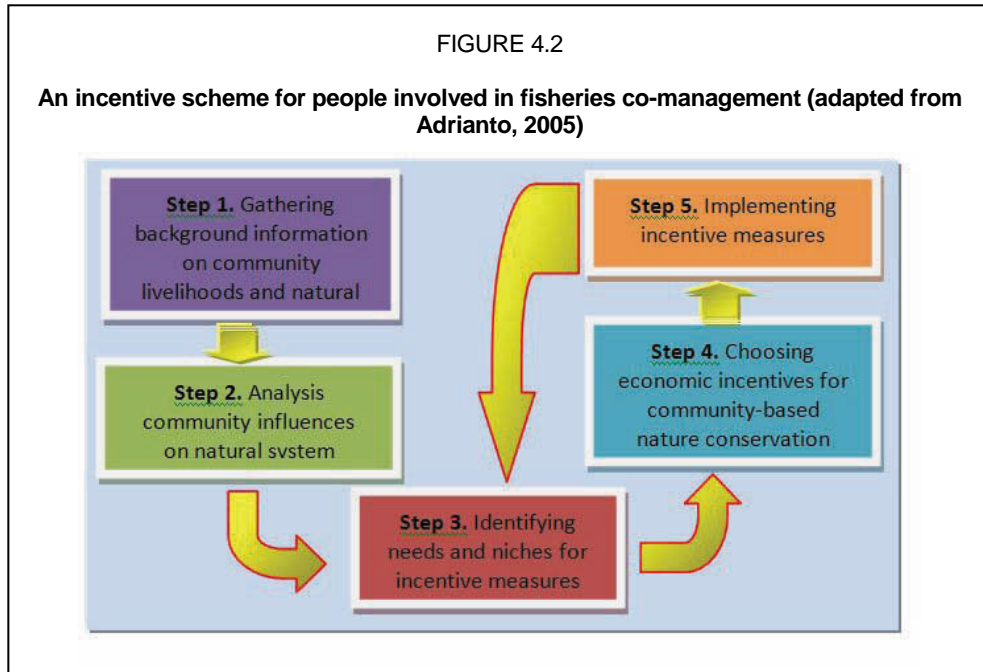
Figure 4.2 above, illustrates that the interaction between the activities of fisheries communities and their environment should be analyzed and any negative impacts that fishing has on the public or the environment should be identified. Thereafter, an incentive scheme, which might encourage better practices can be devised. For example, an incentive on both input and output prices could be offered. A detailed explanation of this incentive system is provided in Module 4, Topic 4.5.

(5) Monitoring and evaluation of fisheries systems. The integration of the community in the process of monitoring and evaluation can enhance the sustainability of a fisheries co-management system. By participating in monitoring activities, a community's reliability or trustworthiness may be enhanced and may eventually determine the effectiveness of the implementation process itself. The design of the monitoring and evaluation framework for a fisheries co-management process is illustrated in Figure 4.3. Meanwhile, a detailed process of monitoring and evaluation is described in Module 4, Topic 4.5.

THE COMMUNITY ORGANIZER

As mentioned previously, a community organizer (CO) plays the role of facilitator during the implementation of the co-management programme. A CO plays an important role, working with people in order to initiate the co-management programme. A CO should live among the community until he or she believes that the community is ready to implement co-management without intensive mentoring.

FIGURE 4.3

Framework for the monitoring and evaluation of fisheries management (adapted from Adrianto, 2004)
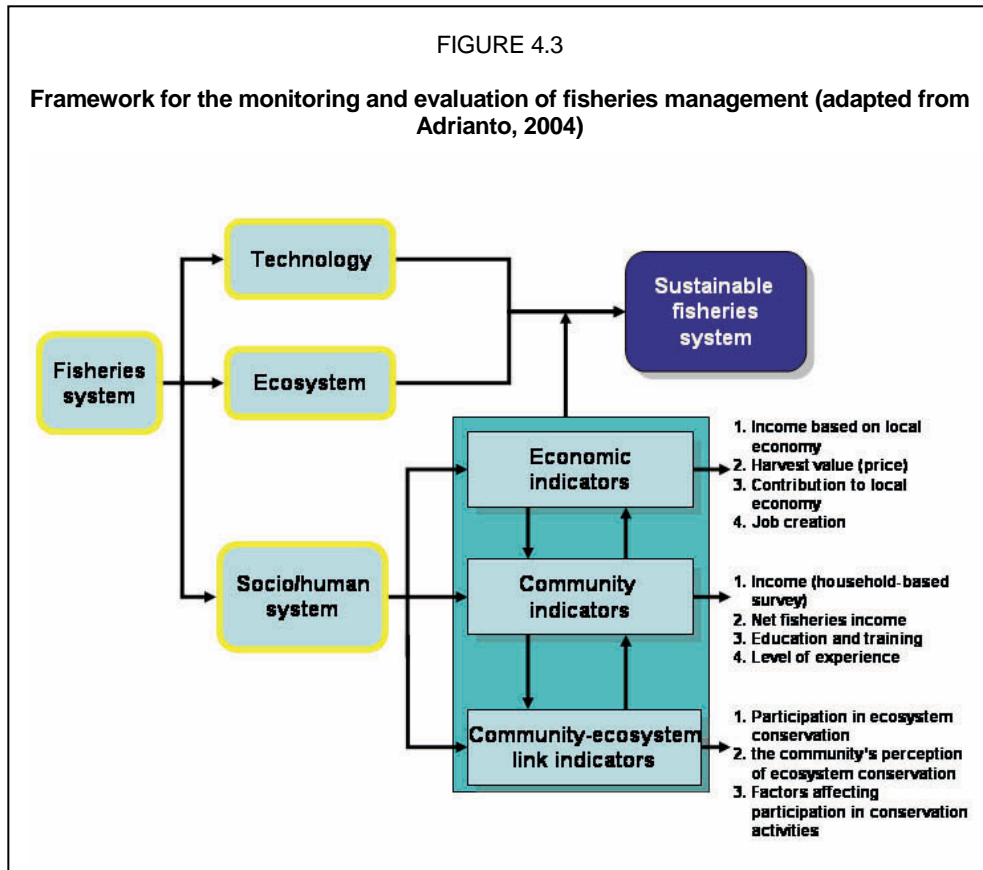
According to Pomeroy and Rivera-Guieb (2006), a CO must possess knowledge and skills as listed in Table 4.1 below.

TABLE 4.1

Skills required by a Community Organizer

No.	Expected skills
1	Open-minded
2	Creative
3	Highly respected
4	Good sense of humor
5	Provide guidance rather than giving orders
6	Attentive
7	Able to work in a team
8	Possess good communication and interview skills
9	Sufficient knowledge about fisheries resources and fisheries management
10	Familiar with the concept and process of community organization
11	Good social relationships
12	A clear perspective on when to finish the mentoring process
13	Highly flexible and adaptive

Source: Modified from Pomeroy and Rivera-Guieb (2006)

COMMUNITY INTEGRATION PROCESS

The CO is a frontrunner in the all important process of community integration in co-management programmes. The integration of the CO into community life will make the initiation and implementation of co-management processes more effective. The CO must be able to accept and adapt to local cultures, traditions, and ways of thinking, as well as the social structure of local people. This process will usually take between three and six months. In the co-management framework, this process is known as "social capital" (Adrianto, 2005).

Within the integration process, there are some fundamental elements that need to be attended to. These are (1) a courtesy call to prominent local leaders to discuss the initiation of a co-management system; (2) community meetings, the objectives of which are similar to the courtesy call, but the targets are different; (3) identification of core group(s) and core leaders; (4) formulation of a community profile; (5) identification of the management area and its boundaries; (6) identification of problems, needs and community opportunities in the co-management context; (7) identification of potential local leaders; (8) identification of existing groups or local organizations and their relationship with fisheries co-management; (9) forming a core community group, usually known as the "initiator group", which acts as a driving force for the co-management programme; (10) identification of key stakeholders; and (11) formulation of a working plan related to the implementation of co-management. A brief description of each element is provided in Table 4.2.

TABLE 4.2
Elements of the integration process in fisheries co-management

No	Element	Description
1	Courtesy call to prominent local leaders	The objective of this activity is to provide initial information to the local leaders, from the community or the government, on the implementation of the co-management system. This process involves introducing the CO to the local leaders, introducing the programme, introducing the concept of co-management, to initiate dialogue and request support for the initiation of the co-management programme.
2	Community meetings	The objective is similar to the previous process. The community meeting is intended to introduce the co-management project to the community and discuss it. The CO plays the role of introducing the concept of co-management and discussing it with the community.
3	Identification of core group(s) and core leaders	The CO identifies the core group(s) and core leaders among the community. These are people who will provide authentic information about the implementation of a co-management process.
4	Formulation of community profile	The CO will formulate the initial profile of the community in order to better understand the condition of the community. This profile will include

		social, economic and institutional parameters and their relation to the ecological system. In other words, this profile will use the "socio-ecological" systems approach.
5	Identification of the management area and its boundaries	This process will use the participatory approach to determine the boundaries of the area that will be used as the basis for co-management. The formulation of boundaries will be important to identify and differentiate between the "effective area" and "administrative area". If necessary, it can use a geographical information system (GIS) tool.
6	Identification of problems, needs and community opportunities	By using the meta-plan technique, the needs, problems and opportunities of the community can be identified, based on the local perspective. This process can be conducted together during community meetings through the local media (such as "duekpakat" in Aceh or "Rembug Warga" in Java).
7	Identification of potential local leaders	This process puts emphasis on the ability of the CO to identify the local leaders as the main driving force behind the co-management programme. The capacity building component of the programme becomes important (Please refer to Diagram 1 of this module).
8	Identification of existent groups or local organizations	Community organization is one of the most important elements of co-management. Therefore, the correct identification of community organizations is key for the implementation process. Organizations include formal organization such as an association of fishers, owners of aquaculture ponds, co-operatives, or non-formal organizations such as a women's savings club, etc.
9	Form the core community group	The core group is the group that becomes the primary driving force behind the implementation of the co-management programme. This group will facilitate the sharing of information among the members of the community; facilitate the organization of the community and assist with the decision-making process in both the initiation and implementation phases of the co-management process.
10	Identification of key stakeholders	This process is important for understanding the influence and impact of stakeholders on the co-management project and the impact of the co-management strategy on the stakeholders.
11	Formulation of working plan	This process is important in the strategic planning process. The working plan consists of goals, an action plan and an outline of the required budget. It is usually performed using the technique of LFA (Logical Framework Analysis).

PARTICIPATORY ACTION-RESEARCH APPROACH IN FISHERIES CO-MANAGEMENT

WHY IS A PARTICIPATORY ACTION-RESEARCH APPROACH REQUIRED?

The use of a participatory action-research approach in fisheries co-management is fundamental. It is relevant to the study of the community's problems and the characteristics of the community profile itself. Research will be effective if is conducted in a participatory manner.

The participatory action-research approach constitutes an alternative to the failed "top-down" research approaches, which were standard academic practice for many years and generally hampered the development process. A top-down approach to research has been shown to fail for a number of reasons, namely (1) if researchers are not involved with the community in development planning, development targets may not be achieved because they may be undesirable for the community; (2) when a development intervention is completed and the community is not involved in the monitoring or evaluation process, then the community is in effect an object of the development.
These two weaknesses have become the basis for developing an alternative approach to research which is more participatory at all levels of development, both nationally and locally (at the village level). At the simplest level, the participatory approach constitutes a participative review of the village's problems, or to coin a more common term, a Participatory Rural Appraisal (PRA).

The PRA has at least five important characteristics. The first is empowerment, whereby the local community is encouraged to participate by using its local knowledge to review the problems that affects it. In-so-doing, the confidence of the local community to overcome its own problems is restored. The second important characteristic of PRA is the respect shown for local people's opinions; the idea that the villagers themselves can find solutions to the village's problems. The third characteristic is the local content of the research; local materials are used to make decisions related to the village's problems. The fourth characteristic is enjoyment or satisfaction, whereby either the process of decision-making or identifying problems is the main focus, rather than the period of time that has been set aside for conducting the study. In this respect, interaction with stakeholders in the community is critical. Communicating by using the local language is one strategy that may be adopted; this certainly increases the satisfaction levels of all participants in the study. The fifth characteristic of PRA is inclusiveness whereby all categories of local people are involved in the research. PRA is based on the principles of representation rather than differentiation.

Theoretically, however, there are at least seven participatory categories as shown in Table 4.3 below.

TABLE 4.3

Types and characteristics of participation

| Participatory Typology	Characteristic
Passive participation	The community participates by listening to what is going on or what has already happened. It is a unilateral process and the project manager informs without listening to people's responses.
Participation in providing information	The community participates by answering questions. In another words, the community provides information without being able to know or verify the results of the information that is analyzed thereafter.
Consultative participation	The community participates by being consulted and external agents listen to views. These external agents define both problems and solutions and may modify these in the light of people's responses. In this type of participatory process, the community does not participate in the decision-making and there is no obligation to take on board people's views.
Participation for material incentive	The community participates through providing resources, such as man power, in return for incentives such as wages or food. The community works for outsiders. It is very common to see this called participation, yet people have no stake in prolonging the activities when the incentives end.
Functional participation	The community participates through the establishment of a group to meet predetermined objectives related to the project, which can involve the development or promotion of an externally initiated social organization. This group is involved in the decision-making process, usually assisted by a facilitator or outsider. Nevertheless, this type of participation is usually conducted after important decisions have been taken.
Interactive participation	The community participates through common analysis that subsequently enables it to establish a new local institution or improve an existing local institution. This type of participatory research plays a more important role in decision-making. The community takes control over local decisions and has a stake in maintaining structures or practices.
Self-mobilization	The community participates independently and mobilizes itself in the development that is being conducted in their area. The community is in contact with outsiders when they need technical assistance, but they are still in control of their resources.

Source: Pretty (1994)

INITIATING A PARTICIPATORY RURAL APPRAISAL (PRA)

The process of performing a review of the coastal village's problems needs to start from a shared identification of problems which is followed by the formulation of a shared vision for solving the problems. In this context, conducting meetings with stakeholders or members of the community becomes one of the most important ways of sharing opinions and knowledge.

The next stage is to conduct a meeting to design plans for solving the identified problem. Questions like "what is our goal?"; "what exactly is preventing us from reaching our goal?" or "how can we achieve the goal?" are very important at this stage. This stage is complete when an action plan or strategy has been prepared.

Figure 4.4 illustrates the process of conducting socio-economic research using a PRA.

FIGURE 4.4

The process of conducting socio-economic research using a PRA.
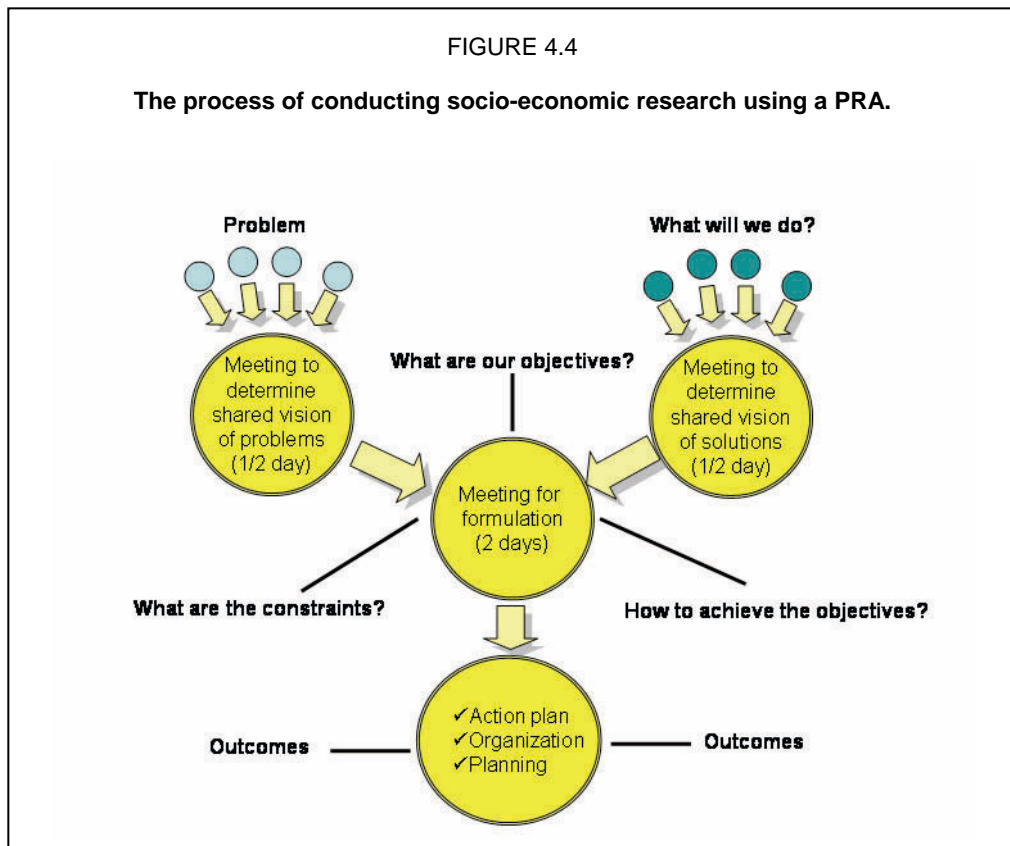
Mohen and Stokke (2000) describe the important stages of implementing socio-economic research using a PRA, as shown in Box 4.1 below.
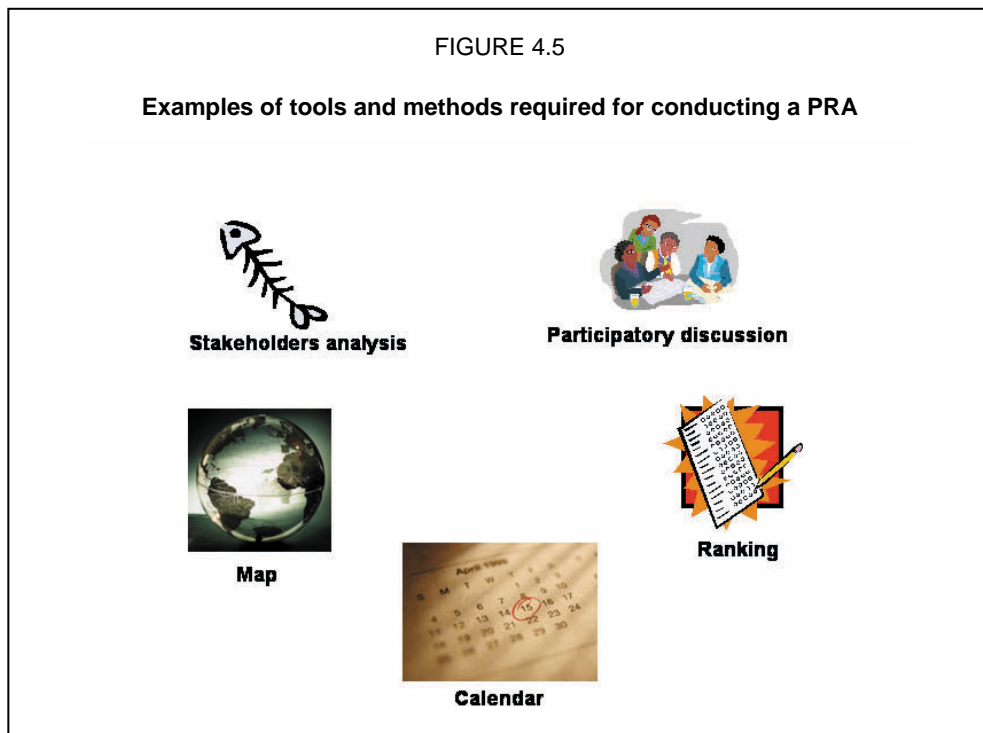
BOX 4.1

Important stages within Participatory Rural Approach (PRA)

• Identifying the related parties (stakeholder analysis).
• Identifying and accommodating peoples' needs.
• Identifying the expectations of people.
• Identifying the indicators required for evaluation.
• In consultation with the community, approving the method to be used.
• Collecting data together with the people.

Methods and tools for PRA

Some of the tools and methods that are required to conduct a PRA of a coastal village's problems are illustrated in Figure 4.5.

FIGURE 4.5

Examples of tools and methods required for conducting a PRA

Stakeholders analysis

Participatory discussion

Map

Calendar

Ranking

A discussion of each of these tools is provided here:

Map

The map provides a spatial description of the distribution of resources and community activities, including the study area. The map is also useful for providing basic information and is normally produced at the first meeting of the village when using a participatory approach. In other words, the map is

prepared in a participatory way, by accommodating local knowledge. The broader objectives of developing a map are outlined in Box 4.2 below.

BOX 4.2

Objectives for developing a participatory map for a PRA

- A map locates and classifies the distribution and use of resources at the present time, in the past and in the future.
- It provides visual information on peoples' activities when utilizing resources in the present, past and future.
- It illustrates local people's knowledge.
- It illustrates socio-economic conditions of local people in the study location.
- It identifies degraded areas and/or a crisis in natural resources as a result of, e.g. contamination, overexploitation, etc.

There are different types of participatory maps. Firstly there is a "history" map that describes change and trends in the state of the community, resource or resource exploitation. After the prevailing conditions have been mapped in a participatory way, it is possible to map the conditions of the past or the future and thereby draw attention to the changes that have taken place, or will take place, in the community. An example of a "history map" is provided in Figure 4.6 below.

FIGURE 4.6

An example of a "history map", as used in a PRA
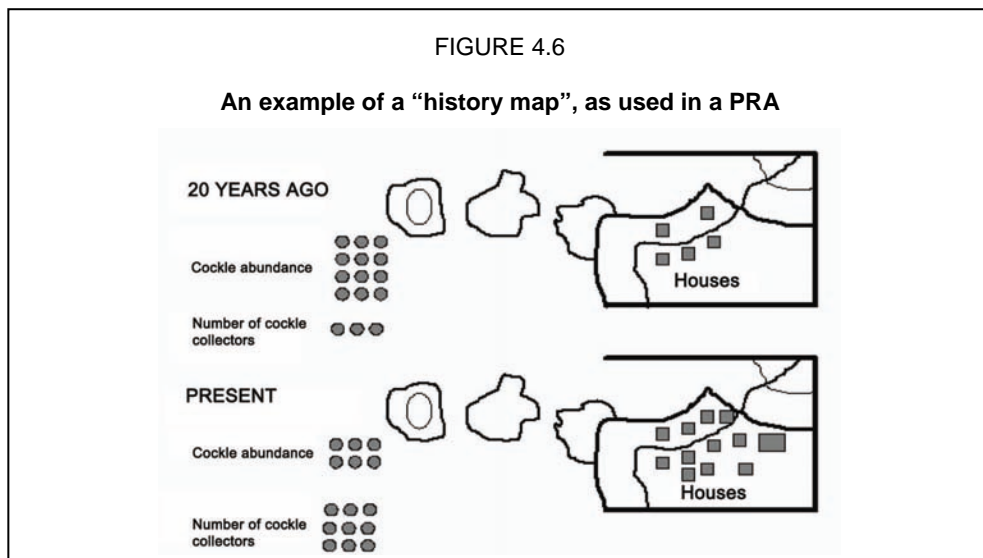
The second type of map is the "resource exploitation map". This map describes the condition of resources utilized by the coastal village, such as the condition of inter-community fishing grounds which are incorporated into the study area. By introducing the basic map that has been prepared in a participatory manner, the community is asked to describe the condition of resource exploitation (Figure 4.7 below).

FIGURE 4.7

An example of a resource exploitation map used in a PRA
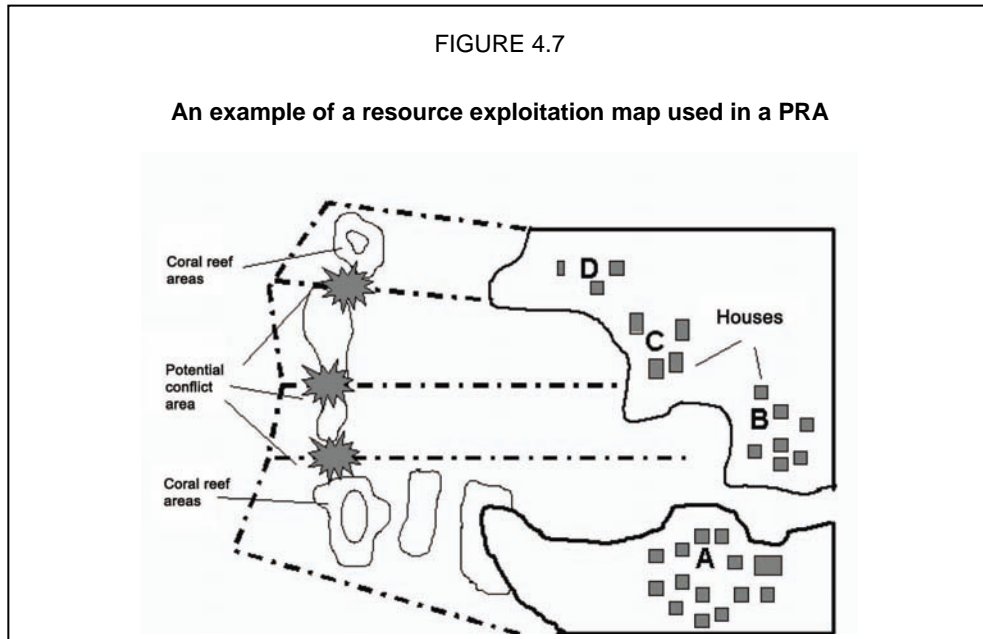
Stakeholder analysis

The most important factor when utilizing a PRA to study the problems of coastal villages, is to determine the stakeholders involved in or affected by the problems. As a result, the technique of stakeholder identification is very important.

The first step in the process of stakeholder analysis is to identify the activities that are related to the problems being studied. For instance, activities associated with the management of coral reefs are fishing operations, marine ecotourism, marine conservation and so on. The second step is to determine which parties are directly related to these activities (who are the main stakeholders?) and which parties are indirectly related to these activities (who are the additional stakeholders?). Figure 4.8 illustrates an approach to conducting a stakeholder analysis.

FIGURE 4.8

An approach to stakeholder analysis, as used in a PRA
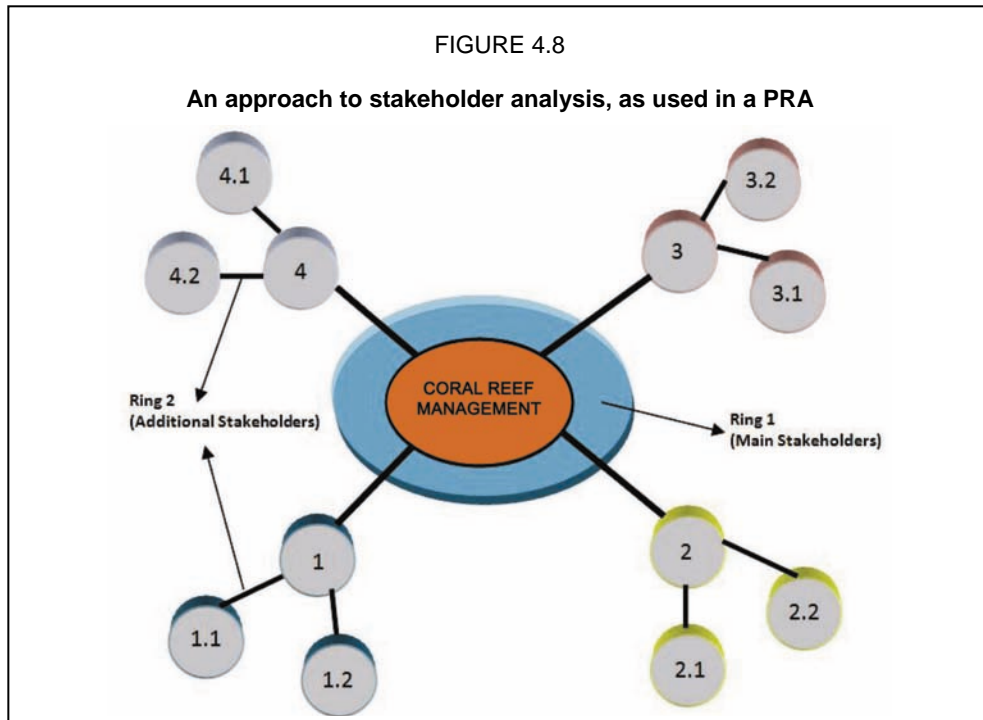
The two types of stakeholders may be identified by asking whether the parties are directly affected by the problems being researched, or not. The stakeholder analysis may be conducted by using the fishbone method. This is a cause-and-effect analysis that is organized by categorizing causes. It helps teams to brainstorm about the possible causes of a problem; accumulate existing knowledge about the causal system surrounding the problem, and group the causes into general categories.
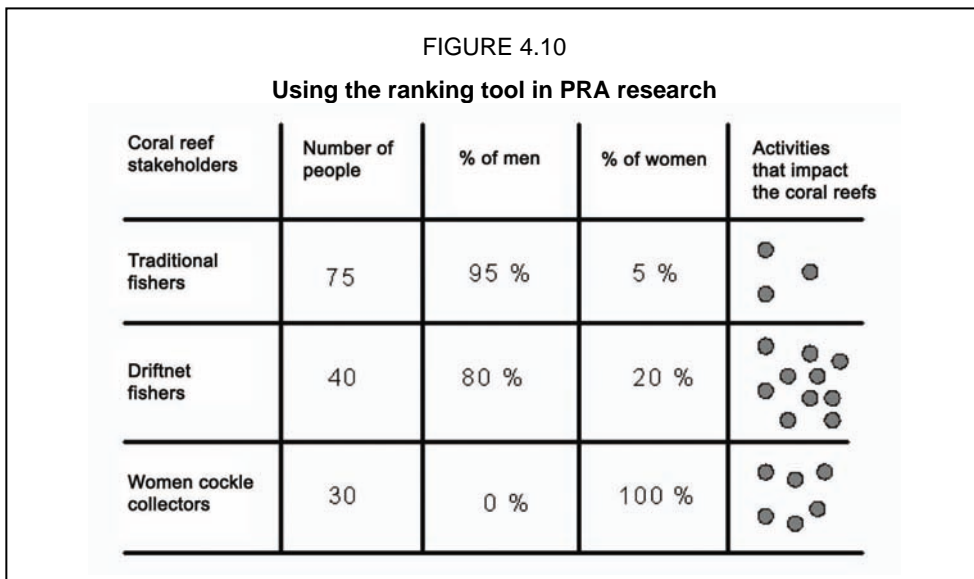
Calendar of activities

Another tool that may be used when conducting a PRA is to provide the community with an opportunity to "map" their activities and in-so-doing, prepare a local community calendar. The purpose of this exercise is to reveal the pattern of the activities undertaken by local people, in particular, those activities that are related to natural resource use. An example of how to prepare a calendar of activities is provided in Figure 4.9 below.

FIGURE 4.9

Preparation of a calendar of activities, as used in a PRA
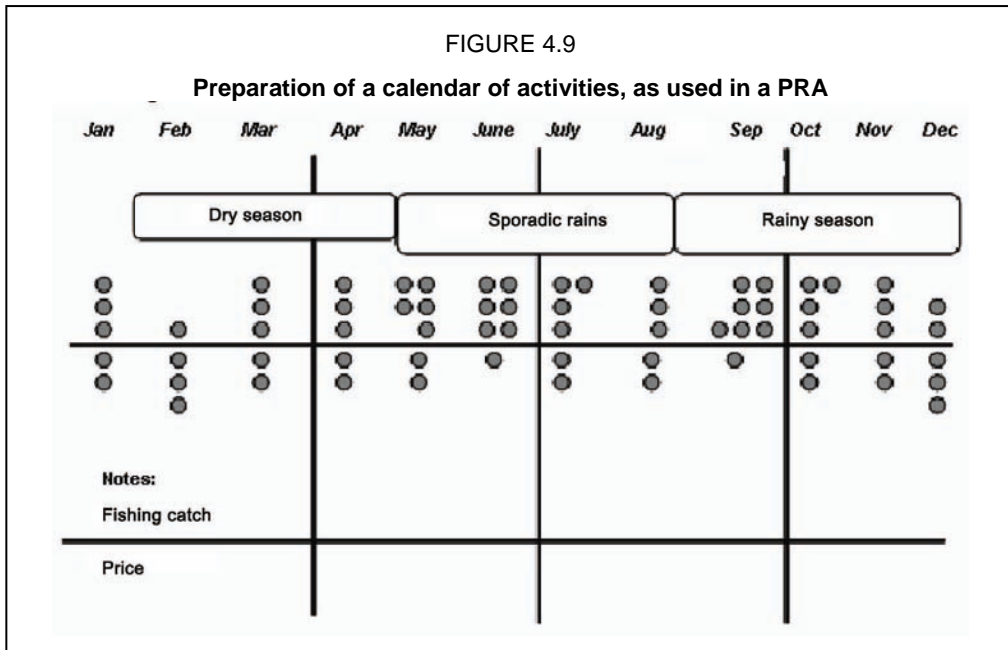
Ranking

This tool is quite important because it provides a means for comparing and evaluating a given condition; for example for determining which party is most affected by the existing rules on coral reef exploitation. The cases to be compared are normally listed on a table and the local people are asked to rank the cases in accordance with the prevailing criteria (Figure 4.10).

FIGURE 4.10

Using the ranking tool in PRA research

Coral reef stakeholders	Number of people	% of men	% of women	Activities that impact the coral reefs
Traditional fishers	75	95 %	5 %	
Driftnet fishers	40	80 %	20 %	
Women cockle collectors	30	0 %	100 %	

COMMUNITY ORGANIZATION

THE THEORY AND BENEFITS OF COMMUNITY ORGANIZATION

In Indonesia, local resource users are government's most important partners in fisheries co-management. However, the centralized fisheries management regime of the past has weakened the position of fishers and fish farmers in Indonesia and limited their ability to participate meaningfully in co-management arrangements.

In order to take up their rightful role in fisheries co-management, fishers and fish farmers need to be organized. Pomeroy and Revera-Guieb (2006) propose that the process of community organization is not simply about developing the institution, but should also include education; empowerment; developing or revitalizing values and ethics systems; developing notions of independence and partnership; developing organizational and leadership skills; and assisting the community to take action.

The long-term benefits of community organization are to:
*   smooth the process of institutional strengthening, either from the ethical, information technology or management points of view;
*   build a culture of transparency and accountability into fisheries management;
*   provide a meaningful contribution towards controlling corruption, collusion, and nepotism in fisheries management;
*   simplify the formulation of local fisheries plans which reflect the societal choice;
*   simplify the gathering of information and the monitoring of compliance with fisheries rules, regulations and conservation activities.

PROVIDE THE CORRECT SIGNAL: SHARE RESPONSIBILITY AND AUTHORITY

For Indonesia, the concept of fisheries co-management represents a substantial change. It represents a shift from a centralized, inflexible government dominated system to one of partnership with fishing communities. In order to achieve this shift, it is necessary to change the mindset of all stakeholders in the process, particularly government officials. This shift requires a willingness from government officials to share responsibility and authority for some aspects of fisheries management. In another words, government officials are required to treat fishers and fish farmers as a subject rather than an object. To achieve this, the government hierarchy needs to send the right signals with respect to sharing responsibility and authority. Some of the signals that can be projected by government are explained in Box 4.3.