MODULE 3

How to start fisheries co-management in Indonesia

HOW TO START FISHERIES CO-MANAGEMENT IN A LOCAL FISHERIES GOVERNANCE FRAMEWORK

WHAT IS MEANT BY STRENGTHENING LOCAL FISHERIES?

Marine fisheries are expected to be a primary mover of national economic growth in Indonesia. The country is endowed with relatively productive marine resources and so this sector of the economy undeniably has economic potential. Recent statistics reveal that Indonesia's total fisheries production has grown to 4.07 million tonnes per annum; the country's potential production is believed to be in the region of 6.4 million tonnes per annum. The same potential has been identified in the fish farming sector. Although it is estimated that this sector has the potential to produce 4.6 million tonnes per annum, to date it has only realized a total production of 0.7 million tonnes valued at around RP6 billion (US$ 660 000). That the fish farming sector has not yet achieved its full potential is illustrated by the fact that the combined income of the fisheries and biotechnology industries in Indonesia is RP82 billion per year (US$ 9.01 million) and the income from marine tourism may be worth as much as RP1 trillion (US$ 110 million) (Dahuri 2004).

In an effort to improve the contribution of marine fisheries to the economy, the development of the sector must be accelerated. One way of doing this is to position the regions that have a strong tradition in the marine and fisheries industries at the forefront of the national development strategy. We need to identify these regions in order to develop a comprehensive and multilevel (from local to national) fisheries development programme. To achieve this, it is necessary to analyze the fishery dependent regions according to a theoretical framework.

DEFINING THE FISHERIES AREA

In the theory of fisheries policy, the definition of fisheries area refers to the identification of areas with high risks, according to the intensity of fisheries activities and the job opportunities that are generated by the fisheries sectors (Symes 2000). Furthermore, Symes suggests that the fisheries area that is defined by these criteria is called a "fisheries dependent region".

In terms of this definition, there are three obstacles that we need to pay attention to. Firstly, there is no information system that can be used to unequivocally identify an area as a fishery area. The national statistics service, for instance, has not yet generated information about the fishery workforce in a standardized format. Secondly, fisheries data is currently not standardized across the different levels of the fishery which can create a discrepancy between the levels. For example, theoretically it is easier to identify fisheries activities at the local level which makes it easier to identify the level of dependency in a region

where fisheries take place mainly at the local level. Thirdly, in some cases the term "fisheries dependence" can cause problems. The term is intended to identify the important role of the fishery sector in certain areas, but the results can be confusing because the fishery sector is often embedded in the local economy which is complex and pluralistic in nature. In this context, the implementation of an arbitrary threshold index, to classify whether a certain area is dependent on the fishery sector or not, cannot be done.

Nevertheless, the difficulties listed above do not necessarily mean that it would be a meaningless effort to determine whether a certain area is a "fisheries dependent region" or not. It remains important to "define" the fisheries area. Phillipson (2000) focused his definition of the fisheries area on the regional economic structure (regional dependencies), rather than fisheries dependencies. Regional dependencies have a local aspect, while fisheries dependencies have many dimensions, including individuals, households and the community. In this context, the analysis is focused solely on the definition of a fisheries area as a region which depends, from a social and economic perspective, on the fisheries sector.

Additionally, it should be noted that Otterstad *et al.* (1997) argues that in some ways economic dependencies have a more direct correlation with a fisheries area. The social variable plays the role of providing general indicators of the social welfare of a certain region.

Once the fisheries area has been broadly defined, it is feasible to initiate fisheries co-management, a process that is generally implemented in three stages. These are: (1) the pre-implementation phase; (2) the implementation phase; and (3) the post implementation phase (Box 3.1). The first phase will be described in this Module while the other two phases will be described in Module 4.

BOX 3.1

The three stages of fisheries co-management implementation

1. Pre-implementation phase: log frame analysis.
2. Implementation phase: community integration, participatory research, community organizing, strategic plan implementation and evaluation.
3. Post implementation phase: counterpart process to ensure the sustainability of fisheries co-management.

Source: Pomeroy and Rivera-Guieb (2006)

INITIATING FISHERIES CO-MANAGEMENT: THE USE OF A LOGICAL FRAMEWORK ANALYSIS

The pre-implementation phase may be characterized as the beginning – and the planning phase – of a co-management programme. According to Pomeroy and Rivera-Guieb (2006), there are a number of factors that can stimulate the initiation of a co-management programme, such as a conflict, an environmental crisis, or the decision to take advantage of a funding opportunity, among others.

These authors classify two types of "beginnings" for a co-management programme (1) the internal beginning, where fisheries co-management is initiated from within the community and by fishers and or other stakeholders in the community (e.g. fishers decide that a fishery crisis should be resolved through co-management); and (2) the external beginning where fisheries co-management is initiated outside the community, e.g. a NGO, government or research institution decide to address a fishery crisis through co-management (Boxes 3.2 and 3.3).

BOX 3.2

Internal beginning

This pattern is commonly known as a "bottom-up" beginning. Co-management is initiated by the internal community and fisheries stakeholders. This type of beginning has a high prospect of sustainability because the community and fisheries stakeholder are aware of the crisis of resources and have an incentive to institute a process of fisheries co-management with a view to finding a solution.

Source: Pomeroy and Rivera-Guieb (2006)

BOX 3.3

External beginning

Fisheries co-management is initiated externally, outside the community and its primary stakeholders.

This type of beginning may be triggered, for example, by the destruction of fisheries resources. In this case, fisheries co-management may be initiated by NGOs, universities or government.

Another example is provided by the situation where a marine conservation area needs to be defined in order to protect that area. This process requires an external beginning because it takes place in a broader context of fisheries resources conservation.

Source: Pomeroy and Rivera-Guieb (2006)

During the pre-implementation phase of the co-management process, it is useful to make use of a Logical Framework Analysis (LFA). LFA is a tool that can assist with the planning of certain activities (in this instance fisheries co-management), but it does not replace such activities. Briefly, LFA can assist with (1) the design or planning process of structured activities; (2) improving the transparency of the activities planned; (3) improving the participation of all stakeholders in the activities planned; (4) improving the planning strategy; and (5) improving the flexibility of the activities in the planning framework.

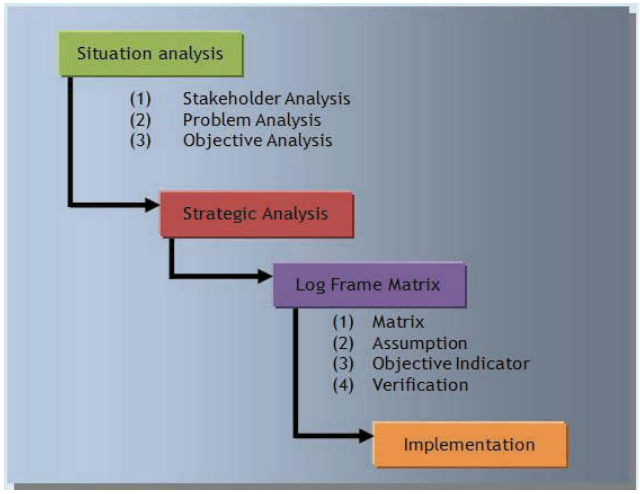
In the LFA, there are two important elements that form the basis of planning, namely the analysis and planning phases. In the analysis phase, there are three types of analysis that provide the foundation of the planning phase, namely

(1) situation analysis, an analysis of stakeholders, key problems and strategies, obstacles and opportunities, and a determination of the cause-and-effect relationship between each of the problems; (2) objective analysis, which develops the objective of the planning activities and the previously identified problems; and (3) strategy analysis, which identifies certain alternative strategies in order to achieve the stated objectives.

In the planning phase, there are three important factors involved, namely (1) log frame, which defines the structure of activities, tests the internal logic related to the structure, and defines the methods and cost of such activities; (2) activity scheduling, which determines the work sequence in the context of activities planning; and (3) resources scheduling, which identifies the budget and source of funding after the activity scheduling is complete. The analysis and planning stages are illustrated in Figure 3.1 below.

FIGURE 3.1

Diagram of analysis and planning stage in the LFA (Adrianto 2004)

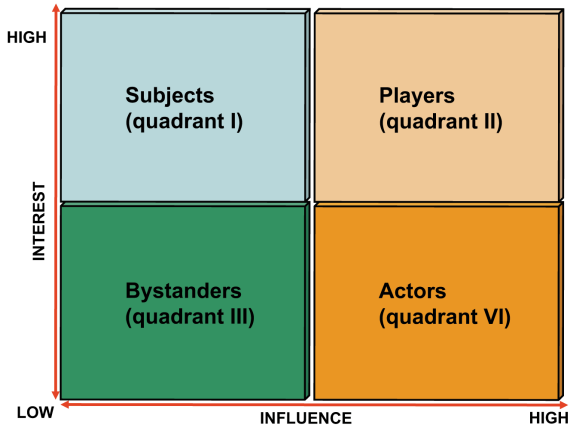


STAKEHOLDER ANALYSIS

In the analysis stage, one of the tools that can be used is the stakeholder analysis. The first step in conducting a stakeholder analysis in a fisheries co-management project is to identify the project's key stakeholders. The next step is to assess their power, influence and interests, and the ways in which they impact or influence the development of the project. Four types of stakeholders may be identified: subjects, bystanders, players, and actors. The relationship between these stakeholders, according to their level of influence and interest is illustrated in Figure 3.2 below.

FIGURE 3.2

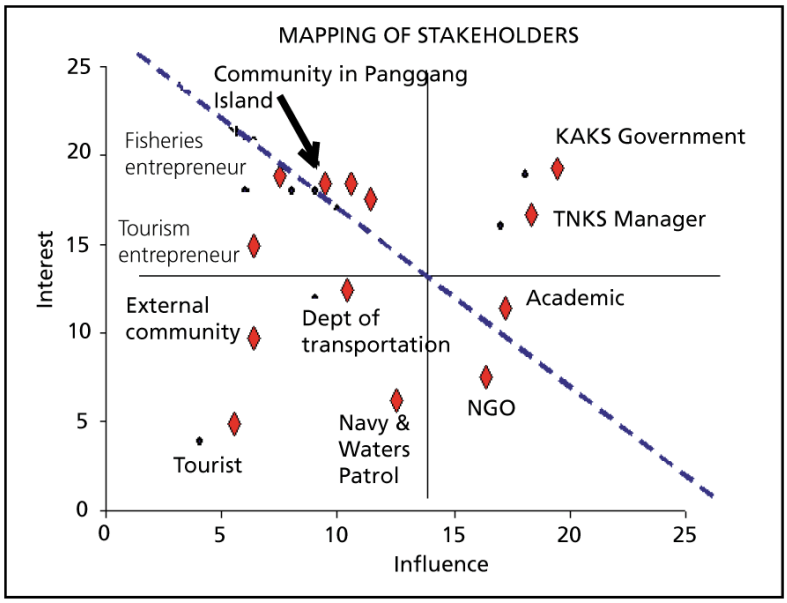
Diagram of stakeholders in the planning phase, based on the Logical Framework Approach



For example, the role of stakeholders in the utilization of fisheries and marine resources on the Island of Pagang (in the Administrative Regency of Thousands Islands, Special Administration Province of Jakarta), is mapped in Figure 3.2 below.

FIGURE 3.2

A stakeholder map for the Island of Panggang in the Administrative Regency of Thousands Islands, Special Administration Province of Jakarta (Source: Haswanto, 2006)



Another example is provided by the relationship map which seeks to identify the qualitative and quantitative relationships between stakeholders, as illustrated in Figure 3.3 and 3.4 below and by a focus group discussion (Box 3.4).

FIGURE 3.3

An example of a relationship map of stakeholders (DSE 2000)

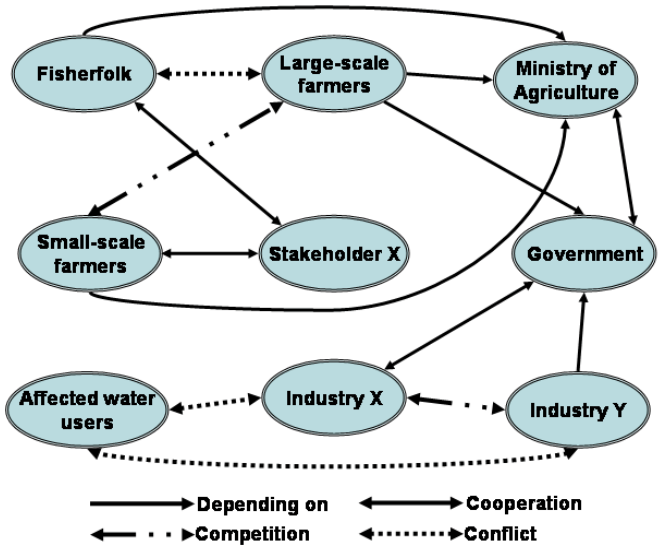


FIGURE 3.4

A fisheries group discussion is conducted at Gambus Laut Village, Asahan District, North Sumatra Province

BOX 3.4

Focus group discussion

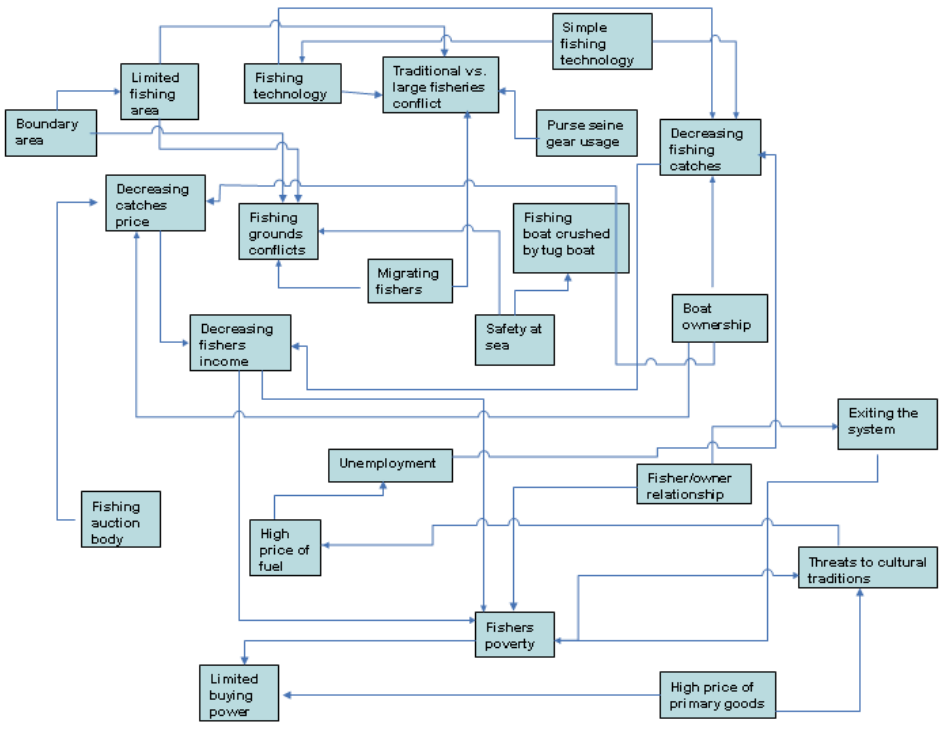
Each process of stakeholder analysis, problem analysis and objective analysis can be conducted by using focus group discussion. This method is effective because it captures the opinions of the key stakeholders who then conduct the next step of the process. Focus group discussion can be done informally at a fisheries co-management planning location (for example in a fishing village).

Focus group discussions may be facilitated by somebody from inside or outside the community.

Apart from the relationship between the stakeholders, one of the most important components of the LFA is the cause-effects map, whereby the logic behind cause and effect relationships is used in the planning stage and mapped as shown in Figure 3.5.

FIGURE 3.5

An example of a cause-effect map, as utilized by the LFA (PKSPL-IPB 2006)



Logical Framework Analysis plays a role in each phase of the project cycle, from design, through to implementation and evaluation. The logframe summarizes the project and its context in a logical manner, so that the

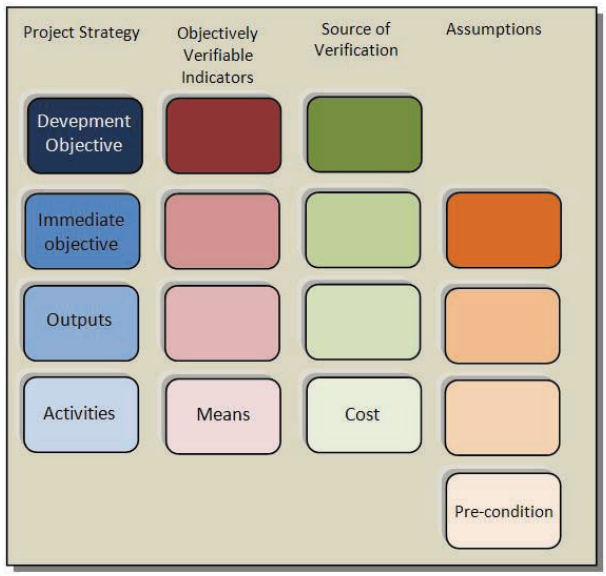
connection between the activities and the expected results may be seen. The framework has both a vertical and a horizontal logic. Vertical logic consists of a hierarchy of objectives, outputs and activities. Horizontal logic consists of indicators (used to measure the extent to which the different components of the objective hierarchy are being achieved); sources of verification (sources of information that will show whether the indicators have been achieved); and risks and assumptions. A risk is an external factor that may negatively influence the realization of objective(s), while an assumption is the underlying hypothesis on which the cause-effect relationship is based. In summary, the vertical logic shows (1) what the project intends to do; (2) the relationships between what will be done and what will be achieved (the "means to the end"); and (3) it specifies the main risks and assumptions. The horizontal logic defines how progress and performance will be monitored and the sources of information for doing this.

HOW TO DEVELOP THE LOGFRAME FOR FISHERIES CO-MANAGEMENT

As mentioned previously, a logical framework approach constitutes one of the basic tools that can be used to plan a fishery co-management system. In this context, planning can be developed as shown in Figure 3.6.

FIGURE 3.6

Matrix of fisheries planning based on the Log Frame Approach (DSE 2000)



In the context of the Log Frame Approach, the most important component of fisheries planning is to identify the goals of the activities planned. Theoretically,

there are different levels of purpose, measured from the broader picture of long term goals, to the finer details such as the expected output of the project and the physical goods and services that will be produced. Table 3.2 below, explains the criteria for each of level of purpose.

TABLE 3.2

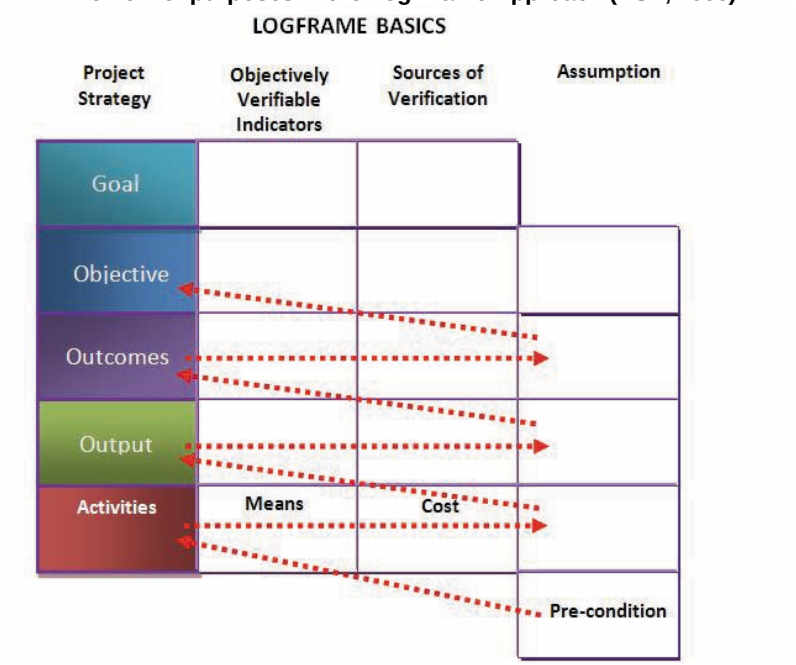
Levels of purpose and criteria in planning activities

Level of purpose	Criteria	Definitions
Long term g*oal*	Harmony with the strategy and development programme	Long term benefit as part of the objectives of the activities
Objective	The reason for the activities	The benefits received by the *beneficiaries* from the outcome of the activities
Outcome	Key components of the activities	Changes in the condition of the development due to the *output*, along with some assumptions
Output	Direct results of the activities	Goods or services directly produced by the activities

From the Table 3.2 above, it can be seen that there is a flow of purposes, starting from the output (the lowest level) up to the long-term goals (the highest level). The flow of such purposes is illustrated in Figure 3.7 below.

FIGURE 3.7

The flow of purposes in the Log Frame Approach (DSE, 2000)



CONCLUSION

As has been demonstrated by this topic, the Logical Framework Approach is well suited to fisheries planning and is one approach that can be used to support the implementation of a system of fisheries co-management. The LFA is particularly suited to participation by stakeholders, which becomes the main aspect of the logical framework.