

## Proceedings of the Multi-Stakeholder Participatory Learning/Problem Census Workshop – Bagamoyo District, Tanzania

Mbegani Fisheries Training Institute, Bagamoyo. 11<sup>th</sup> - 13<sup>th</sup> December 2002



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**Facilitators:**

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**Workshop Facilitators:** Francis M. Shao, Shekania Z. Bisanda, Erasto E. Mlay and Valeria E. Mushi

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## ***MULTI-STAKEHOLDER PROBLEM CENSUS WORKSHOP***

11<sup>th</sup> – 13<sup>TH</sup> December 2002  
Bagamoyo District, Tanzania



### ***PURPOSE***

***The purpose of this workshop is for District and Local level Marine Fisheries stakeholders to identify constraints to sustainable development of their resource and through multi-stakeholder learning approach chart out what needs to be done to address those problems so as to improve their livelihoods.***

***The workshop will also examine the consequences of a learning approach for artisanal fishers and service providers so that follow-up actions can be developed.***

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- Workshop Objectives
- Understanding the Ecology and status of Marine Capture Fishery Resources in Bagamoyo District
- Introducing Multi-Stakeholder Participatory Learning and past experiences in Tanzania, Kenya, Uganda and other countries
- Importance of Fisheries within Complex Livelihood Strategies of the Poor
- Ranking of Factors Influencing Livelihood Choices
- Identification of constraints to fisheries dependent livelihood strategies
- Past, Present and Future Marine resources in 3 Villages of Bagamoyo District; Identifying changes and actions to realise future visions
- Forming Multi-Sector Fisheries Reference Groups
- Evaluating the Census/Learning Workshop

**Learning Framework – Day 1; Wednesday 11th December 02**

| <b>Time</b>  | <b>Activity</b>  | <b>Approach/facilitator</b>                     | <b>Materials</b>  | <b>Learning Objectives</b>   |
|--------------|--|---|---|--|
| <b>08:00</b> | <i>Registration of Participants</i>  | <i>Plenary session MC</i>                       | <i>Participants list</i>                                  |  |
| <b>09:00</b> | <i>General Welcome</i>   | <i>Chair – Mrs. Mushi</i>                       |   |  |
|              | <i>Participants introductions</i>  | <i>Ag. DFO Bagamoyo<br/>– Mr. Mposso</i>        |   | <i>Getting to know each other</i>  |
|              | <i>Official opening speech</i>   | <i>Mr. Mlay (All)</i>                           |   |  |
|              |  | <i>Guest of honour –<br/>Mr. David Kajjunga</i> |   | <i>Flagging off the action</i>   |
| <b>10:10</b> | <b>Tea break</b>   |   |   |  |
| <b>10:40</b> | <i>Morning program</i>   | <i>Mrs. Mushi</i>                               |   |  |
|              | <i>Participants expectations</i>   | <i>Plenary session –<br/>Dr. Bisanda (All)</i>  | <i>Cards</i>  | <i>Brainstorming the outcome;<br/>Identifying common and priority<br/>expectations</i> |
|              | <i>Workshop objectives</i>   | <i>Dr. Shao</i>                                 | <i>Flip chart using<br/>mind mapping to<br/>visualize</i> | <i>Clarifying the scope of the<br/>workshop</i>  |
|              | <i>Understanding the ecology and status of<br/>marine fishery resources in Bagamoyo</i>  | <i>Mrs. Mushi/Mr.<br/>Mposso</i>                |   |  |
| <b>12:45</b> | <b>Lunch Break</b>   |   |   |  |
| <b>14:00</b> | <i>Introduction to afternoon program</i>   | <i>Mushi</i>                                    | <i>Flip charts</i>  |  |
|              | <i>Multi-Stakeholder Learning Approach for<br/>natural resource utilization and<br/>experiences in Tanzania, Kenya, Uganda<br/>and other countries</i> | <i>Group discussions<br/>Mlay/Shao</i>          | <i>-do-</i>   | <i>Understanding the Multi-<br/>stakeholder Learning Approach.</i>                     |

| 15:30 | Afternoon Tea break   |                                      |                    |  |
|-------|---|--------------------------------------|--------------------|--|
| 16:00 | <i>Understanding of the importance of fisheries within complex livelihood strategies of the poor and the factors influencing their livelihood choices</i> | <i>Group discussions<br/>Bisanda</i> | <i>Flip charts</i> | <i>Clarifying and prioritizing participants expectations of the workshop</i> |
| 17:30 | <i>Facilitators meeting</i>   |                                      |                    | <i>Planning schedule for day two</i>   |

## Opening Speech

### DISTRICT LEVEL MARINE FISHERIES MULTI-STAKEHOLDER PARTICIPATORY LEARNING/PROBLEM CENSUS WORKSHOP: BAGAMOYO; 11 – 13 DECEMBER 2002

By David Kaijunga – District Natural Resources Officer, Bagamoyo, Tanzania

#### The District Fisheries Officer, Workshop Organisers, Facilitators, Workshop Participants;

#### Ladies and Gentlemen

I have great pleasure to welcome you all to Bagamoyo District, which has a long, and significant historical background not only within Tanzania but also internationally recognised.

I would like, on behalf of the Bagamoyo District Council and the Department of Natural resources, to thank the Department for International Development (DFID) of Great Britain for the financial support, and the organisers for selecting Bagamoyo as the appropriate site to carry out this study on Marine Fisheries Resource status and its contribution to the livelihoods of the poor. I also wish to thank the workshop participants for the commitment you have attached to this study, thus sacrificing your other activities to attend the workshop.

#### Honourable Workshop Facilitators and Participants

Tanzania has a rich water body resource that includes three great lakes (L. Victoria, L. Tanganyika and L. Nyasa), the Indian Ocean, small lakes, rivers, man-made dams, and wetlands all of which are important sources of fish and fish products.

The average fish production countrywide is about 300,000 metric tons per year. Out of this, artisanal fishers account for 90% of production.

The marine fisheries resource is the major lifeline and source of vital protein (30%) and is the cheapest meat source compared to others. The contribution of the Fisheries Sector to the National Domestic Product is 2.6% and is a major foreign exchange earner, currently contributing about 12.4% and is increasing.

It is very obvious there has been alarming reduction of the fish resource in the territorial waters, in particular in our coastal waters. This reduction is an indication of factors unfavourable to the survival of the fish resource, which may include: -

- ♦ Use of destructive gear that destroys fish breeding grounds and living environment of the ocean organisms;
- ♦ Ocean pollution and marine environment degradation;
- ♦ Fishing pressure in certain locations resulting from use of poor and outmoded fishing methods and gear;
- ♦ Lack of proper conservation measures to protect the fisheries environment.

Following the alarming reduction of fish and fish products there is urgent need to undertake studies that that may lead to understanding better the status and development of fishing activities, existing constraints, and the development of the artisanal fishers. On this basis, the ongoing participatory study, including this workshop, is aimed at understanding better the current status of the marine fisheries resource and its use. This to be achieved through sharing experiences and ideas on the constraints, successes and development strategies of the artisanal fishers. The results of this study will be used to plan and seek solutions to some of these constraints so as to achieve sustainable fisheries resource for the development of the fisheries stakeholders.

May I take this opportunity to wish you all successful discussions that will lead to decision and recommendations aimed at improving the marine fisheries resource in Bagamoyo district and the rest of Tanzania. It is my sincere hope that when you go back to your fishing areas you will become good ambassadors and advocates of sustainable fishing.

With those few remarks I now declare the Workshop officially opened. Thank you for listening.

### **Workshop Expectations - Dr. Bisanda**

The facilitator explained the difference between a seminar and a workshop; the former being a situation whereby only one man does the talking while the other participants do the listening; a situation common in religious gathering. In a workshop all participants have equal chances of airing their views and that all are encouraged to participate. The facilitator emphasized the need for all to share experiences, and briefly discussed some of the norms that participants should observe, including:

- ♦ Respecting other peoples views
- ♦ Participants should exercise their freedom of expression and
- ♦ Nobody will be intimidated for doing so.

He also explained in a very clear way that each participant will participate in one way or another. At one time each participant will have a chance to write down or present in a plenary what his or her group has deliberated on. The facilitator went further to demonstrate how to write on flip charts and manila cards by insisting on writing legibly.

The facilitator reminded the participants that they came all the way from their various villages with some expectations, which they wanted to achieve by the end of the workshop. As an example the facilitator, on arrival at Bagamoyo had expected to find plenty of large fish of various types in the market. On the contrary, the market place is not full of fish, and thus prices are high.

In order to understand the expectations, the facilitator distributed manila cards and marker pens to each participant. He then asked each participant to write in a single sentence what he/she was expecting from the workshop. The cards were then clustered into related themes, in so doing all cards fell into two broad categories, i.e. gaining new knowledge and being empowered to improve the fisheries sector.

|   |   |
|---|---|
| <b>Education</b> <ul style="list-style-type: none"> <li>◆ To learn how to gain easy access to the fisheries resources</li> <li>◆ To learn about fishing technology</li> <li>◆ To learn</li> <li>◆ To learn how to fish</li> <li>◆ To share experience with fellow stakeholders and facilitators</li> <li>◆ Gaining more knowledge on what we have learned prior to this workshop</li> <li>◆ To learn about things that I do not know</li> <li>◆ To get more experience</li> <li>◆ To get advice from Natural Resources Officers</li> <li>◆ To learn more about fishing methods</li> <li>◆ To learn more about how to fish</li> <li>◆ To exchange ideas with other participants</li> <li>◆ To get knowledge on how to exploit more fish and shellfish</li> <li>◆ To do all that we have been learning</li> <li>◆ To know why fish are scarce nowadays</li> <li>◆ Learn modern fishing technology</li> <li>◆ To exchange ideas with different people</li> <li>◆ To gain more knowledge</li> <li>◆ To exchange ideas</li> <li>◆ To gain knowledge that I will share with my fellow stakeholders</li> </ul> | <b>More Fish</b> <ul style="list-style-type: none"> <li>◆ To catch more fish</li> </ul>   |
|   | <b>Improving livelihoods</b> <ul style="list-style-type: none"> <li>◆ How to improve the artisanal fishers' livelihoods</li> <li>◆ To solve the problems of fishermen</li> </ul>  |
|   | <b>Improving the Environment</b> <ul style="list-style-type: none"> <li>◆ To reduce industrial prawn fishing</li> <li>◆ To manage the marine environment</li> <li>◆ To conserve the breeding sites for different types of fish</li> <li>◆ Fish scarcity and how to solve it</li> </ul>  |
|   | <b>Self Development</b> <ul style="list-style-type: none"> <li>◆ To develop fishing</li> <li>◆ To improve my activities</li> <li>◆ To give feedback on what is learned during the workshop to my fellow villagers</li> <li>◆ After the workshop to be a good ambassador on sustainable fishing methods in and outside the village</li> <li>◆ To get self development</li> <li>◆ To improve fishing activities</li> <li>◆ To get development</li> <li>◆ To get rid of poverty</li> <li>◆ To develop my technical expertise and experience</li> </ul> |

## Workshop Objectives – Dr. F. M. Shao

### Main objective:

As a follow-up to the participants' expectations, the facilitator presented the workshop objectives and asked the participants to observe whether their expectations fit within those of the workshop. Participants were also asked to keep on assessing till the end of the workshop whether their expectations were being addressed.

The main objective for the workshop is learning through stakeholder participation (sharing knowledge) how to utilize the marine resource sustainably and plan for its future development. Stakeholders (in this context) include all those whose livelihoods depend on the fishing industry (have a stake in the marine resource), either directly or indirectly. Key elements of the learning approach are:

- ♦ Stakeholders from all levels (District/Village) have to learn the participatory skills for conservation and utilisation of the natural resources sustainably.
- ♦ To evaluate the outcome of participatory training skills obtained by stakeholders on how to plan their development activities.

### Specific objectives:

By the end of the workshop, participants would be expected to:

- Understand different aspects of the multi-stakeholder participatory learning approach
- Identify the needs of the multi-stakeholder learning groups
- Identify different stakeholders of the marine fisheries resource and related partnerships
- Identify indicators for measuring the results of the multi-stakeholder participatory learning and actions resulting thereof
- Be able to plan for the future directions
- Gain experience for continuing multi-stakeholder participatory learning approach
- Be able to link (disseminate) the different activities at different levels – village, district, provincial, national and international levels.

### Structure of the workshop:

The workshop will mainly focus on the following:-

- (i) The present condition of the fishery resource – participants will discuss the past and present status of the resource and who was/is responsible (contributed) to the present status (who brought the change?).
- (ii) The best way of managing the fishery resource to meet the needs of the present and the future generations. What are the changes needed in management, who will be involved and how will they be linked/coordinated – so as to achieve sustainability of the marine fisheries resource.

## The ecology and status of the marine capture fishery resources in Bagamoyo District – Mr. A. Mposso and Mrs V. E. Mushi

**Location:** Bagamoyo District lies within 38<sup>0</sup> to 39<sup>0</sup> E and 6<sup>0</sup> to 7 E and 6<sup>0</sup> to 7<sup>0</sup> S. It is bordered by the Indian Ocean on the East, Mpiji River on the North and Wami River on the South.

- The Ruvu River and the adjacent river systems supply nutrients to adjacent shore waters, making Bagamoyo among the best prawn fishing grounds in Tanzania.
- The continental shelf is characterized by sand/muddy tidal flat, mangrove, coral reefs, sea grass beds, lagoons, and estuaries. These ecosystems are home to different types of marine organisms.

**Weather:** Like the rest of the coastal districts, Bagamoyo experiences two-monsoon systems; the North East Monsoon (December to April - wet season) and the Southwest Monsoon (June to October - dry season). Average wind velocity during the North East Monsoons is about 5m/s. The average wind velocity goes up to 8m/s during the Southwest Monsoons, limiting artisanal fishers' activities. May and November are transitional months.

**Fishery:** two types characterize the fishing industry of Bagamoyo.

- (i) **Artisanal** - This is the largest and most common fishery practiced by small-scale fishers. The target fish types include finfish, shrimps, crabs, octopus and sardines. The fishery has the following characteristics (2002 status):
  - ◆ Number of fishermen – 1230
  - ◆ Average catch per annum- 2850 Metric Tones
  - ◆ Number of fishing vessels - 175
  - ◆ Common fishing vessels - dugout canoe, canoe, outrigger canoe, planked boats
  - ◆ Number of fishing gears – 1311 (This includes traps, gill nets, shark nets, spears)
  - ◆ Traditional gear types - include various types of traps and spears.
- (i) **Commercial Fishery** - This is conducted by trawlers targeting prawns. The fishery is managed, controlled and monitored at National level by the Fisheries Division in collaboration with the District Fisheries Office in Bagamoyo. Fishing seasons are strictly maintained to avoid disturbance during the breeding, and building up stocks.

**Management Constraints;** Like many other artisanal fishing industries, the management of the fishery in Bagamoyo is faced with the following constraints:

- ◆ Poverty among the artisanal fisher communities
- ◆ Illegal fishing practices
- ◆ Insufficient trained fisheries personnel
- ◆ Inadequate working tools and equipment
- ◆ Poor fishing technology

**Strategies:** The fishery resource is among the important economic resources of Bagamoyo District. It provides the district with protein food source, revenue, and employment. It is also important for national foreign exchange, from prawn and other shellfish exports. Due to this importance, there is a necessity to have well designed plans and strategies towards the development of a sustainable fishery and hence the fisheries sector. Among such strategies in place are;

- ♦ Promotion of community participation in the management of the resources;
- ♦ Creation of awareness among fisher communities on alternative means of production such as aquaculture, etc. as applicable;
- ♦ Empowering of the fisher communities in good governance, and participatory planning and management of coastal resources;
- ♦ Training of fisheries personnel at all levels;
- ♦ Revising the fisheries laws and regulations to keep pace with the growth of the fisheries industry;
- ♦ Strengthening the surveillance unit at the district office under the provision of trained manpower and equipment.

**Conclusion:** It is expected that, through an effective implementation of the underlined strategies:

- ♦ Fisher communities will abide to the Fisheries law, regulations and by-laws;
- ♦ Illegal fishing practices will be reduced (by 90%), if not eliminated.

**Discussion;** during the proceedings, several concerns, questions and comments from the participants were aired.

(i) The participants were concerned with trawler operators in the Bagamoyo area. They complained that the prawn trawlers were fishing in the same fishing grounds as artisanal fishers. This had been prohibited to protect the small-scale fishers. As a result of this, the following problems are eminent: Destruction of fish breeding and nursery sites; destruction of the artisanal fishers' fishing vessels and gear, hence creating conflicts among fishers; dumping of unwanted/untargeted fish species (fouling); and possible rapid reduction of fish quantity and quality.

Responding to the complaints, it was learnt that, under the Fisheries Act No. 6 of 1970, there are regulations and by-laws protecting the resource for sustainable use. Under such regulations, trawling for prawns is prohibited in waters of 20m and less. According to fisheries regulation, any prawn trawler caught fishing in this depth is committing an offence, and is subjected to a penalty that includes seizure of the fishing licence. However, it was also learnt that these laws are poorly enforced, resulting from the limited number of trained manpower and working equipment. It was elaborated that Bagamoyo district has taken some initiatives to tackle the problem. Such actions include conducting training seminars on environment protection, as well as forming village level environmental committees to support protection efforts. The committees will be responsible for management of their coastal environment from village level.

Together with enforcement of the fisheries laws, more efforts are in place to ensure that the resource is studied, and exploited rationally. A research programme has been initiated for Bagamoyo and Rufiji to find out the effect of the user conflict between trawler operators and artisanal fishermen. The results will be used to plan better the management of the marine fishery resource for sustainable utilization.

(ii) Another participant wanted to know how many trawlers operate each year in Bagamoyo fishing grounds. The answer was 6 – 7 trawlers operate each month during the fishing season (1st March to 30th November each year). This is the maximum allowed by the fisheries regulation.

## **Multi-stakeholder participatory learning approach for natural resource utilisation and experiences – Mr. E. Mlay and Dr. F. M. Shao**

### **Meaning**

The meaning of multi-stakeholder participatory learning was given as learning together through exchanging or sharing experiences and ideas on economic, cultural and social activities as a process of fostering development. The learning together should involve the stakeholders at all levels; village, district and national level. At the village level, participants can be the village elders, fisher groups, community organizations such as the Beach Management Committees and co-operative groups. Other levels may include the divisional, provincial, or regional and international levels.

### **Why should we learn through Participatory Approach?**

It should be noted that the fisheries resource requires collective effort to effectively manage it. Participatory learning approaches will enable us to properly understand and plan how to manage the sustainable use of the existing marine fishery as a common resource. It also makes the stakeholders perceive a sense of ownership of the resource, hence be willing to invest in it for the benefit of all. This approach gives space to share and plan together such that the community is empowered to make their own decisions and take the necessary actions that benefit them most.

### **What issues do we learn in this participatory approach?**

1. How the situation was in the past and what is it like today? (i) Environmental situation (ii) Food security (iii) Poverty alleviation (iv) Sustainability of the resource.

#### 2. Policies

- Legal framework – basic laws enacted by the government on the use of the resource; by-laws made by the people themselves to control the use of the existing limited resources, traditional/communal laws that determine who owns the resource e.g. land and other natural resources, common resources such as roads, utilities, etc.
- Privatization – how does privatisation of services (eg research, extension services, publicly owned marketing infrastructures etc) affect the livelihoods of fisher communities as a group? In the past, the Government paid for these services in full, but now the private sector has to bear whole or part of the costs. A number of NGOs are also providing some of the services.
- Decentralisation - decision-making process done at the community/village or district levels rather than at national level. What is the effect on the community livelihoods?
- Gender mainstreaming

The learning process has to reflect on how the policy issues touch or affect the environment, food security, poverty reduction and sustainable resource utilization.

### 3. Services

- Which ones are available from the government? (i) guidelines (ii) inspectorates to ensure resources are properly used without damage or negatively affecting other members of the community (iii) Common services - which include research, extension services and reports (dissemination of information on markets etc.).
- The private sector also offers some services to the fishing industry, including marketing, production and distribution of the fishery harvests. How do all these services from the sector affect the activities and the livelihoods of the fishers (socially and economically)?

#### **How to start Multi-stakeholder Learning Group at a Fishing Village**

A team of motivated and interested individuals who have been sensitized and trained like the workshop participants spearheads the whole process. The team often referred to as a **Multi-stakeholder Coalition Group** takes the initiative to work together and sensitize the village Government and the community on the importance of working together to plan their own development utilizing the natural resources available in their own area. They discuss who is to be involved, services needed, level of their input, external support needed and from whom, which partners are available and where they are found, what laws and regulations are needed to ensure compliance with agreed action procedures and other matters. The sequence of events to set off the participatory learning process is as follows:-

**Stage 1:** Identification of the different stakeholders involved to form the Coalition Group. This has to be done by the pioneer/reference group (participants in this learning workshop). For the future visions, who are the new stakeholders/partners needed to bring about change? It should be noted that the vision change must be positive.

**Stage 2:** Creating awareness among the people or sensitising them (community members) to the importance of their working/planning/learning/acting together, and how best the process can be continued sustainably. The community can be sensitised at different fora including workshops, meetings, (agricultural) shows, etc.

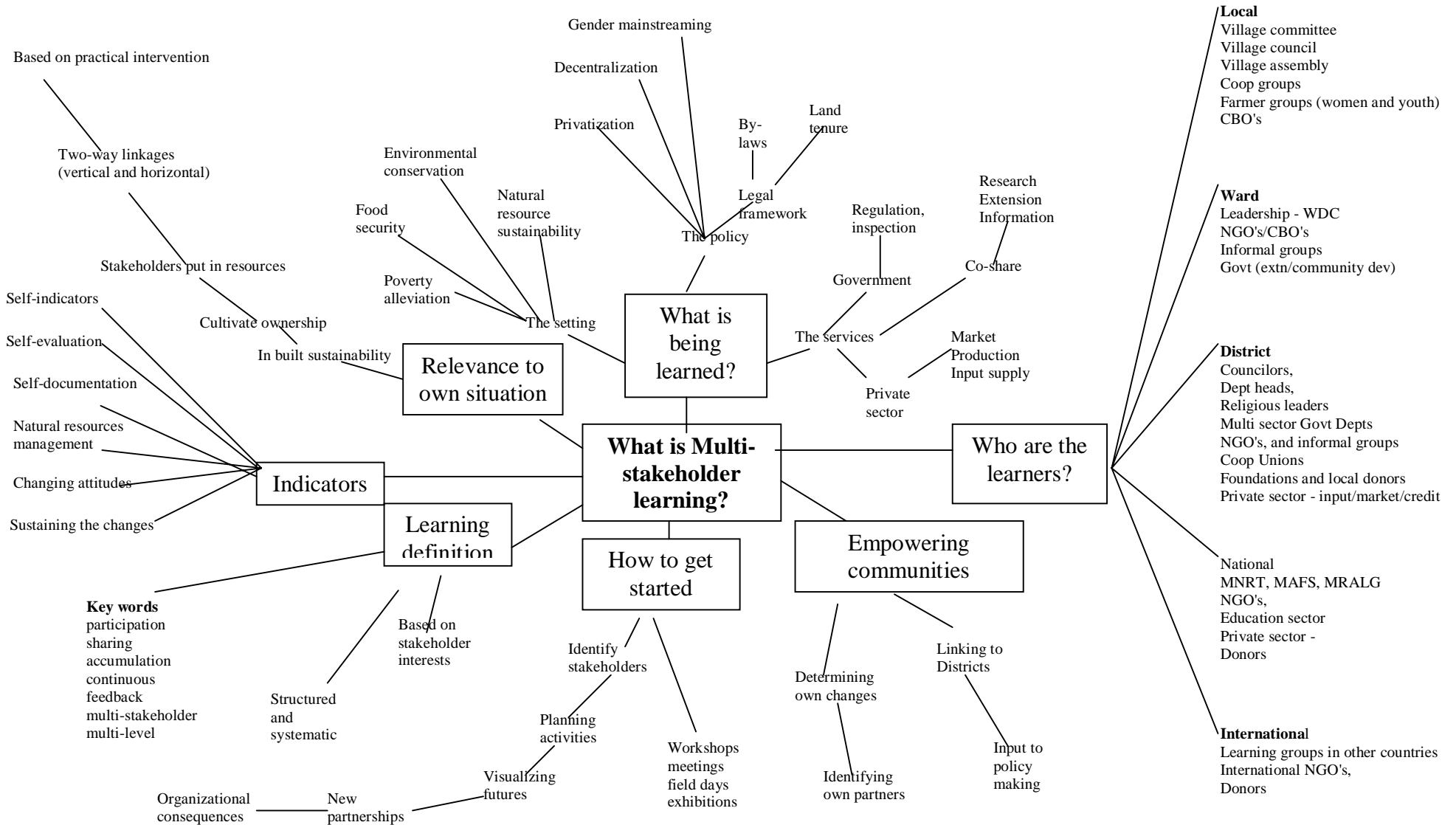
**Stage 3:** Take the necessary steps as agreed. A development plan is made, where necessary using available support from the extension staff or NGO service staff in the area. Members of the village are informed through the Village Government and action begins to take place.

**Stage 4:** As plans are implemented a stage will be reached (say 6 months or one year) when the need will arise to have the programme evaluated so that any constraints or limitations may be corrected. Should it happen that plans are not being implemented, with certain stakeholders not fulfilling their roles, immediate action would be needed, including using the necessary laws to penalize the wrong doers. The village is empowered to take such actions according to the law.

**Indicators:** For the learning process, plans developed or actions taken some mechanism of measuring the performance has to be envisaged. These may be through physical measures and evaluations, reports and/or documentation, management activities, etc. This is vital, in order that if the results are not positive at some stage then the plan may be reviewed, dropped or modified depending on the performance.

**Conclusion:** The Multi-stakeholder Participatory Learning Approach encourages communities to share experiences (learn from each other) and plan together so they are empowered to make own decisions and take actions that benefit them most. This is achieved through community empowerment in management and sustainable use of their natural resources. A summary of the learning process for the Multi-stakeholder participatory learning approach is given in the chart on the next page.

**Multi-stakeholder Learning Approach in relation to Marine Fisheries Resource**



### **Experiences of Multi-stakeholder Participatory Learning Approaches**

This type of learning started in 1998 in liaison with a non-governmental, non-profit making organisation called International Support Group (ISG). The group met for the first time in Nyeri (Kenya) in 1998, where a workshop was organised for two different groups (Nyeri and Kisii) with the aim of looking for ways of developing their agricultural resource base (cattle). In Kisii, through participatory learning approaches, farmers formed a group that mainly looked into ways of promoting ecologically sustainable agricultural practices, ie. farming that does not lead to environmental degradation.

In Tanzania, the first workshop on Multi-stakeholder Learning Approaches was held in June 2000, in Kilosa district. Using the knowledge gained in the workshop, the participants sensitised their communities on sharing their experiences and learning how they could improve their livelihoods through proper use of their resources. The results of the learning process culminated in (i) enactment of by-laws which curbed forest fires, (ii) prohibition of farming in water catchment areas, and (iii) farming in steep slope areas being improved by constructing terraces or planting trees in the worst affected areas. Other stakeholders with stakes in the natural resources (basically wildlife and sugar estates) surrounding these villages were sensitised too, e.g. tourists, estate owners, mission centers etc. As such, for the first time, there was an effort to conduct ecological sustainable tourism, tree harvesting by the estate managers was controlled and all began to share conservation activities and supported development programmes for the village communities, leading to improvement of their roads, schools and health centers.

The second workshop was held in Lushoto district. The participants had a vision of having good roads in their villages, modern houses, terraces in steep slopes etc. A number of these have today been achieved, and some are in the process of being implemented.

Participants of the present workshop were reminded that they should take similar actions when they go back to their villages. They need to sensitize the other members of their communities and other stakeholders in their areas, and together they can improve their livelihoods. They need to use the knowledge gained and self organization within their mandate, then plan and act accordingly. They have the natural resources at their disposal. This training workshop is geared to capacity building for community planning and stakeholder involvement while developing their economic activities.

In Uganda, multi-stakeholder learning approaches emphasized on farming, including how to start partnerships between farmers and extension officers in collaboration with international organizations. Most of the extension services are offered through government agencies but the private sector is being developed to take over such services on contractual basis. The farmers would pay for services offered. This means the villagers decide what services they need when. This has been achieved through community empowerment in management and sustainable use of the natural resources.

**Question:** If the Learning Coalition Group were to be registered as a cooperative, so that they can also work together in economic ventures, how many people are required by law to be able to register as a cooperative?

**Answer:** Twelve members minimum.

## Understanding the importance of fisheries within complex livelihood strategies of the poor and the factors influencing their livelihood choices - Dr. S. Bisanda

### Livelihood defined

A livelihood comprises the capabilities, access to production, capital assets and activities, which people require for making a living. Most of the assets required for a livelihood are within the reach of the local communities. But assets have not necessarily been harnessed to contribute to improved livelihoods. The facilitator explained that different livelihood strategies are aimed at reducing poverty.

1. There are different ways of making a living and which may be used to reduce/alleviate poverty within the household e.g. fishing, farming, carpentry, crushing stone, etc.
2. Different members of the household may do different economic activities, which contribute to the well being of the entire family e.g. father (fishing), mother (marketing), son (quarrying), etc. These people meet in the evening and bring what they have earned/produced for use in the family.
3. Basically, all living things depend on natural resources for their livelihood; soil, forest, marine resources, etc. Fisheries resources may be the core for many livelihoods. We/human beings are dependent on these resources for survival. These resources belong to not only us (present generation) but are even more critical to future generations.
4. Natural resources are limited, and subject to degradation to an unsustainable level if mismanaged. This would be to our detriment.
5. There are different ways of using natural resources to obtain a living.

We invest in the available assets for our livelihoods. There are different types of assets at our disposal. These resources can be grouped into;

- **Natural resources**; Water, land, forest, wildlife, etc.
- **Social resources**; population, human resources (labor), different social groups, participatory democracy.
- **Infrastructure**; Road networks, markets, hospitals, fishing equipment, cold storage facilities, etc.
- **Economic assets** (Funds/ financial assets); credit facilities, off-fishing employment, pension scheme, money for children
- Others (**Human**); education, health, proper nutrition, etc.

### How the fishery resource contributes to community livelihoods and their development

To improve their livelihoods, the local people need to plan activities that utilize the stated natural resources and capital assets. For instance, in order to use the marine resources, one may decide to start a fishing activity. A woman may start a fish selling activity as her income generating activity. Another person may decide to make and sell charcoal out of forestry resources.

### Sustainable livelihoods

- Depend on how these assets and resources are gainfully utilised;
- Do not depend on one activity alone;
- During emergency different assets are used to save human life;
- Must be the outcome of good working environment (good governance).

Good governance includes good fishing policies and guidelines, which can be implemented without negatively affecting the people or the environment. Community-based organizations therefore need to empower their members to making decisions best suited to them. A participatory approach in formulating policy and guidelines is key in proper resource management. There is need to involve the NGOs and the community-based organizations to share their experiences with the communities they serve during the decision-making processes. Thus, the sustainability of livelihoods depends on how people utilise those assets on both a short and long-term basis, while not undermining the natural resource base, which is the basis of all livelihoods. Sustainable livelihoods are able to cope with, and recover from unforeseeable shocks and stresses (drought, floods, civil policy failure) through adapting and coping strategies. Furthermore, sustainable livelihoods are economically effective; that is, they are able to use minimal inputs to generate a substantial amount of outputs. Sustainable livelihoods are also ecologically sound (do not degrade the natural resource base) and socially equitable, which suggests that livelihood opportunities of one group should not foreclose options of other groups.

The facilitator emphasized that since livelihoods are largely depended on the natural resource base; we have to sustain it. Everyone needs to conserve the natural resource base in one way or another. He reminded participants that the natural resource base that we utilize today was “lent to us by future generations”, implying that we must use it wisely and sustainably, so that future generations may also survive on it.

In order for the participants to practice their understanding of their livelihood strategies and factors determining their livelihood choices, they were broken up into four groups. Women were asked to form their own group, while all men were asked to sit according to their villages. This sitting arrangement was prompted by the fact that women’s livelihood strategies are often different from those of men. The facilitator said that very often, when men and women sit together to discuss livelihood strategies, those that are specific to women are often not mentioned because men dominate group discussions. Each group was asked to mention five livelihood strategies in order of their importance. The objective of this exercise was to show how various economic activities relate to each other in their livelihood choices, and how each activity assists towards development of the others, particularly with respect to fisheries. For each major activity on the priority list, they were asked to mention reasons.

Ranking available options is best done through a standard procedure (called *Pairwise Ranking*) that allows comparison of the various activities against one another systematically. Example: Participants were asked which among five common species of fish is the most palatable? All responded *Lethrinus* in one voice. But when the various species were systematically subjected to the *Pairwise Ranking* procedure through comparison against each other the results proved them wrong. They concluded *Scombremorus* sp. is the most palatable.

|                           | 1. <i>Siganus</i> sp | 2. <i>Lethrinus</i> sp | 3. <i>Jacks</i> sp | 4. <i>Scombremorus</i> sp | 5. Cat fish | Count |
|---------------------------|----------------------|------------------------|--------------------|---------------------------|-------------|-------|
| 1. <i>Siganus</i> sp      | -                    | 2                      | 3                  | 4                         | 1           | 1     |
| 2. <i>Lethrinus</i> sp    |                      | -                      | 2                  | 4                         | 2           | 3     |
| 3. <i>Jacks</i> sp        |                      |                        | -                  | 4                         | 3           | 2     |
| 4. <i>Scombremorus</i> sp |                      |                        |                    | -                         | 4           | 4     |
| 5. Cat fish               |                      |                        |                    |                           | -           | 0     |
| <b>Ranking</b>            | 4                    | 2                      | 3                  | 1                         | 5           |       |

How the *Pairwise Ranking* procedure works is explained below, with reference to the example and table above, regarding the palatability of five fish species. The species were each given a number. A two-way table was constructed, and the species with their corresponding numbers recorded in the top row and similarly in the first column of the table respectively. Taking the first row, *Siganus* sp. was compared with *Lethrinus* sp. The participants agreed that *Lethrinus* sp. tastes better than *Siganus* sp. Thus the *Lethrinus* number (2) was recorded in the corresponding cell. Next *Siganus* sp. was compared with *Jacks* sp. The participants agreed *Jacks* sp. tastes better than *Sigantus* sp. The corresponding number for *Jacks* sp. (3) was recorded in the relevant cell. This continued to the fifth species comparing the *Siganus* sp. with Catfish. Participants agreed that *Siganus* tastes better than catfish, thus its number (1) was recorded in the corresponding table segment. The next step was to repeat the same procedure for the second row, comparing *Lethrinus* sp. with *Jacks* sp., then with *Scombremorus* sp. As indicated there is no need to repeat the same comparison twice, hence the corresponding segment is marked with a dash.

At the end of the comparisons, the number of counts (frequency) in the whole table representing each species is recorded at the end of the corresponding species row (column seven). The species with the highest count was the most palatable, thus ranked number one and recorded at the bottom line (ranking or row seven) but in the corresponding column segment. In this case *Scombremorus* sp. (4) had four counts, being the highest, and so ranked number one. The second was *Lethrinus* sp. (2) with three counts. The others followed according to their counts. The last one was the catfish with zero count (did not compare better with any of the other four species). The participants applied this principle to rank their most important livelihood activities.

**Learning Framework – Day 2; Thursday 12th December 02**

| <b>Time</b>  | <b>Activity</b>  | <b>Approach/facilitator</b>   | <b>Materials</b>   | <b>Learning Objectives</b>   |
|--------------|--|---|--------------------|--|
| <b>8:30</b>  | Identification of fishermen's livelihood strategies (including ranking of factors influencing choice)  | <i>Group presentations and discussions</i><br>Bisanda                 | <i>Flip charts</i> | <i>Reflections on communities perceptions of poverty eradication strategies</i>                                    |
| <b>10:10</b> | <b>Tea break</b>   |   |                    |  |
| <b>10:40</b> | <i>Identification of constraints (problem analysis) to fisheries dependent livelihood strategies (to be categorized by vulnerable social groups)</i> | <i>Presentation and Plenary discussions</i><br>Bisanda                | <i>Flip charts</i> | <i>Involve the community members in identifying their constraints in fisheries dependent livelihood strategies</i> |
| <b>12:45</b> | <b>Lunch Break</b>   |   |                    |  |
| <b>14:00</b> | <i>Presentations of the problem analysis</i>   | <i>Plenary discussions</i><br>Bisanda                                 | <i>Flip charts</i> |  |
| <b>15:30</b> | <b>Afternoon Tea break</b>   |   |                    |  |
| <b>16:00</b> | <i>Past and present marine resources in Bagamoyo</i>   | <i>Group presentations (Dunda, Mligotini and Kondo Groups) - Mlay</i> | <i>Flip charts</i> | <i>Reflecting on experiences in past and present marine resources in Bagamoyo</i>                                  |
| <b>17.30</b> | <i>Facilitators' reflection meeting</i>  |   |                    |  |

### Group Presentations (Livelihood strategies)

#### Women group

List of important activities, which could be used to improve livelihood in the village. (i) Agriculture (ii) *Mama lishe* (food vending) (iii) *Mandazi/Chapati* (iv) Fishing (v) Fish processing (frying) (vi) Fire wood collection (vii) Local brew production (*Mnazi*) (viii) Charcoal making (ix) Shrimp fishing (x) Mat fabrication (xi) Fish trading (xii) Pot (earth) making (xiii) Dressmaking

Prioritized most important activities for women (all villages combined). As explained above, the “frequency” means the number of times that the specified activity is considered better than the others listed, when compared to each other pairwise. The activity with the highest frequency is therefore considered the most important activity.

|                | 1           | 2           | 3         | 4           | 5        | Frequency |
|----------------|-------------|-------------|-----------|-------------|----------|-----------|
|                | Agriculture | Dressmaking | Mamalishe | Fish frying | Maandazi |           |
| 1. Agriculture | -           | 1           | 1         | 1           | 1        | 4         |
| 2. Dressmaking |             | -           | 3         | 4           | 2        | 1         |
| 3. Mamalishe   |             |             | -         | 3           | 4        | 2         |
| 4. Fish frying |             |             |           | -           | 5        | 2         |
| 5. Mandazi     |             |             |           |             | -        | 1         |
| <b>Ranking</b> | <b>1</b>    | <b>3</b>    | <b>2</b>  | <b>2</b>    | <b>3</b> |           |

| Activity    | Reasons for being important                             |
|-------------|---|
| Agriculture | It is an income generating activity and source of food  |
| Mama lishe  | Service to the community; income generation among women |
| Dressmaking | It is an income generation activity                     |
| Fish frying | Service to the community; income generation among women |
| Mandazi     | Service to the community; income generation             |

It was learnt that women have indirect contribution to income through service provision and other domestic activities that support the household when their husbands are away doing activities that have direct income generation.

**Dunda Village Group (men)**

Activities, which could be used to improve livelihood in the village are (i) Agriculture (ii) *Mama lishe* (iii) Fishing (iv) Petty business (v) Boat building (vi) Charcoal making (vii) Animal husbandry

Prioritized most important activities for Dunda

|                      | 1        | 2           | 3              | 4             | 5          | 6         |
|----------------------|----------|-------------|----------------|---------------|------------|-----------|
|                      | Fishing  | Agriculture | Petty business | Boat building | Mama lishe | Frequency |
| 1. Fishing           | -        | 1           | 1              | 1             | 1          | <b>4</b>  |
| 2. Agriculture       |          | -           | 2              | 2             | 2          | <b>3</b>  |
| 3. Petty business    |          |             | -              | 3             | 3          | <b>2</b>  |
| 4. Boat building     |          |             |                | -             | 4          | <b>1</b>  |
| 5. <i>Mama lishe</i> |          |             |                |               | -          | <b>0</b>  |
| <b>Ranking</b>       | <b>1</b> | <b>2</b>    | <b>3</b>       | <b>4</b>      | <b>5</b>   |           |

| Activity          | Reasons for being important   |
|-------------------|---|
| Fishing           | It is source of food and income generation activity. Most of villagers depend on fishing for their sustainable livelihood |
| Agriculture       | It is an income generating activity and source of food. It is the second most important activity.                         |
| Petty business    | It is a linking activity between fishers and farmers.   |
| Boat building     | It is an activity that has a direct linkage with fishing.   |
| <i>Mama lishe</i> | Service to the community; income generation   |

**Kondo Village Group (men)**

Important activities, which could be used to improve livelihood in the village are (i) Agriculture (ii) Fishing (iii) Salt making (iv) Petty business (v) Boat building (vi) Charcoal making (vii) Animal husbandry (viii) Local brew (*Mnazi*) production

Prioritized most important activities for Kondo

|                   | 1           | 2        | 3              | 4        | 5           |           |
|-------------------|-------------|----------|----------------|----------|-------------|-----------|
|                   | Agriculture | Fishing  | Petty business | Charcoal | A/husbandry | Frequency |
| 1. Agriculture    | -           | 1        | 1              | 1        | 1           | <b>4</b>  |
| 2. Fishing        |             | -        | 2              | 2        | 2           | <b>3</b>  |
| 3. Petty business |             |          | -              | 3        | 3           | <b>2</b>  |
| 4. Charcoal       |             |          |                | -        | 4           | <b>1</b>  |
| 5. A/husbandry    |             |          |                |          | -           | <b>0</b>  |
| <b>Ranking</b>    | <b>1</b>    | <b>2</b> | <b>3</b>       | <b>4</b> | <b>5</b>    |           |

| Activity            | Reasons for being important   |
|---------------------|---|
| Agriculture         | It is an income generating activity and source of food. Most villagers (99%) indulge themselves in this activity          |
| Fishing             | It is source of food and income generation activity. 55% of villagers depends on fishing for their sustainable livelihood |
| Petty business      | It is a source of income generation to more than 25% of Kondo villagers   |
| Charcoal            | It an income generating activity to 20% of Kondo residents  |
| Livestock husbandry | For food and income generation, a few (about 10%) villagers involve themselves in this activity                           |

### Mlingotini Village Group (men)

Important activities, which could be used to improve livelihoods in the village are (i) Fishing (ii) Agriculture (iii) Pet business (iv) Fish trading (v) Boat building (vi) Charcoal making (vii) Animal husbandry (viii) Local brew (*Mnazi*) production (ix) *Mama lishe*.

### Prioritized most important activities in Mlingitini Village

|                | 1           | 2       | 3         | 4          | 5                | 6          |           |
|----------------|-------------|---------|-----------|------------|------------------|------------|-----------|
|                | Agriculture | Fishing | F/trading | P/business | <i>Mamalishe</i> | B/building | Frequency |
| 1. Agriculture | -           | 2       | 1         | 1          | 1                | 1          | 4         |
| 2. Fishing     |             | -       | 2         | 2          | 2                | 2          | 5         |
| 3. F/trader    |             |         | -         | 4          | 3                | 3          | 2         |
| 4. P/business  |             |         |           | -          | 4                | 4          | 3         |
| 5. Mama lishe  |             |         |           |            | -                | 5          | 1         |
| 6. B/building  |             |         |           |            |                  |            |           |
| Ranking        | 2           | 1       | 4         | 3          | 5                |            |           |

B/Building = Boat building; P/Business = Petty Business; F/trader = Fish trading

| Activity          | Reasons for being important  |
|-------------------|--|
| Agriculture       | It is a source of food and income generation activity                    |
| Fishing           | It is an income generating activity and source of food for men and women |
| Fish trading      | It is a source of income generation for men and women                    |
| Petty business    | It is a source of income generation mainly for women                     |
| <i>Mama lishe</i> | For food and income generation for women                                 |
| Boat building     | Few people indulge in this activity for men                              |

## Past and present status of marine resources in Bagamoyo District (Dunda, Mlingotini and Kondo) – E. Mlay

During the Workshop sensitization and preparatory stages each group representing a village was asked to draw a sketch map of their village in which they would show the major resources that they utilize for their livelihood activities, indicating how the situation was in the past (say 30 years ago) and the status of the same resources at present. Other important services including roads, settlements, schools, health centers, electricity supply, water sources, etc, were to be shown on the maps. The purpose of the exercise was to learn how past experiences can be used to visualize future plans in the effort to improve the deteriorating resources so that they can be utilized for the betterment of the communities in question, currently and in the future. The community's development depends to great extent on how efficiently the existing resources are utilized for their current needs and for future generations.

In this session, the facilitator requested participants to mention the past and current status of resources in their village. Where changes have occurred, reasons for the change are to be shown. Three groups were formed (Kondo, Mlingotini and Dunda Groups); District Fisheries Department representatives also presented the status of services offered to fishers.

### Status of resources (group presentations)

Resources discussed included natural resources (land and water) and infrastructure (markets, roads, electricity supply, etc). The village maps showing past and present status were used during presentation to illustrate the status.

#### Dunda Village

| Activity      | Resource      | Past status                 | Present status | Causes   |
|---------------|---------------|-----------------------------|----------------|--|
| Fishing       | Fish          | Many & bigger fish          | Few and small  | Bad fishing methods (beach seining/trawler)              |
|               | Mangroves     | Many & bigger               | Few            | Unsustainable harvesting; house construction             |
| Farming       | Land          | Scattered houses; open land | High density   | Population increase                                      |
|               | Forests/trees | Many trees                  | Few trees      | Increased harvesting for house construction and firewood |
| Communication | Road          | Not good                    | Better         | Sustainable development                                  |
| Settlements   | Buildings     | Few                         | Many           | Population increase                                      |

#### Mlingotini Village

| Activity        | Resource     | Past status                             | Present status             | Causes  |
|-----------------|--------------|---|----------------------------|---|
| Fishing         | Fish         | Many & bigger fish                      | Few and small              | Increased fishing effort (Gear and manpower)  |
| Seaweed farming | Seaweed      | No seaweed farming (naturally abundant) | Seaweed farming increasing | Preferred species not easy to find in the wild; Crop is being propagated commercially |
| Agriculture     | Farming Land | Fertile land                            | Not fertile                | Poor farming skills and unsustainable farming   |

|               |             |               |                                 |  |
|---------------|-------------|---------------|---------------------------------|--|
| Communication | Road        | Bad           | Relatively good but seasonal    | Community development programme          |
| Power supply  | Electricity | Not available | National grid network available | Community development action and support |

**Kondo village**

| Activity           | Resource               | Past status        | Present status                          | Causes                                      |
|--------------------|------------------------|--------------------|---|---|
| Fishing            | Ocean                  | Many & bigger fish | Few and small fish<br>Increased fishers | Illegal fishing; increased fishing pressure |
| Farming            | Farming land           | Fertile land       | Not fertile                             | Poor farming skills; bad farming practice   |
| Communication      | Road                   | Bad                | Relatively good however seasonal        | Villager initiatives                        |
| Piped water supply | Water for domestic use | Not available      | Available                               | Village development programs                |

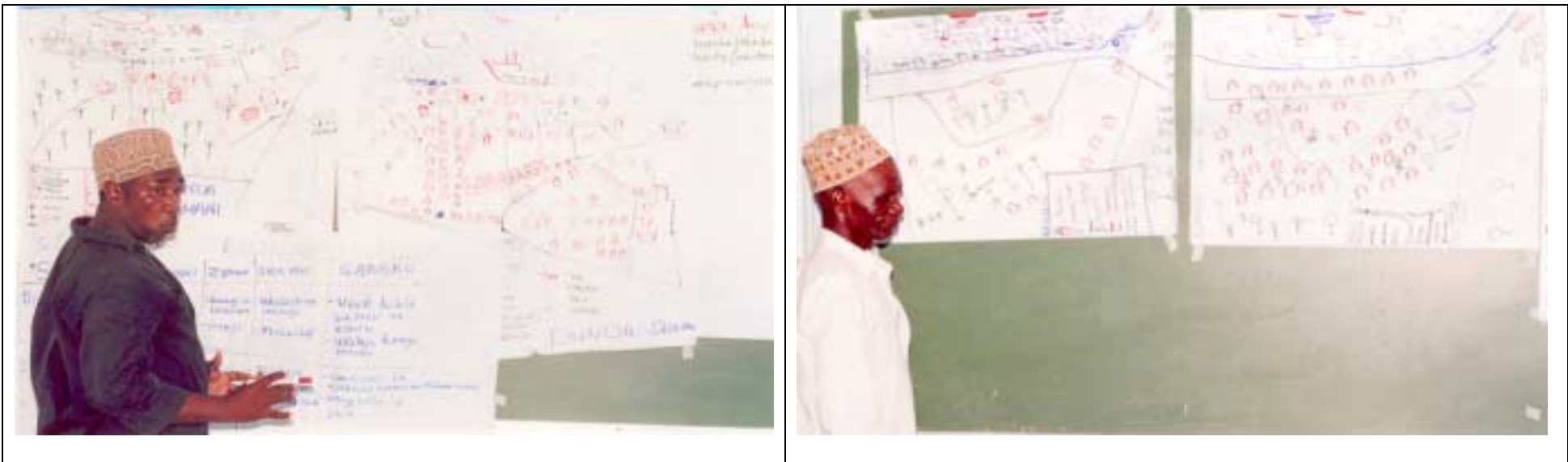
**Fisheries Department (Bagamoyo)**

| Activity                          | Past status | Present status | Causes                       |
|-----------------------------------|-------------|----------------|------------------------------|
| Fishing gear commodity assistance | Present     | Not existing   | Decentralization             |
| Health service                    | Free        | Contribution   | Government policy changed    |
| Life saving service               | Present     | Not existing   | Changes in financial policy. |
| Extension services                | Available   | Not available  | Limited funds                |

Participants raised concern on the deterioration of life saving services during emergencies. Currently the service depended on hired boats and equipment from private owners (hoteliers) who may not act immediately when the accident is reported. They requested the Fisheries Division to update and strengthen their capacity to react to emergencies in the ocean. They were given hope that arrangements are underway to have patrol boats operating in coastal waters in the near future. Currently few boats operate along the coast but it is planned to add more boats.

**Learning Framework – Day 3; Friday 13th December 02**

| Time  | Activity   | Organisation  | Materials                      | Learning Objectives   |
|-------|--|---|--------------------------------|---|
| 8:30  | <i>Past, present and future marine resources in Bagamoyo (Future plans)</i>                            | <i>Group discussions and plenary presentations – Mlay/Mushi</i> | <i>Flip charts</i>             | <i>Reflecting on experiences in Past and present marine resources in Bagamoyo</i>                   |
| 10:10 | <b>Tea break</b>   |   |                                |   |
| 10:40 | <i>Stakeholders analysis/Partnerships building; Formation of Reference (Coalition) Learning Groups</i> | <i>Group discussions and plenary presentations Bisanda/Shao</i> | <i>Flip charts &amp; cards</i> | <i>Enhancing and strengthening local and external collaboration and linkages among stakeholders</i> |
| 12:45 | <b>Lunch Break</b>   |   |                                |   |
| 14:00 | <i>Workshop evaluations</i>  | <i>Plenary – Mlay/Bisanda</i>                                   |                                |   |
| 15:30 | <b>Afternoon Tea break</b>   |   |                                |   |
| 16:00 | <i>Closing and departing</i>   |   |                                |   |



### Future marine resources in three villages of Bagamoyo (vision based plans) – Mr. E. Mlay

In this session, the facilitator assigned participants to work in their groups and visualize what improved future they wish to see on the status of the different resources and associated activities in their villages, and how this improvement can come about. The same groups (Kondo, Mlingotini and Dunda) were maintained. The village maps generated, showing future vision status of the villages were used to illustrate the changes needed during the following presentations. The District Fisheries Department representatives (service providers) also were to present their future vision plans based on improved services they are expecting to provide to fishers. Participants were asked to generate new village maps (one each village) reflecting the desired future status of their villages.

#### Guiding notes:

- (i) Analyse the causes of change; look at success / failure in the past. What is required, eg. education needs, technical services required, other social implications, etc.
- (ii) Use past experiences to generate the future plans; avoid repeating mistakes that led to failures in the similar actions. Make sure the plan is implementable within your capability/resources.
- (iii) Set goals and indicators; How do you measure the success of your actions when you put the plan to action?
- (iv) Your plans should bring sustainable change (positive and not negative).
- (v) Due to time constraints, discuss only two of the most important livelihood earning activities (one related to the fishery resources and any other) and two infrastructure development needs for each village during presentations. An already existing infrastructure need not be included in the plan unless it still requires additional development.

#### Group presentations

##### Kondo village

| Activities   | Resources         | Expected future status                    | Services needed              | Stakeholders  |
|--------------|-------------------|---|------------------------------|---|
| Fishing      | Fish<br>Mangroves | Many and big fish<br>Mangrove restoration | Prawn aquaculture skills     | <ul style="list-style-type: none"> <li>◆ District Council/District Experts</li> <li>◆ Village Government/District experts</li> <li>◆ Villagers/District Council (Bylaws)</li> </ul> |
| Fish storage | Electricity       | Plan preparation<br>Power supply          | Funds<br>Technology/Manpower | <ul style="list-style-type: none"> <li>◆ Village/District Council</li> <li>◆ TANESCO</li> <li>◆ Villagers</li> </ul>  |

**Mlingotini village**

| Activities | Resources                        | Expected future status  | Services needed                            | Stakeholders   |
|------------|----------------------------------|---|--|--|
| Fishing    | Fish<br><br>Mangrove trees       | Many and big fish<br>Thick mangrove forest<br>Improved fish environment<br>Sustainable exploitation | Extension officers<br>Conservation skills  | <ul style="list-style-type: none"> <li>◆ District natural resources Officers</li> <li>◆ Village Government</li> <li>◆ Villagers</li> </ul> |
|            | Seaweed farming                  | Increased seaweed farming   | Farming technical know how; market         | <ul style="list-style-type: none"> <li>◆ Natural Res. Dept</li> <li>◆ Villagers</li> </ul>   |
| Business   | Small industries<br>Road; Bridge | Small-scale industries established<br>All weather road and bridge in place                          | Funds;<br>Trained technicians;<br>Manpower | <ul style="list-style-type: none"> <li>◆ Engineers</li> <li>◆ Donors</li> <li>◆ Mlingotini Villagers</li> </ul>                            |

## Discussion:

(i) There is ample space for seaweed cultivation i.e., space is not a limiting factor for seaweed cultivation; it is just a matter of planning how to utilize the space.

(ii) It was noted that there is user conflict between beach seine fishers and seaweed farmers. Fish are attracted to seaweed farm areas due to attractive (natural simulation) environment. The beach seine fishers destroy the stakes and ties constructed to establish the crop. Seaweed farms act like fish aggregating devices.

**Dunda Village**

| Activities | Resources | Expected future status | Services needed   | Stakeholders   |
|------------|-----------|------------------------|---|--|
| Fishing    | Fish      | Many and big fish      | Coastal environment conservation;<br>Improved fishing skills;<br>Strengthened fish zoning | <ul style="list-style-type: none"> <li>◆ District Council/Fisheries Officers</li> <li>◆ Village Government</li> <li>◆ Villagers</li> </ul> |

|                  |   |   |   |  |
|------------------|---|---|---|--|
|                  | Mangrove and coral reefs  | Mangrove forests and coral reefs recovered/restored   | Conservation and restoration skills   | <ul style="list-style-type: none"> <li>◆ District natural resources/Fisheries</li> <li>◆ Village government</li> <li>◆ Villagers</li> </ul>                                      |
| Small businesses | Market Center<br><br>Emergency food storage structure (silo)<br><br>Ward savings and credit Society | Sustainable business established;<br>Emergency food store constructed<br><br>Savings and credit society established | Reliable/permanent market built;<br>Systematic arrangement of the market structure; | <ul style="list-style-type: none"> <li>◆ District Council</li> <li>◆ Donors</li> <li>◆ Village government/Ward</li> <li>◆ Villagers</li> <li>◆ CBOs</li> </ul>                   |
| Education        | Secondary school  | More trained community members  | Sustainable education for our children;   | <ul style="list-style-type: none"> <li>◆ Ministry of Education</li> <li>◆ District council</li> <li>◆ Village government</li> <li>◆ Villagers</li> <li>◆ Donors; NGOs</li> </ul> |

#### District Fisheries Department

| Activities           | Resources   | Expected future status  | Services needed  | Stakeholders  |
|----------------------|---|---|--|---|
| Patrol               | Marine and beach resources                                      | Improved marine and beach resources;<br>Management of resources improved; | Community participation in management and conservation | <ul style="list-style-type: none"> <li>◆ District council/Fisheries Division</li> <li>◆ Village environment committees</li> <li>◆ Villagers</li> </ul>  |
| Extension Services   | Artisanal Fishers/Fish resource<br>Fishing Skills (education)   | Availability of working tools;<br>Sustainable exploitation of resource.   | Most fishermen to acquire fishing skills;              | <ul style="list-style-type: none"> <li>◆ District Fisheries Department</li> <li>◆ Fisheries Division</li> <li>◆ Village Government/Villagers</li> </ul> |
| Small-scale business | Market facilities<br>Food stores<br>Ward saving and credit Bank | Reliable market centres built;<br>Strategic food stores constructed.      | Ward saving and credit bank initiated;                 | <ul style="list-style-type: none"> <li>◆ District council</li> <li>◆ Donors</li> <li>◆ Village Government/ Ward</li> <li>◆ Villagers</li> </ul>         |

|   |  |   |   |   |
|---|--|---|---|---|
| Life saving at sea                            | Life saving equipment                                    | Life saving equipment purchased;<br>Increased number of life saving staff;<br>Decreased deaths from capsized boats and other sea accidents. | Education - Life saving skills to fishermen;  | <ul style="list-style-type: none"> <li>◆ Fisheries Division/Central Government</li> <li>◆ District Fisheries Department</li> <li>◆ Fishing community</li> </ul> |
| Institutionalisation of Fisheries Legislation | Fisheries Laws and Regulations (Fisheries legislations). | Improved fisheries laws   | Increased implementation of fisheries legislations;<br>Education on formulation of bylaws | <ul style="list-style-type: none"> <li>◆ District council</li> <li>◆ Fisheries Division</li> <li>◆ Village Government/ Ward</li> <li>◆ Villagers</li> </ul>     |

#### Discussion and comments

- (i) Other stakeholders would have been appropriate to invite to this workshop, since some issues are in need their attention e.g., District land management Department, hoteliers, NGOs etc.
- (ii) Participants noticed the need of extension staff to be provided with transport, both on land and in water, in order to link easily between the government fisheries management authority and fishing community.
- (iii) Participants were alerted to be careful with people who come in their area with intention to invest in land. Legal formalities should be taken when writing land sale agreements. Otherwise might cause user conflict between beach users and investors.

### **Identification of constrains (Problem analysis) to fisheries depended livelihood strategies – Dr. S. Bisanda**

What is a production constraint? The aim of this question was to see if participants have similar understanding of production constraints. It was emphasized that, although there are many constraints and every individual may be confronted by different constraints, there is a need to have a common understanding of constraints. It was further emphasized that, in this workshop we shall deal with those constraints that affect households, and not those which affect individuals. Within this context, criteria for identifying problems were defined.

- ◆ The problem should have an impact on many people in the community;
- ◆ The problem should have a repetitive property, frequently recurring;
- ◆ The problem should have a long term effect;
- ◆ The problem should be known by local people;
- ◆ Preventive measures have to be taken against the problem, i.e. communities are taking preventive measures.

The facilitator assigned the participants a working exercise so as to familiarize themselves with problem identification. For each problem, participants were requested to find out solutions to identified problems. During the exercise, participants were divided into four groups, three groups were male, from each of the three villages; the fourth group comprised women from all three villages.

### **Exercise**

For each of the identified five most important activities in the village:

- Explain factors constraining the communities to achieve their goals
- Explain the potential solutions to the constrains

### **Plenary presentations of the problem analysis**

#### **Women group (all villages)**

| <b>ACTIVITY</b>                  | <b>PROBLEM</b>  | <b>SOLUTION</b>  |
|----------------------------------|---|--|
| Farming                          | Inferior implements<br>Low capital<br>Low access to modern working tools      | Formulation of saving and credit groups<br>Access to modern agricultural skills.<br>Find a donor |
| <i>Mama lishe</i> (food vending) | Lack of a hygienic working place<br>Lack of capital to buy superior equipment | Formation of cooperative groups<br>Secure donor assistance                                       |
| Fish frying                      | Low capital   |  |
| Dress making                     | Inferior implements and machinery<br>Low skills                               | Education<br>Form cooperative groups   |
| <i>Maandazi</i>                  | Competition for the market  | To have reliable market<br>Group formation   |

After the plenary presentation, it was learnt that some loans were offered to women in the past, however the majority of women did not have access to these loans. The conditions set to these loans were limiting factors for rural women to secure the loans. This caused the loans to be accessible to only a few, being those who were 'well off'.

#### **Mlingotini village group (men)**

| <b>ACTIVITY</b> | <b>PROBLEM</b>  | <b>SOLUTION</b>   |
|-----------------|---|---|
| Fishing         | Poor fishing gears & vessels<br>Low capital<br>Low fishing skills<br>Overexploitation of marine resources | Collaboration between Fisheries Division and fishers in sustainable harvesting of fisheries resources |
| Agriculture     | Inferior farming tools<br>Wild animals,<br>Insect pests   | Modern farming tools<br>Animal and pest control through Agricultural Officer.                         |

|                                  |  |   |
|----------------------------------|--|---|
| Petty business                   | Low capital<br>Unreliable markets  | Loans<br>Business skills<br>Market expansion                    |
| Boat building and repair         | Low capital to buy superior implements<br>Poor skills                                | Access to modern working tools<br>Corporative group formulation |
| <i>Mama lishe</i> (food vending) | Lack of a hygienic working place<br>Lack of access to credit services<br>Low capital | Business skills<br>Group formation                              |

In discussion it was found that some fishermen do not know fishing regulations. However this was made clear by Ms Mushi that, the regulation are printed on the back leaf of their fishing licenses. They have to read them and abide with them. In addition there should be a good information flow between the fisheries management and fishers. Participants emphasised that the preparation of fishing guidelines should be participatory. They wondered how a person living in Dar es Salaam could prepare guidelines for Mlingotini without involving the fishermen who knows better the environment? As an example, they sighted a fishery regulation which allows large vessels to fish in waters more than 20 meters deep on the assumption that such depth is far away from the sites where small-scale fishermen operate. They said that in some places the same depth is just five meters from the shoreline.

#### Dunda village group (men)

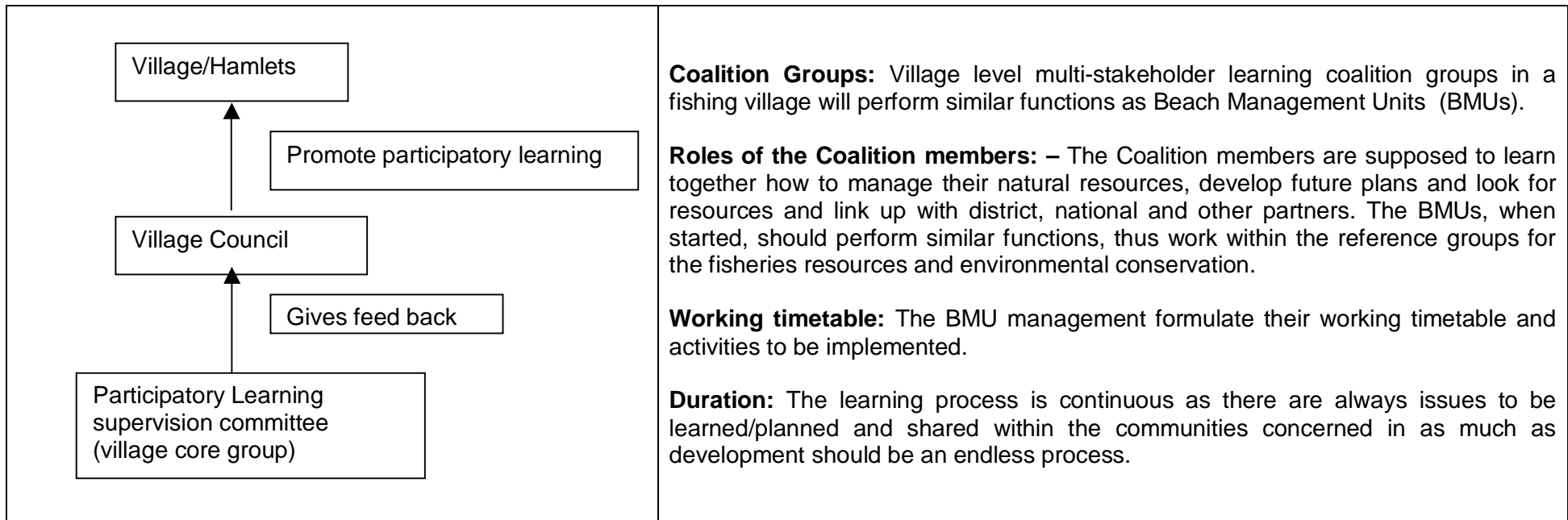
| ACTIVITY                 | PROBLEM  | SOLUTION   |
|--------------------------|--|--|
| Fishing                  | Overexploitation by the trawl fishery<br>Illegal fishing (using illegal gear)<br>Low capital | Cooperative groups fighting against improper exploitation methods used by trawler operators; illegal fishing e.g. dynamite |
| Agriculture              | Poor farming tools<br>Low capital  | Modern farming tools<br>Invite tractor investors   |
| Petty business           | Low capital<br>Poor business skills  | Provision of low interest loans<br>Training on business management<br>Market expansion                                     |
| Boat building and repair | Poor working tools<br>Poor skills  | Provision of low interest loans to enable builders to purchase superior implements   |
| Mama lishe               | Lack of hygienic premises<br>Low capital   | Cooperative initiatives to build nice premises.<br>Group formulation<br>Establishment of savings and credit schemes        |

**Kondo village group (men)**

| <b>ACTIVITY</b>     | <b>PROBLEM</b>   | <b>SOLUTION</b>  |
|---------------------|--|--|
| Farming             | Inferior farming tools<br>Lack of capital<br>Low yield | Encourage tractor owners to send their tractors in the area at the onset of rains<br>Training on organic farming |
| Fishing             | Poor fishing gears & vessels<br>Lack of capital        | Access to fishing gear & vessels through soft loan/commodity assistance  |
| Petty business      | Low capital<br>Unreliable market                       | Soft loans to cooperative groups   |
| Livestock husbandry | Low capital and poor rearing skills.                   | Provide training on livestock husbandry skills.<br>Provision of soft loans                                       |

**Formation of reference groups - Dr. F. Shao**

We are getting to the close of the workshop. When we leave here, we are a learned group with basic principles on how to share and plan together our own development. We are the ambassadors of Participatory Learning in our villages. In order to advance this knowledge and apply it we need to act, starting from here on. To be effective within our communities we cannot act individually. We have to start formation of reference participatory learning groups (Multi-stakeholder Learning Coalition Groups), at village and District levels. The flow chart diagrams below illustrate the stages and interrelationships needed to form effective Coalition Groups to spearhead the learning and development planning process for community empowerment.

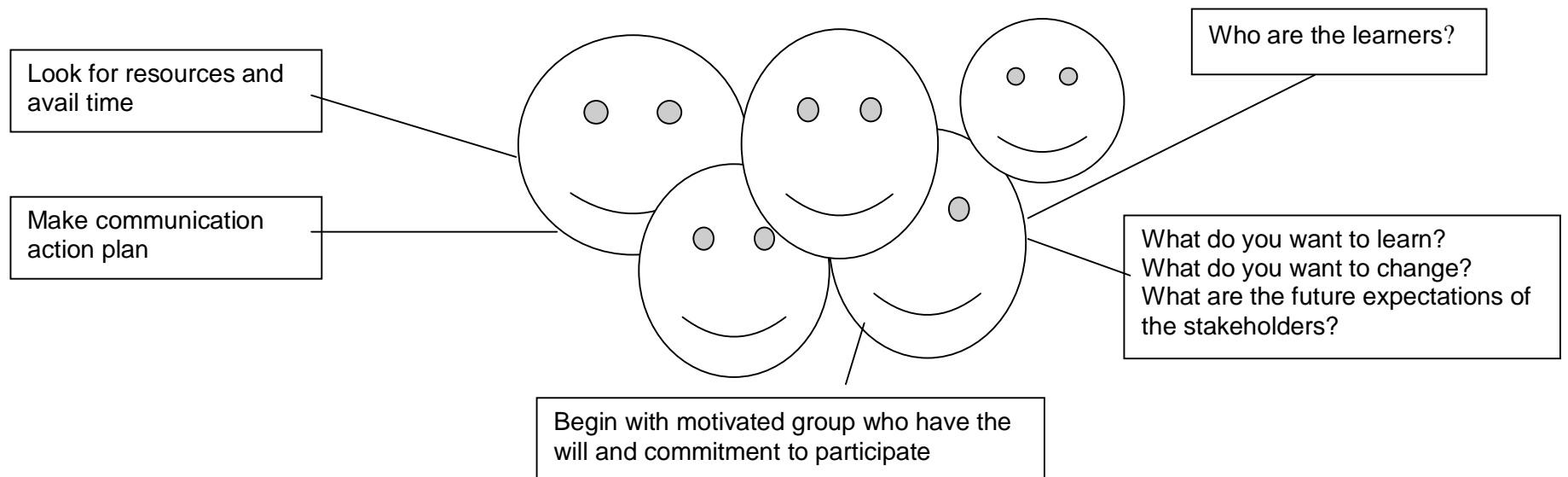


Steps to undertake

**Step 1:** Briefing on Multi-stakeholder Learning to Village Government and villagers;

**Step 2:** Planning to improve the available village maps;

**Step 3:** Seek support of Village Leaders and convene general meeting to: Give briefing of multi-stakeholder learning education; Identification of available natural resources in the village; Identify early innovators of multi-stakeholder learning education; Formation of working groups.



### Discussion:

In order to ensure proper formation and function of the reference groups:

- Facilitators were requested to make follow up (reflection) visits to evaluate how the groups formed are performing and if possible advise where necessary.
- District and village councils were requested to support the groups to make sure they are functional and sustainable.
- Communication between the village coalition group, district and national levels should be in place to provide linkage and sharing of ideas.

### Workshop Evaluations

**END OF DAY ONE EVALUATION:** (Mood Barometer). Participants were asked to tick one of two faces; YES (tick on the smiling face) if the presentations were clear and well understood; NO (tick on the sad face) if the presentations were confusing, were not understood, and thus not much was learned.

Results.

|                           |    |
|---------------------------|----|
| <b>Smiling face (YES)</b> | 37 |
| <b>Sad face (NO)</b>      | 7  |



**END OF DAY TWO EVALUATION:** (Fish Environments). Tick one of two pictures; YES (tick on the healthy fish swimming comfortably within large mangrove trees) if presentations by fellow village members were understood and true to reality; NO (tick on the weak fish swimming on open shallow waters) if presentations were confusing, not understood and do not represent the true situation.

Results.

|                           |    |
|---------------------------|----|
| <b>Healthy fish (YES)</b> | 32 |
| <b>Weak fish (NO)</b>     | 11 |

**Evaluation Form:** At the end of the workshop (day three) participants were asked to evaluate the participatory learning process for the 3 days. The results were as recorded below:

*(Instructions: Please indicate using the score guide provided below the extent to which you agree or disagree with the following statements about the workshop. A score should be given to each statement).*

**1=I do not agree at all. 2=I slightly disagree. 3=I am not sure. 4=I agree 5=I fully agree**

| Respon<br>dents | Average<br>score |
|-----------------|------------------|
|-----------------|------------------|

**1. FIRST IMPRESSIONS the workshop led to:**

|  |      |      |
|--|------|------|
| Open dialogue happening between stakeholders present | (44) | 4.77 |
| A better understanding of one another's situations   | (39) | 3.64 |

**2. The following FACTORS were important in this workshop**

|  |      |      |
|--|------|------|
| The facilitators were willing to listen to participants opinions | (42) | 4.19 |
| The mix of stakeholders present was good                         | (41) | 3.78 |

**3. About the QUALITY OF COMMUNICATION during the workshop**

|   |      |      |
|---|------|------|
| The workshop provided participants with the opportunity to create new ideas | (41) | 4.29 |
| The discussion encouraged the development of trust for working together     | (40) | 3.83 |

**4. About the OBJECTIVES and EXPECTATIONS of the workshop**

|   |      |      |
|---|------|------|
| I have a better understanding of Multi-stakeholder Learning     | (42) | 3.76 |
| I have enough skills to facilitate a learning process back home | (36) | 4.14 |
| I have concrete follow up actions to take when I return home    | (42) | 4.14 |

Workshop Participant Categories

|                          |    |
|--------------------------|----|
| Fishers                  | 17 |
| Fish Traders/Fryers      | 11 |
| Boat Makers/Repairers    | 3  |
| Food Supply/"Mama Lishe" | 3  |
| Fish Trap Makers         | 1  |

|                              |   |
|------------------------------|---|
| District Department Managers | 1 |
| Field Extension Officers     | 4 |
| Seaweed farmer               | 2 |
| Village Extension Officers   | 2 |
| Ice blocks supplier          | 1 |

Participants were also asked to comment freely what they felt on the workshop proceedings in their own perspective. The following comments were recorded

**GENERAL COMMENTS**

|   |   |
|---|---|
| <p>Good educational approach; wish it be repeated often<br/>                 Increased cooperation and learning together is important<br/>                 I was pleased to participate in this workshop<br/>                 Need increased education for villagers<br/>                 We are thankful for the education and chance to participate<br/>                 I hope I will have another chance to participate in similar workshops<br/>                 Similar workshops to be conducted at least twice a year<br/>                 Workshop very educative<br/>                 Looking forwards to sensitize other villagers<br/>                 I understood<br/>                 Follow up action needed<br/>                 Request another workshop of similar nature<br/>                 I was happy to share ideas and learn new things<br/>                 Useful education<br/>                 I was satisfied with the workshop programme<br/>                 The workshop was educative<br/>                 I have benefited<br/>                 Make follow up visits from time to time</p> | <p>Request Fisheries officers to visit fishers from time to time<br/>                 Workshop scheduled time to be increased<br/>                 There is need to host such workshops from time to time so as to improve fisheries and other natural resources<br/>                 I understood what I was taught and will educate other villagers<br/>                 I found what was taught to be all useful<br/>                 Department staff to make frequent visits to villages<br/>                 Facilitators need to follow up implementation<br/>                 Good education<br/>                 Congratulations to the facilitators<br/>                 More workshops involving greater number of stakeholders<br/>                 I am satisfied with the workshop<br/>                 More similar workshops to artisanal fishers<br/>                 Request more support to our development<br/>                 Facilitators were understood<br/>                 More time was needed for the workshop<br/>                 I will use the education received to improve the environment<br/>                 We need empowerment to development<br/>                 I learnt many issues on fishing activities</p> |
|---|---|

**OTHER COMMENTS ON WHAT COULD BE IMPROVED**

|  |  |
|--|--|
| <p>More on environmental conservation<br/>                 Combine sustainable development in fisheries and agriculture<br/>                 Increase agriculture training<br/>                 Agriculture needs to be improved<br/>                 Business education to be stressed in future<br/>                 Follow up actions from time to time; don't leave us here<br/>                 No comments<br/>                 Other sector experts need to participate – agriculture, human settlements, livestock, etc.<br/>                 Increase workshop time</p> | <p>All department heads to attend such workshops<br/>                 Time allocated is too little<br/>                 Such workshops to involve environmentalists as well<br/>                 Education on fisheries and farming should go hand in hand<br/>                 More explanation on action to patrol fishing activities; punish wrong doers<br/>                 More groups to be involved in such workshops<br/>                 Sensitize formation of cooperative groups<br/>                 More stakeholders needed to attend<br/>                 More time be allocated to learn cooperative groups formation and sensitization</p> |
|--|--|

**OTHER COMMENTS ON WHAT THEY LIKED MOST DURING THE WORKSHOP**

|   |  |
|---|--|
| Good cooperation and participation<br>Good organization<br>Approach (participatory) involving everybody<br>Workshop administration<br>Open and sincere discussions<br>Satisfactory knowledge gained<br>Understanding the bad effects of beach seining<br>Active workshop where everybody listens and participates<br>Stakeholders given chance to express their constraints, experiences, and future visions<br>Good services offered<br>Meeting different people and exchanging experiences<br>Good instructions<br>Knowing other people | Cooperation and involvement<br>The education offered<br>Subject on fisher development/improvement<br>Development education that considers current and future generations<br>Good facilitation and workshop organization<br>Preparing our own plans<br>New knowledge gained<br>Freedom for each participant to give opinions and comments<br>Good communication between facilitators and participants<br>Knowledge on planning development issues<br>Open discussions and contribution of ideas<br>Common understanding with other participants |
|---|--|

**Closing (17/11/2002)**

**Vote of Thanks: Kondo Group** (on behalf of the participants)

The Guest of Honour, Workshop Facilitators, Participants; Mabibi na Mabwana,

We feel honoured to be given the chance to give a vote of thanks on behalf of the participants. The workshop has been an eye opener for us, not that we have not participated in other workshops, but it is the procedure and kind of subjects we have been discussing since we started. We are used to workshops where we as participants are receivers. In this workshop we have been presenters most of the time. Thanks to the facilitators who guided us through, enabling us to build more confidence as time went by.

We are ending the workshop more learned and more confident on what we are able to do ourselves instead of waiting for external forces to tell us what to do. We are not saying that we are already experts of planning and implementing using the Participatory Learning Methodology we have followed in the last three days. We wished the time were longer, we would probably learn more. The challenge before us is to pass on the knowledge gained to the other members of our communities so that we act together as a team for our betterment.

We fishers and members of our households have a lot of stake in the marine fisheries resource. It means therefore if we ourselves can do something to prevent the current pressure on the resource, we will be doing justice to the future generations and ourselves. How we do that is what we have been learning in the last three days. That little has been a stimulus.

As fishers in neighbouring villages, our fishing grounds are the same. The more we cooperate in acting collectively, the better for us in the future. This workshop has brought us together and let us maintain this relationship. We should keep on reminding organisers of other workshops to involve us in this manner.

We are concluding our remarks by requesting the organisers and supporters of this programme to extend more of their resources by way of follow up actions in terms of advisory service to institute the learning groups in the fishing villages. We shall appreciate to work with the facilitators again in future. Please let us have several copies of the workshop reports for our reference and learning, as many of us are not good writers, thus we may not have been able to record fully the learning experiences we shared during our stay here. Finally we thank the Principal and the rest of the institute staff for our comfortable stay here. Thank you all.

### **Workshop closing speech**

#### **MARINE FISHERIES MULTI-STAKEHOLDER PROBLEM CENSUS WORKSHOP: BAGAMOYO, TANZANIA: 13<sup>th</sup> NOVEMBER 2002 By Mr. Yasson E.S. Mindeme (Principal of Mbegani Fisheries Training Institute)**

The District Fisheries Officer Bagamoyo, Workshop Facilitators, Workshop Organisers, Workshop Participants, Ladies and Gentlemen;  
I feel honoured to share with you at this important event that marks the closing of the Multi-stakeholder workshop aimed at improving the fisheries activities, and therefore improving the livelihoods of the artisanal fishers in Bagamoyo District.

I have been informed that the workshop has been conducted through Participatory Learning Approach, thus giving the stakeholders maximum opportunity to contribute ideas and exchange experiences in the overall involvement of communities in the management and sustainable utilization of the fisheries resource.

The fisheries resource contributes heavily to the overall national development through the following:

- ♦ Improving the nutritional status of the population
- ♦ Provides employment for a good portion of the population
- ♦ Contributes a good percentage of the Gross Domestic Product
- ♦ Contributes substantially to the national foreign exchange earnings.

These contributions are directly linked to the improvement of the livelihoods of the people of Tanzania, and in particular the artisanal fishers of Bagamoyo District.

I am informed that, during the preparatory stage prior to the workshop, you participated right from the start through preparing maps of your villages visioning the status of the natural resources over 20 years ago and the current situation. I am told those preparations were used as live teaching materials during the workshop. In addition the use of those maps stimulated contributions of ideas from you in the process of brainstorming what needs to be done as a strategy to improve livelihoods of the artisanal fisher communities. This emphasizes the fact that the conservation and sustainable utilization of the fisheries resource rests with the fishers themselves.

From what you presented and through the maps, it is evident that in Bagamoyo District there has been persistent destruction of the marine resource, alongside reduced fish harvest much lower than the once plentiful and excess catch of the past. You, as major stakeholders, have managed to brainstorm causes that led to this declining situation and suggested immediate actions needed to reverse the situation. I am told you went further and formed action groups (Reference Groups) to spearhead Participatory Learning process in your villages when you go back.

This workshop has taken place at the right time when the National fisheries Policy is placing heavy emphasis on the revitalizing the fisheries sector so as it contributes more to the national income. The policy stresses the need to maintain sustainable utilization of the fisheries resource. It is my sincere hope that your participation has armed you with the necessary education and experience as tools to improve your livelihoods without jeopardizing the survival of the resource. At the same time I urge you as Reference Groups to be ambassadors of Participatory Learning Approach in your areas so as to uplift your livelihoods and the people of Bagamoyo.

May I take this opportunity to thank the financiers, organizers and facilitators of this workshop for realizing the importance of the fisheries resource to the people of Bagamoyo and the nation, thus taking the positive action of conducting the workshop here as part of the study to determine what actions need to be taken to ensure sustainability of the marine fisheries resource.

Finally I wish you all the best on your way back and may I welcome you again to Bagamoyo, and in particular Mbegani Fisheries Training Institute, in the future. I now declare the workshop officially closed. Thank you.

**PARTICIPANTS LIST**

| <b>NO</b> | <b>NAME</b>       | <b>ADDRESS</b> | <b>OCCUPATION</b>         |
|-----------|-------------------|----------------|---------------------------|
| 1         | Mwanahawa Mohamed | Dunda          | <i>Mtendaji</i>           |
| 2         | Pili Rammadhani   | Dunda          | Fish frying               |
| 3         | Anthony Msolwa    | Kondo          | Basket-trap making        |
| 4         | Omari Kom         | Dunda          | Fisherman - shark net     |
| 5         | Subira Pazi       | Dunda          | Fish trader               |
| 6         | Hassan Masoud     | Dunda          | Boat builder              |
| 7         | Musa Mfaume       | Mlingotini     | Fish trader               |
| 8         | Mgeni R. Vuai     | Mlingotini     | Fisherman                 |
| 9         | Kombo Lila        | Dunda          | Fish trader               |
| 10        | Ibrahim Mwinge    | Dunda          | Fisherman – Gillnet       |
| 11        | Bahatisha Rajabu  | Kondo          | VEO                       |
| 12        | Mtumwa Rajabu     | Dunda          | Fish frying               |
| 13        | Machano Ally      | Mlingotini     | Fisherman - hand lining   |
| 14        | Mwanaidi Miraji   | Dunda          | Fish frying               |
| 15        | Mwamtoro Selemani | Dunda          | VEO                       |
| 16        | Milomo Maneno     | Dunda          | <i>Mama lishe</i>         |
| 17        | Hamisi Kodi       | Mlingotini     | Fisherman – Shark net     |
| 18        | Hamisi Jafari     | Mlingotini     | Boat builder              |
| 19        | Rajabu Sumay      | Mlingotini     | Ice provider              |
| 20        | Asinati Abdalla   | Kondo          | Seaweed farmer            |
| 21        | Mariam Athumani   | Kondo          | <i>Mama lishe</i>         |
| 22        | Riziki Haji       | Mlingotini     | <i>Mama lishe</i>         |
| 23        | Kishindo Hamisi   | Mlingotini     | Fish frying               |
| 24        | Ashura Kessy      | Kondo          | Fish frying               |
| 25        | Wache Dhamiri     | Kondo          | Fisherman- Beach seining  |
| 26        | Twaha Omari       | Kondo          | Boat builder              |
| 27        | Ramadhani Doto    | Kondo          | Fisherman-H/lining        |
| 28        | Seif Malik        | Kondo          | Diver- lobster fishing    |
| 29        | Mbegu Shani       | Mlingotini     | Fisherman- basket fishing |
| 30        | Jumanne Kodi      | Mlingotini     | Sea cucumber collector    |
| 31        | Kidudu bin Juma   | Mlingotini     | Fisherman- Sea cucumber   |
| 32        | Mshindo Kombo     | Mlingotini     | Fisherman- weir           |
| 33        | Othman Mohammed   | Dunda          | Fisherman- Beach seining  |

|    |                     |                              |                                    |
|----|---------------------|------------------------------|------------------------------------|
| 34 | Mwinyijuma Mwarami  | Dunda                        | Fish trader                        |
| 35 | Sillo Mtubwi        | Dunda                        | Fish trader                        |
| 36 | Juma Amani          | Kondo                        | Fisherman – crab                   |
| 37 | Musa Maliatabu      | Kondo                        | Fisherman-sea cucumber collector   |
| 38 | Nuru Hilary         | Kondo                        | Fish trader                        |
| 39 | Shirika Swalehe     | Kondo                        | Fisherman-weir                     |
| 40 | Selemani Mshindo    | Kondo                        | Fisherman – Cast net               |
| 41 | Rifai Issa          | Mlingotini                   | Seaweed Farmer                     |
| 42 | Idrissa shabani     | Mlingotini                   | Fisherman – Beach seining          |
| 43 | Grace Semfuko       | Bagamoyo                     | Journalist                         |
| 44 | Nyakiboha Mwinoki   | Bagamoyo                     | Assistant Fisheries Officer        |
| 45 | Mohamed Mselem      | Bagamoyo                     | Assistant Fisheries Officer        |
| 46 | Abubakar Mposso     | Bagamoyo                     | Senior Ass. Fisheries Officer      |
| 47 | Baraka Kuguru       | Fisheries Division           | Fisheries Officer                  |
| 48 | David Kaijunga      | Bagamoyo                     | District Natural Resources Officer |
| 49 | Francis M. Shao     | FANRM Research Consultants   | Team Leader, Facilitator           |
| 50 | Shekania Z. Bisanda | National Environment Council | Facilitator                        |
| 51 | Valeria E. Mushi    | Fisheries Division, MNR&T    | Facilitator                        |
| 52 | Erasto E. Mlay      | FANRM Research Consultants   | Facilitator                        |