Pangani River Basin Management Project

The Pangani River Basin Management Project is generating technical information and developing participatory forums to strengthen Integrated Water Resources Management in the Pangani Basin, including mainstreaming climate change, to support the equitable provision and wise governance of freshwater for livelihoods and environment for current and future generations.

The Pangani Basin Water Board is implementing the project with technical assistance from IUCN (International Union for Conservation of Nature), the Netherlands Development Organization (SNV) and the local NGO PAMOJA. The project is financially supported by the IUCN Water & Nature Initiative, the Government of Tanzania, the European Commission through a grant from the EU-ACP Water Facility, and the Global Environment Facility through UNDP.

Pangani Basin Water Board

The Pangani Basin Water Board was established in 1991 and is one of 9 basin water boards in Tanzania. The PBWB has a number of roles and responsibilities including: data collection, processing and analysis for water resource management monitoring and resource assessment; technical aspects of trans-boundary issues in the basin; co-ordinate and approve basin WRM planning / budgets; approve, issue and revoke water use and discharge permits; enforce water use permits and pollution control measures; co-operate between sectors at the local level; and resolve conflicts and co-ordinate stakeholders.
TRAINING OF FACILITATION TEAM ON INTEGRATED WATER RESOURCES MANAGEMENT

MODULE 1

Participatory Planning, Stakeholder Participation and Gender Mainstreaming an Intergrated Water Resources Management and Development

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<table>
<thead>
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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>EU-ACP</td>
<td>European Union- African Caribbean &amp; Pacific</td>
</tr>
<tr>
<td>IWRM</td>
<td>Integrated Water Resources Management</td>
</tr>
<tr>
<td>IUCN</td>
<td>International Union of Conservation of Nature</td>
</tr>
<tr>
<td>KCF</td>
<td>Kikuletwa Catchment Forum</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Governmental Organisation</td>
</tr>
<tr>
<td>O&amp;OD</td>
<td>Opportunities and Obstacles to Development</td>
</tr>
<tr>
<td>PGN</td>
<td>Practical Gender Needs</td>
</tr>
<tr>
<td>PRA</td>
<td>Participatory Rural Appraisal</td>
</tr>
<tr>
<td>PBWO</td>
<td>Pangani Basin Water office</td>
</tr>
<tr>
<td>SGN</td>
<td>Strategic Gender Needs</td>
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<tr>
<td>SNV</td>
<td>The Netherlands Development Organization</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
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</table>
Introduction

The Pangani Basin Water Board is implementing the Pangani River Basin Management Project, with technical assistance from the International Union of Conservation of Nature (IUCN), the Netherlands Development Organization (SNV) and the local NGO PAMOJA Trust. The project is financially supported by the IUCN Water and Nature Initiative, the Government of Tanzania, the European Commission through grant from the EU-ACP Water Facility and the Global Environment Facility, through UNDP.

The main goal of the Project is to "strengthen Integrated Water Resources Management in the Basin, including mainstreaming climate change to support the equitable provision and wise governance of freshwater resources for current and future generations and to empower Water Users and Managers in Pangani Basin to manage and allocate water resources with consideration for climate change, the environment and other technical information, through consultative processes and the sound framework of integrated water resource management (IWRM)."

The project has the following five Key Result Areas, which contributes to the achievement of the goal:

**Result 1:** Increased understanding of environmental, economic and social implications of different river flow scenarios under expected climatic conditions and increased capacity to collect and analyze such flow assessment information;

**Result 2:** Water Users strengthened and empowered to participate in IWRM and Climate Change adaptation processes through dialogue and decentralized water governance;

**Result 3:** Water Sector’s vulnerability to climate change understood and pilot actions generate lessons in adaptation;

**Result 4:** Pangani Basin Water Board coordinates other sectors and stakeholders in the development of an IWRM Plan; and

**Result 5:** Project implementation effectively & efficiently to the satisfaction of all stakeholders.

**OBJECTIVE OF TRAINING OF FACILITATION TEAM PROGRAMME**

For the forum to be established and community participation to be realized under IWRM; the trainees formed Catchment Facilitation Teams, that were deployed to train or raise communities awareness on different issues in regard to IWRM; entrepreneurship; community participation; gender and other cross cutting issues relating to water resource management, as an initiative to strengthening the capacity of the community to manage the resources at different levels in the catchment once the forums have been established. The TOT equipped the facilitation teams with different facilitation and training skills, methods, tools and approaches in integrated water resources management. As a result, the TOT exercise contributed to empowering the teams with knowledge and skills, which will be transferred to the water users for proper planning and sustainable management of the water resources at their local scale.

1 Previously called the Pangani Basin Water Office
One of the pre-requisites in the process of putting in place the Kikuletwa Catchment Forum is development of training materials to be used for Training of Trainers (TOT) programme covering topics in Integrated Water Resources Management (IWRM), entrepreneurship; community participation; gender and other cross cutting issues relating to WRM, climate change and adaptation strategies and the contribution of water resources in poverty reduction. Towards that end, the three experts contracted to undertake this assignment assembled in Moshi for a five day workshop to develop modules for the proposed training on:

Module 1- Participatory Planning, stakeholder Participation & Gender Mainstreaming (Annexure III)
Module 2- Integrated Water Resources Management (Annexure IV)
Module 3- Entrepreneurship and Finance Management (Annexure V)

This publication contains Module 1 (Annexure III) titled:
Module I: Participatory Planning, Stakeholder Participation and Gender Mainstreaming in Integrated Water Resources Management and Development

The other modules are available as separate publications

The workshop report from the ToTs is available at the end of this publication in Appendix 2 as a reference.
Training of Catchment Facilitation Teams on Integrated Water Resources Management for Kikuletwa Catchment

TOPIC 1: Participatory Planning for Integrated Water Resources Management

(i) General objective
To equip facilitators with knowledge, skills and appropriate attitudes essential for facilitating participatory planning processes for water resources

(ii) Specific objectives
At the end of this training element participants are able to
- define the concepts of planning
- define and describe the concept of participatory planning
- describe the purpose and importance of participatory planning
- use selected techniques and associated tools for participatory assessments and planning in water resources management and development such as PRA and O&OD
- use and familiarize with general steps in participatory planning
- facilitate resource users in the process of analysis, determination of possible solutions and action planning

(iii) Training contents
- The concept of planning and integrated planning
- The concept of participatory planning
- Basic principles of participatory planning
- The purpose and importance of participatory planning
- Steps in participatory planning
- Participatory planning methodologies and tools - PRA and O&OD

(iv) Methodology
- Short presentations
- buzz groups
- Brainstorming
- Group discussion

(v) Evaluation
- Ability to answer questions
- Contributions in group and plenary discussions
- Ability to use participatory planning tools
Participatory Planning for Integrated Water Resources Management

1.0 The concept of planning
Planning is a process, which set out objectives, identifies existing resources/potentials and implementation capabilities to achieve the objective over the specific period of time. Planning facilitates implementation in an orderly manner to achieve set objectives, enables assessment of resources available in order to overcome obstacles and assists in knowing the communities requirements. The importance of planning is that it facilitates proper allocation of scarce resources, facilitates timely implementation of activities and a plan is a tool which helps the management to supervise its development activities.

1.1 Planning Approaches
Two approaches of preparing plans can be identified. The top-down and the bottom up approaches. The top-down approach has been dominant in Tanzania. Generally top-down planning has an inherent feature of involving the people instead of facilitating them to participate in decision making in their development activities. This approach also has a tendency of making people dependent on the government. The second approach of planning is the bottom-up and has two scenarios: The first scenario is where people use participatory tools and come up with priorities based on pre-determined interventions. This also enhances dependence. The second scenario is where people lead and make decision in the planning process. It instills a sense of ownership.

2.0 Participatory planning
Participatory planning is a process whereby stakeholders are involved in the process of problem identification, analysis, choosing appropriate remedies from a range of options, planning, implementation, monitoring and evaluation of their plans. In the process of analysis and planning, the community is facilitated to discuss and consult each other on their development issues. Participatory planning is people centered action oriented and holistic.

People: People gather data using participatory tools, analyses data, prepare plans and set priorities.
Action: People own the process of planning, implementation and outcome.
Multi-sectoral: Economic activities are interdependent issues. Therefore during planning process development issues are tackled holistically.

2.1 Pillars for participatory Planning
(i) Community members should participate in the planning process.
(ii) Vulnerable groups and the socially disadvantaged should be involved in decision making. These groups are those of old people, orphans, widows, and the handicapped.
(iii) The process should be internalized by the Village, Ward, District and other development partners.
3.0 Principles of participatory planning

Participation aims at bringing about change in peoples attitudes which is critical on the part of the peoples involved towards their environment and water resources management in particular. For change to happen the following principles have to be observed:

(i) **Equality**: All stakeholders are equal, they have the right to communicate their ideas and be listened.

(ii) **Democratic**: all decisions should be decided by participants themselves without being driven or oppressed. Decision making by consensus is key

(iii) **Logic**: the ideas should be tested by logical reasoning or participant commonsense.

(iv) **Empiricism**: the ideas should be check by empirical experiences mostly participant’s experience or feelings

(v) Focus on participant problems or need **NOT** project needs.

(vi) Open for critical/analytical thinking.

4.0 Importance of participatory planning

Participatory planning has the following benefits:

(i) facilitates the process of local empowerment by creating opportunities for specific disadvantaged groups, such as women or the landless, to have access to external resources (training, credits) or to mobilize their own resources organization, knowledge, skills).

(ii) allows the integration of local knowledge systems into local project planning and implementation.

(iii) facilitates a two-way learning process between the local community and the project.

(iv) enhance political commitment and institutional support for local planning by building a common understanding between institutions and local groups.

5.0 Key steps in participatory planning

(i) **Community/catchment visioning**:

The role of visioning is to enable the community develop an image of what that future should look like. Based on the vision, it will be easy defining the real and important problems. Planning is a systematic effort to realize the ideal future condition or the future image. So, we should have clear vision of the catchments water resources.

(ii) **Stakeholder identification**

Stakeholder analysis is needed because that plan will be implemented in a catchment and not in an empty space. In reality the plan connects different stakeholders/groups. A plan is where different stakeholders meet. For successful implementation of the plan it is important to identify, describe and define who they are, what their potential, what they will contribute and their expectations to the intervention.

(iii) **Problem identification, analysis and search for solutions- Diagnosis**

Participatory planning is done in order to solve problems. So, problem identification is the first important step of planning. Diagnosis is an examination and analysis of any given situation. Participatory assessments (for water resources in this case) examine community resident’s practices, opportunities, the problems they encounter and their causes. Some problems are simple while others are complex.
Looking and the cause and effect is essential. This crucial information is obtained using various tools such as secondary data, mapping, transect, Venn diagram and semi structured interviews. In the course of diagnosis, community members identify major problems. In order to seek valid solutions, it is necessary to describe and understand the problem in detail by asking the following questions:

- *what exactly causes the problems* (root cause of the problem).
- *Who are affected by these problems? How?*
- *What will happen if the problems are not solved?*
- *So far the problems have not been solves why?*
- *Do we intend to solve the problems?*
- *What can be done to solve the problems?*

(iv) Planning

Planning is a process which translates objectives into activities/actions for implementation within a given time frame and budget. The planning format indicates objectives, activities/ actions to be undertaken to persons responsible for implementation, period and the target groups. The plan also indicates resource requirements and indicators for achievement.

(v) Adoption of the plan and strategies for implementation

When preparation of a plan has been completed (usually through representatives), it is important that the plan is adopted by all stakeholders through legitimate forums or gatherings and strategies for implementation adopted.
6.0 Participatory planning methodologies

A number of participatory planning methodologies exist. However, the Opportunities and Obstacles to Development (O&OD) and Participatory Rural Appraisal (PRA) methodologies are popular. Both of them use tools such as community mapping, transect walk, Historical time lines, Seasonal calendar, institutional analysis, gender daily calendar, focus groups and Identification of sources of income and expenditure. The two techniques are briefly discussed below.

6.1 The Opportunities and Obstacles to Development (O&OD) Methodology

The methodology is an intensive consultative planning process that uses participatory tools to come up with village and district plans. It has been developed for institutionalizing in the Local Government Authority structure. The methodology has been developed in line with the governments’ (Tanzania) aspirations to devolve powers to the communities.

The O&OD methodology has the following advantages:

- Communities can manage the participatory planning process because it uses few participatory tools that are easy to follow.
- The approach promotes transparency and accountability to community development activities on a day to day basis.
- It is an approach that removes dependency and strengthens self-reliance.
- The approach motivates communities to own the outcomes of their decisions.
- The approach commits both the central and local governments to respond and be accountable to the people.
- It is the most appropriate approach that provides a foundation for communities in all their poverty.
- Enhances Local Government Authorities coordination ability of development partners programmes.

6.2 Participatory Rural Appraisal

Participatory Rural Appraisal (PRA) also known as participatory learning and action refers to a broad group of tools and activities designed to identify and incorporate the knowledge and opinions of stakeholders in the management of projects and programmes especially grass root stakeholders such as water users.

PRA is a participatory process in which all community residents are involved in identifying, prioritizing, and analyzing problems, making action plans to address the problems, implementing, monitoring and evaluating the activities. The overall objective of PRA is mobilize and empower the community members by involving them in every step including collection and analysis of data, planning and implementation of activities.

A PRA process seeks to achieve the following specific objectives:

- To facilitate community members identify their problems, potentials, and opportunities and to prioritize them
- To enable community members analyze their problems, causes, and propose solutions
- To involve community members in the formulation of plans to solve the problems
- To legitimize the plans. Community members recognize and own the plans since they are a product of their efforts
- To aid the mobilization of resources from within and outside the village to implement the plans
- To encourage community members to monitor and evaluate the implementation of the plans
7.0 Basic principles/features of PRA

- **Involvement of all community members:** Remember the community is not homogenous. The main aspect of PRA is learning from, with and by members of the community. PARTICIPATION! The team should emphasize with the community members and be able to see their lives and their problems through the eyes of the community members. Involving community members can greatly facilitate interpretation, understanding and analysis of data.

- **Triangulation:** Examine the problem using at least three different tools of diagnosis such as mapping, transect, and semi structured interviews. This is a form of cross checking. Accuracy is achieved through diverse information and different kinds of sources of information. Triangulation is done in relation to composition of the team, sources of information (people, places etc) and mix of techniques.

- **The community members have a leadership role** in all phases. The facilitator plays a role of an advisor/facilitator only. Hand over the stick.

- **Development:** Planning process should eventually lead to both quantitative and qualitative improvement in the social, economic and political spheres.

- **Self Help:** Community members use their own expertise, resources, labour and organization to solve their problems. Sustainable development programmes must incorporate approaches that communities themselves can manage and control.

- **Recognition of local cultural values, institutions and local knowledge systems of the people in all attempts to address local problems.**

- **Mix of techniques:** The PRA techniques are taken from a wide range of possible tools which are tailored to the specific requirements of the study.

- **Optimal ignorance and appropriate imprecision:** The PRA team should avoid unnecessary detail, accuracy and over collection of data which is not really needed for the purpose of PRA. The team should ask itself what kind of information is required, for what purpose and how accurate it have to be?

- **Multidisciplinary team:** The members of the PRA team should have different skills and backgrounds. The different view points of team members will complement each other and will provide a more comprehensive picture.

- **Offsetting bias and being self critical:** The PRA team actively seeks out the poorest, women and other disadvantaged groups. The team should be careful to analyse its own biases in order to prevent PRA from being a development tourism and collecting rumours.

- **On the spot analysis:** learning takes place in the field and the analysis of the information gathered is an integral part of the field work.

8.0 Participatory Rural Appraisal Tools

There are a variety of tools that are used during the PRA exercise in order to elicit community participation in the generation of information. These tools are:

- **Spacial data:** These are tools concerned with understanding the space. They are powerful visual tools that provide at a glance a sense of location and differential relationships. Tools include community mapping, and transect.

- **Time related data:** Refers to study of changes that have taken place during the past such as in population, agricultural practices, crops, vegetation, water sources, climatic conditions etc. Time related data helps the team understand the nature and trend of such changes and how and why they happened. Tools include Timelines/historical profiles, trend lines and seasonal calendar.
9.0 Planning

A plan is the single most important output of a participatory assessment process. Planning translates objectives into activities/actions for implementation within a given time frame and budget. The plan also indicates resource requirements and indicators of achievement. A possible format of a plan is shown below:

### FORMAT OF A CATCHMENT WATER RESOURCES MANAGEMENT ACTION PLAN

<table>
<thead>
<tr>
<th>Objective</th>
<th>Activities</th>
<th>By who</th>
<th>Period</th>
<th>Resources</th>
<th>Indicators for achievement</th>
</tr>
</thead>
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A catchment plan will usually cover several issues including development priorities as agreed by catchment/community residents, proposed actions and requirements, duties and responsibilities for individuals and groups, work schedules etc. The formation of a catchment forum, a water user association or any other form of a water management institution should come as a result of implementing an action plan. It takes the skills of the facilitators to prompt the resources users and other stakeholders to see the formation of a water management institution as a priority need based on the information collected and analysis done jointly. Note also a catchment forum is not the only answer in addressing water resources management issues. The totality of actions in the plan forms a more comprehensive and integrated action within and beyond the catchment.

10.0 Conclusion

Participatory planning aims at facilitating learning and creating dialogue with stakeholders and getting necessary information from them through convenient communication methods. Participation by different stakeholders provides more information needed for planning than from a narrow group of users. More importantly, peoples support for development activities increases when they are actively part of the decision making process.
TOPIC 2: Stakeholder Participation in Integrated Water Resources Management

1. General objective:

To enable participants acquire knowledge, skills and appropriate attitudes essential for promotion of stakeholder participation in Water Resources Management.

2. Specific objectives

After completion of this course element participants will be able to:

- define the concept of participation in WRM
- describe the different levels of stakeholder participation
- describe the importance and principles of Stakeholder participation
- describe key step in the participatory process and can demonstrate them practically
- identify various stakeholders groups, categorize them and develop strategies to maximize stakeholder participation
- demonstrate knowledge, skills and attitudes essential in promoting stakeholder participation

3. Content

- Concept of participation
- Different levels of participation (Typologies of participation)
- Principles of participation
- Importance of stakeholder participation
- Key steps in the participatory process
- Stakeholder analysis and strategy development to maximize participation
- Techniques to enhance stakeholder participation

4. Methodology

- Buzz groups
- Brainstorming
- Short presentations/lecture
- Group discussion
- Group work

5. Means of evaluation

- Presentations from group discussions
- Contributions in group and plenary discussions
- Ability to answer questions
Stakeholder Participation in Integrated Water Resources Management

1.0 Introduction

A core principle of an IWRM approach to water management is stakeholder participation. Water is everyone’s business and for the success of water sector reforms it is important to know what the views and interests are of the stakeholders. People are central to the use and management of natural resources including water. People use water and other natural resources for their livelihood and other needs. People’s participation is therefore a pre-requisite to water resources management and development.

2.0 The concept of participation in water resources management

Participation is whereby community members organize themselves and define their needs, problems and issues, develop plans and strategies to address them, implement such plans, monitor and evaluate their plans. Put simply, participation is a process whereby stakeholders play an active role in decision making and in the consequent activities which affect them. In water governance participation means having a stake or share in decision making processes related to water resource management and development.

It is important to note that participation is learning by doing exercise, whereby plans are made, action is taken, results are studied, lessons learned and new plans and action take place.

2.1 Rationale for stakeholder participation in IWRM

(i) Science and technology alone can not solve conflicts over water resources, pollution and biodiversity problems. As competition for water intensifies it becomes more difficulty to find simple technical solutions to water related problems.

(ii) It is a strategy to deal with different views, opinions and interests over water resources

(iii) There are multiple uses of water and multiple users of water resources

(iv) It a common property resources

(v) Stakeholders in a catchment area need to collaborate to solve problems
3.0 Different levels of participation

Various scholars have written on types of participation. Many seem to converge on the following typology:

<table>
<thead>
<tr>
<th></th>
<th>PRETTY’S TYPOLOGY OF PARTICIPATION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Passive participation</td>
</tr>
<tr>
<td>2</td>
<td>Participation by information giving</td>
</tr>
<tr>
<td>3</td>
<td>Participation by consultation</td>
</tr>
<tr>
<td>4</td>
<td>Participation for material incentives</td>
</tr>
<tr>
<td>5</td>
<td>Functional participation</td>
</tr>
<tr>
<td>6</td>
<td>Interactive participation (partnership)</td>
</tr>
<tr>
<td>7</td>
<td>Self mobilization (control)</td>
</tr>
</tbody>
</table>


4.0 Importance of stakeholder participation in Water resources management

(i) It can lead to informed decision-making as stakeholders often possess a wealth of information which can benefit the project;
(ii) Stakeholders are the most affected by lack of water resources or poor management of water resources;
(iii) Consensus at early stages of the project can reduce the likelihood of conflicts which can harm the implementation and success of the project;
(iv) Stakeholder involvement contributes to the transparency of public and private actions, as these actions are monitored by the different stakeholders that are involved;
(v) The involvement of stakeholders can build trust between the government and civil society, which
can possibly lead to long-term collaborative relationships

(vi) Ownership
(vii) Empowerment is key to sustainable water resources management and development. Enable farmers make decisions that affect them both at their own level and at higher levels through their organizations
(viii) Sustainability
(ix) Effectiveness
(x) Efficiency
(xi) Stakeholder learn through participation

5.0 Pillars of participation

(i) Behavior and attitudes: listening, patience, respect, and willingness to learn are very important attributes
(ii) Methods: Use of appropriate tools and techniques is fundamental (community mapping, transects, seasonal calendars etc)
(iii) Emphasize learning through sharing (skills, knowledge and experience)
(iv) There has to be commitment to the process

6.0 Common principles of participation

(i) A defined methodology and systematic learning process: Focus should be on communal learning by the stakeholders
(ii) It is important to reflect the various interpretations of reality and solutions for problems by the different stakeholders
(iii) Group learning process: Understanding of the complexity of the word can only be done through group analysis and interaction
(iv) Commitment to equity: Empowering those who are marginalized, deprived, excluded often especially women
(v) Methods and approaches being used should as much as possible be designed and adapted to the local situation (context specific) preferably by the actors involved to enhance ownership
(vi) A culture of sharing of information, methods, food, fuel, field experience, between local people, government and NGOs should be promoted
(vii) The role of outsiders is to act as catalysts (facilitators) for local people (resource users and other stakeholders) to decide what to do with the information and analysis they generate. This requires a change in behavior and attitudes of outsiders.
(viii) The process of joint analysis and dialogue should help define changes which would bring about improvement and seek to motivate people take action

7.0 Avenues for participation – Stakeholder platforms

Stakeholder dialogue is central to improving water governance. Well informed stakeholders, who communicate with each other on a regular basis will find locally appropriate solutions to pressing water related problems. Strengthening communication between and among stakeholders enables them to take action that is more effective. For this to happen, a stakeholder platform is needed where stakeholders come together to analyse problems, agree on a common vision, resolve differences and agree on a coordinated action through an organized process.

Stakeholder dialogue involves creating time, space, and institutional platform for interaction with those with a stake in water resources and services within a defined area. Stakeholders involve water users,
those involved with governance, service providers, institutions involved with learning or knowledge management and NGO supporting communities.

**Key issues to remember in formulation of stakeholder forum**

(i) There is no blueprint on how to build a structure or stakeholder fora. The practical realities on the ground will determine whether a catchment, subcatchment organization or a water user association should be formed.

(ii) Democratic and equitable representation is key in the formation of water resources management institutions. Ensuring the active involvement of the poorest and most marginalized members of the community is fundamental.

(iii) The form of stakeholder forums can be decided by national guidelines where policies and legislations exist. It is appropriate however the form and structure of the forum is decided by stakeholders themselves. Similarly it is important for the responsible authority such as the Basin Water Offices to take a lead role in the building process.

(iv) The establishments of stakeholder forum calls for considerable effort from stakeholders and facilitators as stakeholders have a wide array of interests, motivations and different levels of power. In other words in building a stakeholder forum, it is important to understand the stakes of different stakeholders, power and relationships of different stakeholders.

(v) Roles and responsibilities of different stakeholders must be clearly defined and clarified as far as water resources management is concerned.

(vi) Building stakeholder forums/platforms is not easy and consensus is the exception.

(vii) Skilled facilitation is needed to achieve consensus and to ensure that communication is maintained between all stakeholders.
8.0 Key steps in the participatory process

(i) Selection of site (eg KC) and collaborators: Identify catchment/communities and collaborating institutions, NGOs or community organizations

(ii) Educate and build awareness/capacity building: Train collaborators/partners to mobilize peoples participation and sustainable approaches to water resources management.

(iii) Undertake community visioning with local leaders, government agencies and officials, women and youth

(iv) Assess the local situation using participatory methods (participatory appraisal methods). Make attempt to understand government plans and interventions

(v) Participatory planning: Assist communities to plan activities and validate plans with as many group as possible such as women, youth and indigenous people

(vi) Implement planned activities with partners. Involve as many local groups as possible. Ensure ownership of the project is transferred to the community

(vii) Regularly monitor activities and evaluate successes and weaknesses

9.0 Stakeholder analysis

Effective stakeholder dialogue and participation depends on having appropriate stakeholders in the stakeholder forum. These are the people who need to be engaged if water governance is to improve. It is essential to identify these stakeholders and to discover their stake in water management. Stakeholder analysis is a way to identify stakeholders.

Why is stakeholder analysis important in water resources management?

- there are many stakeholders at different levels
- there are multiple views, interests, and strategies
- there exists multiple uses and users of resources
- changes in policies or programmes affect each stakeholder in different ways. Projects do affect stakeholders differently

1.1 Who is a Stakeholder

Stakeholders are persons, groups or institutions with interests in a project, programme, or an intervention. Stakeholders are all those who need to be considered in achieving project goals and whose participation and support are crucial to its success. You can also define a stakeholder as an agency, organization, group or individual who has a (direct or indirect) interest/stake in the programme, or who affects or is affected positively or negatively by the implementation and outcome of it.

1.2 Stakeholder analysis

Stakeholder analysis is the identification of a project’s or programme key stakeholders, an assessment of their interests, and the ways in which these interests affect project viability. It is a way of understanding a system through its stakeholders. It looks at their interest, objectives, power and relationships. Stakeholder analysis will also show existing patterns of interaction between stakeholders. It will show conflicts and can help find ways to resolve them. By understanding the system, it is possible to facilitate change.

9.3 Categories of stakeholders

Stakeholders can be divided into two very broad groups:

- Primary stakeholders are those who are ultimately affected, either positively or negatively (i.e. who expect to benefit from or be adversely affected by the intervention). They are the immediate communities of interest
• Secondary stakeholders: are intermediaries in the process of delivering support to primary stakeholders. They can be divided into funding, implementing, monitoring and advocacy organizations, or simply governmental, NGO and private sector organizations.

9.4 Why do we need stakeholder analysis?

• identify and define the characteristics of key stakeholders
• to empirically discover existing patterns of interactions
• draw out the interest of stakeholders in relation to the problems which the project is seeking to address (at the identification stage) or the purpose of the project (once it has started
• to mobilize key stakeholders and to build up a common awareness
• to mobilize stakeholders and to analyze the stakeholder’s needs and interest, objectives, linkages and interactions, etc.
• to target interventions and approaches
• as a tool to predict and/or manage conflicts (To balance conflicting interests and to assure commitment/participation in implementation)
• assess the manner in which they might affect or be affected by the programme/project outcome;

9.5 Steps in conducting stakeholder analysis

Step 1: Identification of major stakeholder groups:
Deciding who to involve in stakeholder analysis can be difficult. In practice a first list of key stakeholders can be prepared by the facilitation and capacity development team based on informal discussion. Other stakeholder will be identified in subsequent activities.

Stakeholder may be people living near proposed actions, people who use potentially impacted resources, people who have expressed interest on this or similar issues, local activists, local community groups, non-profit groups with associated interests, potentially responsible parties, local industries/businesses, farmers, tourism, educational institutions, elected officials, government agencies and the media.

Step 2: Determining interests, importance and influence

• Draw out key interests for each stakeholder group in the initial list.
• Next, assess the influence and importance of each stakeholder on the project.

Step 3: Establishing Strategies for involvement

• Plan strategies for approaching and involving each person or group.
• There is no need to involve reluctant stakeholder, and stakeholders may change their level of involvement as the process continues.
• Partnerships should be flexible and designed to grow.

Conclusion

Effective water governance requires an environment that promotes decentralisation. Although there is no single model for effective water governance it is fundamental that decision making should take place within the framework of IWRM, resource users and other stakeholders should have a voice in management processes either directly or through organisations representing their interests, decision making processes should be transparent and water management at all levels should be aligned with poverty reduction strategies.
MODULE 1: INTEGRATED WATER RESOURCES MANAGEMENT (IWRM)
TOPIC 3: Gender Participation In Water Resources Management And Development

(i) Objective:
To enable facilitators familiarize and demonstrate the importance of mainstreaming gender issues in planning, implementation, development and management of water resources in the catchment.

(ii) Specific objectives
At the end of this lesson, catchment facilitators will be able to:
- define concepts used in gender planning
- demonstrate understanding and application of gender analysis tools in planning for water resources
- identify possible improvements and strategies to involve women and men in the water resources management activities in to ensure participation, equitability, and sustainability of water resources management and development interventions in the catchment

(iii) Training contents
- Definitions of concepts and tools used in gender planning
- Gender mainstreaming and implications for sustainable water resources management
- Describe gender analysis and its importance
- Key ideas in gender and tools for gender analysis
- The process of integrating gender into WRM
- Gender issues for Water resources management
- Importance of women participation in water resources management
- Strategies to address gender issues in water resources management

(iv) Methodology
- Short presentations
- Questions and answer (problem posing)
- brainstorming
- Focus groups and plenary presentations
- Group assignments/discussions

(v) Evaluation
- Ability of participants to answer questions and contribute during discussions
- Ability to use various tools for gender analysis tools
- Findings from group discussions/and focus groups
1.0 Introduction:

Experience in many African countries show that fundamental inequalities exist between men and women regarding their participation in water resources management activities. The inequalities in the participation are due to differences in the access and control over the resources, as well as division of roles and responsibilities and opportunities available to men and women. Most often women are in a disadvantaged position. In most countries in sub-Saharan Africa, agriculture is the lifeline of the economy and women are key farmers, food producers and natural-resource managers. In the region, women produce 60-80% of domestically produced food, provide nearly half the farm labour, and shoulder over 90% of the domestic responsibilities. Women work almost twice as many hours as men. Nearly all rural women (96%) work on family farms, providing 75% of the farm labour and 60% of farm-derived income.

Despite these contributions, women face major constraints in terms of time, access to and control over resources, and the benefits they receive. Women typically have much less contact with extension agents, control very few agricultural technologies and farm inputs, and rarely take part in making decisions within the household or in institutions. To improve this situation gender mainstreaming/gender sensitive planning in development activities is essential.

2.0 Concepts used in gender planning

2.1 Sex

Sex portrays biological differences that make up male and females. These features cannot change under normal circumstances. For example, a female and male sex organ is a key characteristic that defines sex. It is universal congenital, unchanging and unvarying.

2.2 Sex roles

Sex roles are biological functions for which a necessary qualification is to belong to one particular sex category. For example, pregnancy and breast-feeding are female sex role because only members of the female sex can bear children. Such sex roles cannot change.

2.3 Gender

The term refers to social aspects of being male or female. Gender is socially defined. This term is used to analyze the roles, responsibilities, constraints and opportunities of men and women in development.

2.4 Gender roles.

These are different tasks, responsibilities, and expectations the society has defined and allocated to men and women, girls and boys. They are not necessarily determined by biological makeup, and therefore they can change with time, and differ from place to place. For example, in many African communities herding is the work of boys and men. But this has changed with the introduction of dairying and zero-grazing, where women play a key role. Because gender is specific to a given culture and time, gender analysis is necessary for every community and project.

Gender planning recognizes that in most societies, low-income women have a triple role. Women are involved in reproductive, productivity and community managing activities, while men are primarily involved in productive and community politics activities.
(i) **Productive work**

Work done by both women and men for pay in cash or kind. It includes both market production with actual use and monetary value, but also potential exchange value. It covers a wide range of activities including farming and business enterprises.

(ii) **Reproductive work**

This is work that supports the welfare and maintenance of the family. It includes child care, fetching water and fuel wood, cooking, washing, nursing, and other household tasks. Reproductive work has no monetary value and is difficult to measure. It is often not considered to be “work”, yet it takes women many hours each day to do. It is required to guarantee the maintenance and reproduction of the labour forces. It includes not only biological reproduction but also the care and maintenance of the workforce (husband and working children) and the future workforce (infants and school-going children).

(iii) **Community work:**

This is work that goes towards the provision of community services and the maintenance of the social system. Activities under this category include building schools, maintaining roads, and building soil-conservation structures, attending committee meetings, providing support during bereavement and maintenance of scarce resources of collective consumption, such as water and health care. This is voluntary unpaid work, undertaken in ‘free’ time.
(iv) Community politics role:
Activities undertaken primarily by men at the community level organizing at the formal political level, within the framework of national politics. This is generally paid work, either directly or indirectly, through status or power

2.5 Gender needs
Women and men have different needs, firstly, because they have different roles in society, and secondly, because of the relations of subordinate position of women to men. It is useful to distinguish between two types of gender needs.

(i) Practical Gender needs (PGNs):
These are associated with living conditions or material state. These are needs related to food, fuel, and water, the health and education of their children and opportunities for increased income. These needs can often be met through short-term development projects.

(ii) Strategic Gender needs (SGNs):
These refer to a particular group’s subordinate position relative to the social and economic standing of the advantaged. It is measured, for example, by gender disparities in wages and unemployment opportunities, by the poor’s lack of access to participation in democratic processes and decision-making, and by women’s vulnerability to poverty and violence

2.6 Gender balance
This involves intent of ensuring that people of both gender enjoy equal or proportional opportunities. For example, having equal number of male and female in the catchment water resources management committee.

2.7 Gender Equity
Just treatment, balanced recognition and appreciation of both women's and men are potential in community and other spheres.

2.8 Gender Neutral
Planning for women, men boys and girls are taken as homogenous/not taking into consideration as being different in needs and roles. For example, gender neutral planning does not show specifically how it will address gender based needs and issues. Such a plan will refer to community as if it were homogeneous.

2.9 Gender relations
Refers to how male and female members relate and interact with each other in the context of social, political, economic and cultural aspects in society. These gender relations are normally determined through the socialization process and reinforced through the individual, the family and community based institutions, cultures and ideologies.
3.0 Gender mainstreaming and implications for sustainable water resources management

Is a process whereby gender issues and male/female specific issues/concerns are incorporated in all development processes. The key mainstream aspects of development process are policy, legal system, planning, and political system. Gender mainstreaming aims at ensuring equality in development and thus enhance sustainability. As far water resources management and development is concerned gender mainstreaming is about taking into consideration the gender specific roles of men and women, needs, interests and opportunities regarding water resources. Ignoring gender needs and interests reduces the level of participation of all segments of the community, thus jeopardizing any development efforts. Some of the implications of this for development efforts are listed below.

(i) Heavy workload for women

Time is a critical input in development work. Men and women tend to take on different tasks in the family and society. Because women spend the larger part of their day on “reproductive” work, they are less able to take on the “productive” work tasks needed for development activities.

- Negotiating to ensure a better distribution of work among family members (for example to persuade men to take on some of the workload normally done by women).

- Providing basic services (such as a water supply) to reduce the amount of time needed for such tasks as fetching water.

- Introducing appropriate technologies (such as tools for weeding) to improve the efficiency of production.
(ii) Lack of necessary inputs and tools
The lack of necessary inputs (e.g., improved seeds, fertilizers) and farm tools and implements (e.g., weeder, seeder) can slow down farm operations. This can be attributed to poverty, but is also a result of lack of control over benefits from the farm. Because they have different responsibilities, men and women might well decide to invest in different things: the man in fertilizer for “his” maize, for example; the woman in seeds for “her” plot of beans. But because the men make most of the investment decisions, the women’s preferences may not get put into effect.

(iii) Extension services
Agricultural extension services are often directed to men, because it is men who are normally deemed to be the heads of households. The assumption is that once the information reaches the head of the household, it will automatically be shared with the rest of the household. However, this is not always true, and often women have little technical information necessary to improve their farm and manage water resources. For activities in which women are the key actors, information is a must if they are to participate.

4.0 Gender analysis
Gender analysis is a tool to assist in strengthening development planning and implementation; to make projects and programmes more efficient and relevant. Overlooking gender analysis and the resulting lack of effective strategies has caused many projects and programmes to fail or to bring marginal impact and benefits, particularly to women. Those, who actually should be involved in activities which a project or programme aims to address, have often been excluded.

4.1 Why is gender analysis important
- Improves knowledge and understanding about people, women and men, youth within the sector and the locality of a project. This helps in formulating relevant approaches, which address real problems and obstacles to development (water resources management and development), and thereby improves the quality of projects

- Produces relevant and crucial insight into the differences in the roles, responsibilities and access to, and control over resource of women and men. It identifies the relationships between women and men and their spheres of authority. Based on the findings project planners and implementers will be able to formulate, and consider optional project strategies, and to fully incorporate the gender dimension in projects and programmes.

- Helps in looking at the roles and responsibilities of women and men without stereotypes assumptions. Men’s roles, rights, and responsibilities should be not overlooked with the pretext that they are known. Gender analysis can reveal essential information.

- Generally speaking, uncovers information about the disadvantaged position of women. Women have less education, less authority, less access to land, credit and training than to do men. However, gender analysis collects information on both women and men.

- Is particularly helpful in answering the question: How are the project objectives possible to reach?

Gender analysis should be carried out at the earliest possible point in the project or programme planning cycle as it can fundamentally affect the entire project concept and the structure.
4.3 Key ideas in gender analysis

The tools of gender analysis focus on:

(i) **The division of labour.** Who does what type of work? Work is divided into three broad types: reproductive, productive and community (described below).

(ii) **Access to and control over resources.** Who can use the resources such as land, trees and water? Who controls what happens to them?

“Access” means the ability of an individual to get to and use a particular resource. For example, women may have access to a forest (they can collect fuel wood there) even though they do not own it. The rights of the user are few, and are often limited only to improving the resource. If the user has only access to the resource but no control over it, he or she has little security, as the person controlling the resource may take it away at any time. The user therefore has no incentive to make long-term investments in it, like planting trees. Access to resources without control over them can be a barrier to development.

“Control” over resources means power that goes beyond simply use. It means power in both management and decision-making. Someone who controls a piece of land can rent it out to someone else, cut down the trees and plant crops on it, or even sell it. Control gives security to the user, so promotes long-term investment.

(iii) **Benefits from the work done.** Who gets the income (in whatever form) from the resources and the work?

Tools used in the analysis gender issues include but not are not limited to Gender Daily Calendar, Profile of productive, Profile, Profiles of access to and control over resources, Profiles of quantitative and qualitative participation, The Gender – disaggregated activity Calendar)

- A gender daily calendar analyses the different day to day activities performed by men and women
- An activity profile reveals activities men and women do in the sphere of reproductive work, productive work and community work
- Access and control profile analyse whether men and women have access to the resources necessary to undertake the activities listed, derive benefits from and whether they have control over them.

5.0 The process of integrating gender into WRM

Ignoring gender issues often leads to unwanted consequences (usually for women and youth) and failed development efforts. Gender should therefore be considered in all aspects of development activities especially in water resources management and development like those being pursued by PBWO, IUCN and SNV. By asking some simple but appropriate questions, it is possible to understand water related gender issues from the start.

(i) **Needs assessment (community diagnosis)**

- Identify community activities and determine who does them: men, women, boys, girls (and older men and women). This helps to assess the possible participation of everyone.
- Establish the resources available within the community and who has access and control over them: men, women, boys, and girls.
• Find out how decisions are made in the community and in households, and the roles of men, women, boys and girls in each.

• Articulate (state clearly) the development needs, constraints and opportunities for men, women and children.

• Assess the possible impact of the project on men, women and children.

(ii) Planning

• Ensure that the concerns and constraints recognized during the needs assessment are addressed, using stated criteria and procedures. Develop strategies that are responsive to the needs of both men and women.

• Develop projects that respond to the needs of men, women, boys and girls.

(iii) Implementation

• Ensure the participation of those with different types of workloads. Conduct a time-use analysis exercise to find out the best times and days for women, for instance, to participate in project activities such as training and meetings.

• Ensure the meaningful representation of both men and women in making decisions.

(iv) Monitoring and evaluation

• Develop indicators of the project performance for men, women, boys and girls. Adjust the project activities if necessary to ensure that the intended beneficiaries are reached, and to avoid unwanted effects on particular groups. Involve all stakeholders in monitoring the project performance, through record-keeping, review meetings, etc.

6.0 Conclusion

Without gender analysis there is:

**NO SUSTAINABILITY** because men are subjected to tasks/activities or trained to use improved methods for a job they never do.

**NO EQUITY** because women, are not involved in project interventions such as training or decision making processes

**NO EFFECTIVENESS** because water resources management problems such as destruction of water sources, environmental degradation, pollution, conflicts, financial mismanagement, water scarcity and lack of representation of women are not addressed
References


4. PRA Programme, (1995) PRA Field handbook for Participatory Rural Appraisal Practitioners, Egerton University, Kenya


APPENDIX 1

Participatory Rural Appraisal Field Guidelines

1. Spatial data

1.1 RESOURCE MAPPING (DIAGRAMMING OR MODELING)

A map is a representation of an area in space in form of a sketch diagram, plan or a precise scaled down drawing of an area. It shows geographical boundaries, roads, water resources, farms, houses, wells, schools, buildings, social points, and other physical and natural resources of a village, subcatchment. Maps can be prepared using stones, small sticks, leaves, plants, seeds, or any other local materials available in the village.

Procedure:

Before

Decide what sort of a map is to be drawn and for what purpose.
Engage the villagers in a discussion that relates the aspects that you wish to be indicated on the map e.g. what is the extent of the village where do children go for their primary school education. Where do the villagers get (collect) water or wood fuel from etc?

During

- Identify participants, men and women who know their area very well. Where possible mix ages (young, old, and middle aged). Ask them to feel free to participate in drawing the map and tell them that drawing is very easy and that there is nothing to fear.
- Identify an area suitable for drawing the map (open space/ground).
- Ask the villagers to indicate the extent of the village, the location of the primary school and the sources of water etc. on a map. They can use a suitable place on the ground or on a flip chart, using sticks and fingers to draw on the ground and felt pens to draw on paper.
- Allow them to draw the map in their own way and don't suggest. Let them use their own symbols to represent various different features e.g. geographical boundaries, roads, water resources, wells, houses, etc.
- Encourage participation of every villager. If the number is too large, see whether they can form two groups with each group drawing their map and then comparing the two maps.
- Ask one of the villagers to explain to the others the things they have included in the drawing and seek consensus.
- Ask them to indicate the direction the sun rises from thus indicating the east-side of the map.
- Triangulate the information indicated in the map. Ask some of the villagers to point out his/her house, school, church, etc. on the map.
After
- Ask one of the villagers to copy the map (if it was on the ground) in a newsprint or flip chart paper.
- It might save time at the same time maintain originality if the map was transferred directly to A4 paper.
- If possible, taken a couple of snaps of the map/model drawn on the ground.
- Thank all the villagers.

2. **Transect walk**

Transect walk is a simple walk across the study area by members of the PRA team accompanied by community residents/resource persons.

**Purpose:**
The aim of the Transect walk is to acquire a better understanding of various aspects on land use, community settlement patterns, and sources of various resources, soil types etc. that the investigators wish to collect. The observed major problems and existing potential opportunities are also recorded under each specific zone along the Transect.

**Procedure:**
Members of the PRA team can conduct a Transect walk through the study area by following the under listed steps:

**Before**
- The PRA team reviews the study area on the map or by standing at a good vantage point and decides the best direction to follow which gives the greatest variation of the aspects to be investigated.
- The route of the Transect walk can be chosen from the village map drawn by the villagers.
- Find out from the resource persons most suitable route to follow to capture most aspects to be investigated and mark the route on the map.
- The transect is done jointly by PRA team and community members.
- Distribute various responsibilities for data collection among the members of the PRA team participating in the Transect walk.

**During**
- Using the note book write down all the aspects to be investigated on the left-hand column of one page of the notebook.
- The observation made about these aspects should be recorded in the appropriate column under the corresponding zone on the Transect line. These zones are determined through the observed changes on the land topography, soil types, settlement patterns etc.
- Book down all important details of the decided aspects or parameters as you come across and get as much information as possible on these aspects from the villagers.
- Drawn sketched and collect specimens of any new findings e.g. plant, weeds, farm layout etc.
- Talk to elderly villagers you come across and find out indigenous practices on many of their routine activities.
- When it is necessary to deviate from the original route to capture some details from an offset area do it.
- Travel slowly and patiently while discussing with the villagers - **use the six helpers when, how, what, where, why and who, to get explanations of various issues as found along the Transact line.**
- Use the opportunity to conduct some semi-structured interviews to some people met during the Transect walk.
- Always try to follow the footpaths and across the agricultural lands to get more useful observations.

After
- After the completion of the Transect walk sit down at a suitable place with villagers to have discussion and recording of information and data collected.
- Prepare an illustration diagram of the Transect walk using the information already gathered. Get the information cross-checked by other villagers.
- Transect walk is useful for identification of land uses, potential sites for wells and identification of places where soil erosion takes place within the village.
- Generally a Transect walk in PRA is done after drawing the physical map of the village.

**TRANSECT DIAGRAM**

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<thead>
<tr>
<th>Item/Zone</th>
<th>Zone A</th>
<th>Zone B</th>
<th>Zone C</th>
<th>Zone D</th>
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<td>Forest Resources</td>
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<td>Water sources</td>
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<td>Economic activities</td>
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<td>Settlements</td>
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<td>Irrigation Activities</td>
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<td>Problems/Issues</td>
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<td>Opportunities</td>
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**3. Time related data**

This refers to a study of changes that have taken place during the past e.g. in population, number of houses, agricultural practices, crops, vegetation, water sources, employment, climatic conditions, etc.

**Purpose**

The time related data helps the PRA team to understand the nature and trend of such changes and how and why they happened. This technique is useful for appraising the feasibility of some of the development activities expected to be carried out in the future with respect to real changes and trends in important parameters. Time related data sources are time lines, trends, and seasonal calendars.

**3.1 HISTORICAL PROFILE**

This is the life history of a community as far back as the community can remember. It is a chronological order of the events the community has witnessed since they settled in the area or as far back as they can remember.
Purpose
The aim of a historical profile of a community is to:

a) Get a list of events that the community feels they affected the community’s life.
b) To find out how the community was able to cope up with those events.
c) To assist the communities to reflect back and enlist some of their failure and successes.
d) To find out from the community some of the reasons that have contributed to their cultural beliefs, values and behaviour.
e) Historical profile helps in building the future strategies.

Procedure

Before
(i) Ask the members of the community to give the PRA team some elderly members who have wide
information about the past. These should include both men and women.
(ii) Identify a suitable place to hold the discussion. This should be a quit place and without lots of
interruptions.
(iii) During the discussions the PRA team proceeds as follows
• Start with informal discussion to set the climate
• Find out from the elderly members if they can remember the time when they settled in the area,
or the earliest events they can recall.
• Starting from the year they settled in the area or the earliest years they can clearly remember
the happenings, ask them to also give you the other event that happened five years later. It is
easy to collect information on events that happened in aspects for five years, up to the present
time.
• Always try to get clarification on how the events affected the community and what coping
strategy they adopted.
• List the years with their corresponding events in chronological order. Historical events can be
topical. In this case the PRA team obtains information on events of a particulars subject e.g.
water resources management and development problems and finding out how the community
was able to cope up with the situation.

3.2 SEASONAL CALENDARS
This is a graph or diagram showing regular patterns or cycles that occur within a given community.

Purpose
The calendar shows the level of various activities month by month in a normal year. It indicates whether
there are certain problems that recur at set periods in the year. It can therefore assist in determining
availability of water, pasture, labour and appropriate timing of project activities.

Procedure

Before
• Begin the discussion with an appropriate topic that relates to seasonality e.g. rainfall, economic and
social activities, disease outbreaks, food availability etc.
• Try to ensure that there is sufficient diversity in the group in terms of experience, age, sex, etc.
• Decide whether to work first on the ground using sticks and stones, etc. or go straight to a flip chart
paper.
During
- Draw the x-axis and y-axis lines.
- Mark out 12 months at the bottom of the chart (x-axis) at equal intervals.
- Ask the farmers to show the month that has the highest amount and the month with the least.
- Ask the farmers to show these variations on a convenient surface e.g. on the ground or on newsprint, using any suitable locally available materials e.g. sticks, seeds, stones, etc.
- Remind the group they should consider a normal year.
- Ask such questions as when do you expect rains, when are crops planted or harvested, etc.
- Once the seasonal analysis chart has been completed, get other villagers comment on it and at the same time get it triangulated.
- Observe the changes and variations and study how they fluctuate throughout the year and how villagers adjust their life-style accordingly.
- Ask the villagers to transfer the chart that was prepared on the floor/ground on A4 paper. The number of seeds/stones used to indicate the variation of different times may be drawn on the chart using different colours for a large group presentation. The points at the tip of each pile can be marked and joined into a curve.
- Analyse the graphs by looking for connections or relationships between different patterns and also problems and opportunities.

3.3 TREND LINES
Trend lines are diagrammatic representation of variations of a particular aspect or condition that the PRA team wishes to investigate. The variations of these aspects are investigated for the number of years that the community can remember.

Purpose
Trend lines enable the PRA team to understand the changes that have taken place over the years and how and why they happened. The team is also able to understand the trend of relevant variables which can help to forecast the future trends for envisaged changes.

Procedure

Before
- Ensure that there is a suitable surface to sketch out the changes and trends. This could be on the ground, newsprint paper or chalkboard. Ensure there are the necessary markers, sticks or chalk.
- Decide the topic to be discussed e.g. rainfall, population growth, soil erosion, food availability, education, land productivity, etc.
- Ask the community to give the PRA team elderly villagers as well as young villagers who have a lot of knowledge on past and present events.
- Have these villagers sit together at a predetermined site with a suitable surface for sketching.

During
- Choosing one topic at a time, ask the villagers to indicate which year had the highest amount and the year with the least. The relative amount can be represented by such symbols as sticks or heaps of stones etc.
- The comparison of other years is achieved by placing a similar symbol but while comparing it with the year with the highest and the lowest amount.
• Where an abrupt change occurs, find out from the villagers what caused abrupt change. Find out from the villagers what they could have done to ensure that the trend does not move in the negative direction.
• Ask the villagers what they foresee as the future trend on that subject.
• Ask the villagers to join the points to form a curve reflecting changes and trends.
• Have the chart transferred on an A4 paper.

4. Social related data

Under this category of the PRA tools included those data that assist the PRA team to understand how the community interacts with the various local institutions that offer or are supposed to offer their services to the community. Social related data will also give some insights on how and from where the community generates its income and how the same income is spent. A PRA team may also use the social related data to get insight on the community’s social classes and the community’s criteria for social classification. Also included in social related data is information that indicates what the services and goods the community obtain from outside their village and what goods and services they offer to outsiders.

Some of the common tools used for collecting social related data include the following:
• Institutional Set-up (Venn Diagram)
• Gender Daily Calendar

4.1 Semi-structured Interviews (SSIs)

This is a guide interview where only some of the topics are predetermined and more questions arise during the interview. The interview is informal and non-conventional but follows generally well determined pattern. A written or mental checklist is used and the PRA team open ended questions and probes topics as they arise. The output is usually in the form of hypothesis and propositions.

Procedure

Before
• Prepare a semi-structured questionnaire as a guide based on the topics under investigation prior to the visit.
• Enlist with the help of local residents in identifying the interview sample.
• Give advance warning about your visit and choose the suitable time.

During
• Be sure to identify yourself and the purpose of the interview. Start the discussion with acceptable greetings.
• Using the questionnaire for guidance, proceed in an open and informal style, encouraging the respondent to elaborate on points of interest and relevance.
• Assure the respondent of absolute confidentiality. Names are only recorded if the respondent has no objection.
• Establish rapport, follow the local protocol, make people comfortable.
• Use clarifying questions to focus the interview, for example “can you tell me/us a bit more about that?”
• Give encouragement and positive feedback during the interview.
• Be patient and listen carefully
• Don’t rely entirely on the questionnaire. Allow new questions and directions to emerge.
• Don’t ask challenging or threatening questions.
• Take the necessary notes.
• Be nice and friendly
• Build future collaboration
• Do not interrupt each other
• Encourage participation
• Information can also be gathered through critical observation and use of indicators such as permanent houses, donkey or ox carts, bicycles, radios, tin roof houses, water tanks are signs of wealth.
• If a respondent doesn’t want to answer a particular question, move on but note the circumstances or observations of the respondent.
• If the respondent doesn’t wish to participate in the process at all, thank him or her and find another household to interview.

Questions
Prepare questions on areas of interest Eg Water resources, land, pollution, water governance, gender etc

4.2 Livelihood Mapping
This is the process of identifying the basic resources used by the community. It involves identification of all the basic life support resources of the community and their sources within or outside the community.

Purpose
To understand the resources the community considers important in meeting their basic needs. It also helps in finding out whether they are self-sufficient in those resources or not. The exercise can be done in small groups (of separate men and women) or in large groups of both men and women.
Procedure

- Ask the community to list down on a large sheet of paper the resources they consider important for their livelihood. This listing can also extend to secondary needs if the community insists.
- Once the listing is exhausted the final list of each of the resources agreed upon is written on a card (or piece of paper of equal size).
- Draw a large circle representing the community boundary. The small pieces of cards/papers containing the names of the resources listed are then placed beside this ‘map’ of the community.
- All the resources that are available within the community are placed inside the circle.
- All resources that are partially available are placed on the borderline of the circle.
- The resources that are completely unavailable within the community are placed outside the circle.

4.3 Institutional analysis (Venn Diagramming or Chapati)

The Venn diagram is necessary to help the PRA team to understand the formal and informal institutions in the study area and their extents of overlap in decision making and co-operation. The diagram highlights gaps that exist between different institutions and the village. Such diagrams could also be used to identify the locally perceived role the outside agencies play in the village and their perceived shortcoming or failures.

Procedure

Before

- Select a suitable place and set the climate for frank discussion.
- Invite people from all sections of the villagers to participate in the discussion.

During

- Ask the villagers to list the institutions that give service or are expected to give service to the village.
- Find out from the villagers the order of these institutions in terms of their capacity based on their resources e.g. personnel and supporting facilities. Let the villagers indicate the order by using circles where a large circle represents a high capacity and a small circle to represent a low capacity and so on.
- Ask the villagers to draw a large circle on a convenient surface. This large circle will represent their village.
- Ask the villagers to place each institution circle at the appropriate place relative to the centre of the big village circle such that, if an institution often interacts with the villagers in their development efforts, that institution is placed at the central place of the village circle. If on the other hand such an institution partly interacts with the community then it is placed some distance away from the centre of the circle and so on. The village circle will indicate the impact the institution makes to the village through their interactions.
- Institution that collaborate with others in working with the community will be represented in the chart by party overlapping their circles. The amount of overlap will again represent the level of their collaboration.
- When the community has reached a consensus on where each of the institutions is to be placed relative to the village circle, ask them to give reason as to why they did so. For example. Let the villagers say and list what they would have liked such institutions to do as to quality for a central place in the village circle.
After

- Try to understand the relationship of these organisations with the villages from the diagram. For example, a bigger paper circle marked “electricity” placed at a distance from the village would mean that the villagers are aware how useful electricity would be in their life, but its not available in the.
- Record the findings.
- Thank all participating villagers for sharing information.

1.6 Gender Daily Calendar

Gender is defined as the division of people based on sexes e.g. male, female, girl, boy, etc. It is on these gender lines that most activities in traditional societies are managed. Therefore PRA recognises the importance of gender analysis in any rural development effort. This is done by ensuring that gender biases are as far removed as possible and that specific “gendered” data are awarded due importance e.g. addressing specific women needs such as “pre-and antenatal facilities” other than the broaded community needs like “health facilities”.

Purpose:
This exercise seeks to establish the social and economic activities carried out by men, women, boys and girls from the beginning of the day to the end in a 24-hour clock.

Procedure:

Before

- Divide the community members into two groups men and women. The boys can join men while girls can join women. You may have separate youth groups of boys and girls if need be.
- Let each group have a suitable place they can discuss their daily activities without interference.

During

- On newsprint or flip chart papers, let each group (men and women) list down what they do from the time they wake up in the morning to when they go to sleep in the evening.

After

- Let each group present in the plenary and discuss the outcome in terms of lessons learnt.

NOTE

Cards of different diameters could be used to represent the village and the institutions. Names of the institutions could be written on the appropriate cards.

NOTE

Gender issues are sensitive among some communities, they may react negatively if outsiders seem to have come to upset traditional norms. The PRA team facilitates such discussions through a neutral process and not with an ‘activist approach’ attitude.
4 Organisation Of Problems And Opportunities

The primary goal of PRA exercise is to initiate dialogues and interaction between the community and the PRA team so that a Community Action Plan can be prepared.

Purpose:
The purpose of this exercise is to organize the disintegrated information gathered into manageable structure for the community to assess and rank.

Procedure:

Before

- Consider the issues that the community has identified by reviewing all the sources of data collected. All team members to ensure a comprehensive compilation of problems should discuss these.

During

- Develop a list of the problems faced by the community. The PRA team, the technical officers from the area and the community should be involved in preparing this list.
- The problems should be listed and complied at random, without any notion of their importance.
- The list can be refined and amended together with the community.
- Taking each problem at a time, identify its root causes, the community’s coping strategies and the potential options (opportunities) of solving the problem.

<table>
<thead>
<tr>
<th>Problems</th>
<th>Causes</th>
<th>Coping Strategies</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water scarcity</td>
<td>Low water table</td>
<td>Re-digging of old wells</td>
<td>Tapping water from the river 8km away.</td>
</tr>
<tr>
<td></td>
<td>Low soil retention</td>
<td>Catchment tank at school</td>
<td>Rain water harvesting techniques</td>
</tr>
<tr>
<td></td>
<td>Long time to collect</td>
<td></td>
<td>Rehabilitation of 2 wells</td>
</tr>
<tr>
<td></td>
<td>Few wells-only 2 working</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Health</td>
<td>No health facility</td>
<td>Walk long distances to health facility.</td>
<td>Strengthening PHC’s services.</td>
</tr>
<tr>
<td></td>
<td>Poor environmental sanitation</td>
<td>PHC services just introduced.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stagnant water and mosquito.</td>
<td>Village health post site identified.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of organised basic health education</td>
<td>PHC committee established.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and environmental sanitation programme.</td>
<td>Use of local medicine.</td>
<td></td>
</tr>
</tbody>
</table>

NOTE
In most cases the listing of problems is by sectors such as soil erosion, water availability, diseases, declining productivity, deforestation, etc. the PRA team should however guide the community to ensure that gender issues are not overlooked. The opportunities that address two or more problem can be listed more than once.

List of problems and opportunities is a prerequisite for the preparation of the Community Action Plan (CAP). Analysis of problems and opportunities can be organized in the matrix below:
5. Ranking of problems and opportunities

Once the community completes the listing of problems and opportunities, the next step is to decide which problems present the most pressing constrains to development in the area. A systematic method must be devised to do that. Similarly each problem may have several opportunities to address it. Some opportunities are better and easier to implement than others are. Criteria are needed in order to be able to decide which the best opportunity is.

5.1 Pair-wise or Preference Matrix

This tool is also used to assess the villager’s preference of items or practices on paired comparison. These items could be problems, opportunities, seed types, tree species, crops, etc.

**Purpose**

To give the order of preference of items or practices for example when the farmers have the problems/opportunities as shown below. It may be necessary to find out the average preference using the Pair-wise ranking method:

**Problems**

1. Water scarcity
2. Low level of education
3. Inadequate agricultural inputs
4. Low income
5. Low food production
6. Poor health

**Procedure:**

- Develop a matrix or grid with as many columns as number of items to be ranked.
- List these problems in each column in the “X”-axis.
- Also list the same problems on each column on the “Y”-axis as shown on the table below.
- Block out those squares that are not necessary since it will be either comparing the same items or a repetition on the same pair.
- At the inter-section of columns for different problems, indicate the preferred problem.
- Count the number of items each problem is preferred and this gives you the score.
- Record the score at the extreme end column and rank the items. The item with the highest score ranks first, and so on. In case of a tie in score, the villagers can vote.

5.2 Matrix Scoring/Ranking

Matrix scoring is one of the effective techniques of PRA that helps to rank problems or opportunities based on locally accepted criteria against which the scoring is done. This exercise gives an opportunity to outsiders in understanding very clearly the priorities of villagers in selecting any crop variety, vegetables, tree species, breed of livestock, water projects, etc.

The discussion of villagers that goes on during this exercise generally provides a wide range of information to outsiders in clearly understanding the various factors/criteria that govern in selection of any particular item by the villager. Their criteria provide outsiders with an opportunity to look at things from a new angle and perspective.
**Procedure:**

**Before**
- Have an initial discussion with the interested villagers and set the climate for the discussion and begin.
- Keep sufficient number of bold seeds, coloured makers, paper, chalks etc. for the exercise.
- It always convenient for the villagers if the exercise is started on the floor or ground.
- Ensure that you are asking the right group of villagers to do the matrix ranking scoring exercise that is relevant to their activities. For example farmers could score on soil conservation methods, housewives could score on different tree species suitable for food fuel while village youth can score on different income generating activities.
- Ask the villagers to list down either problems or the opportunities (e.g. water scores) for a given problem. In case a list is already available, begin by asking them to write the items on small cards and arrange them on a vertical line on the floor.
- Now ask them why they prefer one to the other, what are their reasons for selecting for example one water source opportunity. Ask them to write down the criteria on cards and place them horizontally on the top margin. for the water source opportunities the criteria could be sustainability, productivity, equitability, technical feasibility, socio-cultural feasibility, cost, time to benefit, etc.
- Develop a matrix by drawing horizontal and vertical lines dividing the items to be scored against and the criteria.
- Start talking about the first criteria. Ask them to score e.g. the water source opportunities against one criteria at a time e.g. sustainability, productivity, etc. Each criteria is discussed exhaustively, and points to be awarded agreed upon. Points are awarded through voting or consensus. The points scored for each criteria range from lowest (0) to the highest (3). The points can be presented in terms of e.g. number of seeds. Counting the number of points is the most preferred one.

**After**
- Once the scoring is done, then triangulate it with the other villagers.
- There could be same score for two or more items in the matrix. Voting or consensus can do the preference here.
- Ask the villagers to transfer the final matrix on paper, for presentation to a large group of villagers.


This is the most concrete outcome of the entire PRA exercise. The CAP is a record of all the community’s development priorities and potential, and is used as a basis for sustainable development planning. The CAP can also be a source of priority projects, which can be forwarded to the District Development Committee for possible funding.

The plan can help external donors and implementing agencies to determine whether the community’s development goals are in line with their own priorities.

The CAP covers several issues:
- Development priorities as agreed on by the community;
- Proposed actions and requirements;
- Duties and responsibilities for individuals and groups; work schedules; and Identification of the areas where the community needs external assistance.
The community takes the lead in developing the CAP. The local extension and the PRA team act as facilitators, and make technical information available to the community to help them come to rational decision. It is also preferable to involve NGOs and donor agencies in this activity because in many cases, external input, especially funds, technical support and training, may be critical for the success of the CAP. If these groups are present while the plan is being prepared, they may be able to help during the implementation.

**Procedure:**

- Validate the ranked priorities (potential opportunities).
- On the basis of the rankings, the community recommends specific activities (actions) to achieve the opportunity.
- List down the required resources for the activity.
- List down what the community can contribute from the required resources and the external assistance they require.
- Indicate the time to begin the activity.
- Indicate who is responsible for following up the implementation of the activity.
- Any comment concerning the opportunity can also be made.

**PROBLEM: LACK OF ADEQUATE WATER**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Activities</th>
<th>By who</th>
<th>Period</th>
<th>Resources</th>
<th>Indicators for achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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APPENDIX 2

Report on the workshop for development of training materials for Training of Trainers in the Kikuletwa Catchment

PANGANI BASIN WATER BOARD

The Pangani River Basin Management Project

PANGANI BASIN

HELD AT UHURU HOSTEL 6-10th April 2009

PROJECT JOINTLY IMPLEMENTED BY:

*International Union of Conservation of Nature-* IUCN
*The Netherlands Development Organization*- SNV
*PAMOJA.*

*The Government of Tanzania,*
*European Commission, EU-ACP Water Facility*
*Global Environment Facility, UNDP.*

Report prepared by:

*Willie Mwaruvanda*
*Basili Liheta*
*Leodgard Haule*

April 2009
## List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBOs</td>
<td>Community Based Organization</td>
</tr>
<tr>
<td>CT</td>
<td>Core Team</td>
</tr>
<tr>
<td>GWP</td>
<td>Global Water Partnership</td>
</tr>
<tr>
<td>IUCN</td>
<td>International Union of Conservation of Nature</td>
</tr>
<tr>
<td>IWRM</td>
<td>Integrated Water Resources Management</td>
</tr>
<tr>
<td>SNV</td>
<td>The Netherlands Development Organization</td>
</tr>
<tr>
<td>ToT</td>
<td>Training of Trainers</td>
</tr>
<tr>
<td>KCF</td>
<td>Kikuletwa Catchment Forum</td>
</tr>
<tr>
<td>PBWO</td>
<td>Pangani Basin Water Office</td>
</tr>
<tr>
<td>PRBMP</td>
<td>Pangani River Basin Management Workshop</td>
</tr>
<tr>
<td>PMU</td>
<td>Project Management Unit</td>
</tr>
<tr>
<td>NAWAPO</td>
<td>National Water Policy</td>
</tr>
<tr>
<td>NSGRP</td>
<td>National Strategy for Growth and Reduction of Poverty</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Governmental Organisation</td>
</tr>
<tr>
<td>NWDS</td>
<td>National Water Sector Development Strategy</td>
</tr>
<tr>
<td>WSS</td>
<td>Water Supply and Sanitation</td>
</tr>
<tr>
<td>LGRP</td>
<td>Local Government Reform Programme</td>
</tr>
<tr>
<td>O&amp;OD</td>
<td>Opportunities and Obstacles to Development</td>
</tr>
<tr>
<td>PRA</td>
<td>Participatory Rural Appraisal</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>EU-ACP</td>
<td>European Union- African Caribbean &amp; Pacific</td>
</tr>
<tr>
<td>GWP</td>
<td>Global Water Partnership</td>
</tr>
</tbody>
</table>

1.0 Introduction

The Pangani Basin Water Office is implementing the Pangani River Basin Management Project, with technical assistance from the International Union of Conservation of Nature (IUCN), the Netherlands Development Organization (SNV) and the local NGO PAMOJA Trust. The project is financially supported by the IUCN Water and Nature Initiative, the Government of Tanzania, the European Commission through grant from the EU-ACP Water Facility and the Global Environment Facility, through UNDP.

The main goal of the Project is to “strengthen Integrated Water Resources Management in the Basin, including mainstreaming climate change to support the equitable provision and wise governance of freshwater resources for current and future generations and to empower Water Users and Managers in Pangani Basin to manage and allocate water resources with consideration for climate change, the environment and other technical information, through consultative processes and the sound framework of IWRM”

The project has the following five Key Result Areas, which contributes to the achievement of the goal:

**Result 1**: Increased understanding of environmental, economic and social implications of different river flow scenarios under expected climatic conditions and increased capacity to collect and analyze such flow assessment information;

**Result 2**: Water Users strengthened and empowered to participate in IWRM and Climate Change adaptation processes through dialogue and decentralized water governance;

**Result 3**: Water Sector’s vulnerability to climate change understood and pilot actions generate lessons in adaptation;

**Result 4**: Pangani Basin Water Office coordinates other sectors and stakeholders in the development of an IWRM Plan; and

**Result 5**: Project implementation effectively & efficiently to the satisfaction of all stakeholders.

2.0 Objective of Training of Trainers (ToT) Programme

For the forum to be established and community participation to be realized under IWRM; the trainees will form Catchment Facilitation Teams, that will be deployed to train or raise communities awareness on different issues in regard to IWRM; entrepreneurship; community participation; gender and other cross cutting issues relating to WRM, as an initiative to strengthening the capacity of the community to manage the resources at different levels in the catchment once the forums have been established. The TOT will equip the facilitation teams with different facilitation and training skills, methods, tools and approaches in integrated water resources management. As a result, the TOT exercise will contribute to empowering the teams with knowledge and skills, which will be transferred to the water users for proper planning and sustainable management of the water resources at their local scale.
3.0 Workshop process

One of the pre-requisites in the process of putting in place the Kikuletwa Catchment Forum is development of training materials to be used for Training of Trainers (TOT) programme covering topics in Integrated Water Resources Management (IWRM), entrepreneurship; community participation; gender and other cross cutting issues relating to WRM, climate change and adaptation strategies and the contribution of water resources in poverty reduction. Towards that end, the three experts contracted to undertake this assignment assembled in Moshi for a five day workshop to develop modules for the proposed training as described in the TOR/specific responsibilities of the experts. The workshop was also attended by the core team members in project implementation namely Mr. Mturi from SNV, Mr. Luanda from Pangani River Basin Management Project (PRBMP), Ms. Jane Kabogo from PBWO and Ms. Irene Chikira from PBWO and currently on attachment to IUCN. Ms Chikira also presided as a workshop chair.

3.1 Prelude and groundwork

(i) The workshop started by welcome remarks from Mr. Mturi a member of the core team who wished everyone a happy stay in Moshi and hoped that the gathering would achieve its objectives. He pointed out that the main objective was to develop training material for the forthcoming TOT.

Two documents namely (i) Strengthening Participation and Planning for Integrated Water Resources Management (IWRM) Programme for Pangani River Basin, Tanzania – Capacity Building for Kikuletwa Subcatchment Forum - TRAINERS MANUAL by Owino J.P 2007 and (ii) Integrated Water Resources Management for River Basin Organizations: Training Manual, Cap-Net 2008 were distributed to experts as key reference materials in the process of developing training materials. This was followed by a brief presentation on the Kikuletwa Catchment by Ms Irene Chikira from the PBWO which provided key highlights on the size, subcatchments, problems, lessons and challenges for management and development of water resources in Kikuletwa Catchment.

(ii) The experts reviewed the documents provided (see (i) above) and concluded that the manuals contained useful information which however needed to be tailored to the needs of the prospective trainees (envisioned facilitators) most of whom probably do not have a basic understanding of IWRM. It was also observed that governance issues are not clear and elaborate in the training manuals provided. Similarly it was agreed that experts would explore other sources they see relevant to the needs of the trainees such as the Global Water Partnership (GWP) training materials which can also be useful reference materials.

(iii) Similarly, the review of the documents together with a presentation on the Kikuletwa catchment revealed a number of gaps and pointers on areas that need to be covered during the training. Areas identified as missing include conflict management, gender mainstreaming, participatory planning, financial management, and governance aspects. It was also the opinion of experts that trainees need to be equipped with training methodologies and facilitation skills which are a basic requirement for effective engagement of communities towards formulating the Kikuletwa Catchment Forum (KCF). This would constitute a more holistic approach in the capacity building of the trainees and the entire process of establishment of the envisaged forum.

(iv) As part of ground setting and having a focused mind and approach in the process of developing training materials and subsequent training and formulation of the KCF, the Pangani Basin Water Officer was categorical on the following as elements that must also guide the exercise
namely (i) the establishment of the catchment forum is intended to operationalize the National Water Policy (2002) which among other things aims to empower communities to manage water resources at the lowest appropriate level, (ii) responsibilities of water users, operations and management skills, water revenues and expenditure, management and monitoring mechanisms and the role of water resources in poverty alleviation, (iii) the emerging issues of climate change and adaptation measures and promotion of alternative livelihood activities that minimize pressure and dependence on natural resources.

3.2 Identification and preparation of modules

Based on the analysis of information materials provided by IUCN/PBWO and guidance from the core team members the following modules identified and agreed for preparation

(i) Stakeholder participation in Water Resources Management (Mr. Haule)
(ii) Participatory planning for water resources (Mr. Haule)
(iii) Gender issues in water Resources Management (Mr. Haule)
(iv) Entrepreneurship in WRM (Mr. Liheta)
(v) Financial Management in WRM (Mr. Liheta)
(vi) IWRM contribution to poverty reduction (Mr. Mwaruvanda)
(vii) Conflict Management (Mr. Liheta)
(viii) Climate Change and adaptation measures in WRM (Mr. Mwaruvanda)
(ix) Water as a Resource (Mr. Mwaruvanda)
(x) Water governance (Mr. Mwaruvanda)
(xi) IWRM concept and principles (Mr. Mwaruvanda)
(xii) Management Instruments and tools in IWRM (Mr. Mwaruvanda)
(xiii) IWRM Planning (Mr. Mwaruvanda)

3.3 Workshop working guidelines

For a fruitful workshop the following were agreed

(i) Experts would work individually and make presentations starting at 10:30 every day. Comments and guidance would then be given for every topic presented.
(ii) In preparing the proposed modules experts should state the overall objective, specific objective, training contents or learning points, training methodology and tools for evaluation of the lesson
(iii) Development of specific objectives should revolve around development of Knowledge, skills and attitudes
(iv) Being so broad, IWRM as a topic was proposed to be broken down into smaller more relevant topics for beginners. The proposed topics were

- Water as a resource
- Water governance
- IWRM concept and principles
- Management instruments and tools in IWRM
- IWRM planning

(v) Modules should be prepared in English and would later be translated into Kiswahili
(vi) All key terms such as gender, entrepreneurship, governance should be clearly defined at the beginning of the module
(vii) Each module shall finally be covered in five to eight pages
(viii) Youth group should be clearly targeted in all training modules
(ix) Each expert should prepare and strive to come up with a zero draft by the end of the workshop

3.4 Workshop deliverables

After five days of hard work experts managed to come up with outlines and few zero drafts for all proposed topics. It was however felt that, improvements and polishing would be needed before coming up with a draft report for sharing with PBWO/IUCN/ SNV associates. Many valuable comments on our draft report were received from PBWO/IUCN/ SNV. We have tried our best to incorporate them in our final report. One of the key comments was to have three separate manuals namely (i) IWRM (ii) Participatory Planning, stakeholder Participation and gender mainstreaming (iii) and Entrepreneurship and Financial Management. We have done as such. In this report the three “proposed manuals” are presented as three separate modules (see Annexure III,IV,V) each one containing its related topics.

4.0 Conclusions

The wrap meeting was attended by members of the Core team, IUCN RBM Manager and the three experts. The main objective was to jointly evaluate the one week programme and chart the way forward. The following conclusions were reached

(i) The meeting was satisfied that the one week programme achieved its objectives despite being so tight on the part of experts. The one week experience left no doubts that more resources and time would be needed to develop relevant and appropriate training materials thus requiring adjustments on the previous timetable. A new programme to be followed was thus developed (see Annex I).

(ii) Future implementation of all planned activities calls for flexibility bearing in mind that community engagement activities are highly iterative.

(iii) Experts were dissatisfied by the slow administration of contractual requirements such as timely provision of allowances which left consultants wondering how they would meet their basic necessities. It was hoped this would be rectified in the future.

(iv) A discussion on the disparities on the DSAs provided to experts as well as a change of fees from 150USD to as low as 100 USD was found to be a demotivating factor for the much desired team work. It was concluded experts would be paid 150 USD and DSA of 80,000 Tshs.

(v) A programme report with draft training modules would be submitted to PBWO/ IUCN/SNV for review and feedback. It was also proposed a joint review of the modules might be appropriate.

(vi) Experts proposed training should be run in two phases covering the theoretical part in the class followed by a field work lasting a minimum of 5 days to enable trainees practice, internalize issues learnt in the class as well as experience community facilitation skills on the ground. The earlier planned backup from facilitators would be determined after evaluation of the training
ANNEXURE I: Revised schedule for ToT Assignment

REVISED WORK SCHEDULE FOR ASSIGNMENT

<table>
<thead>
<tr>
<th>S/N</th>
<th>Activity</th>
<th>Responsible</th>
<th>Time Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nomination of Expert</td>
<td>Core Team/Partners</td>
<td>2-3 March, 09</td>
</tr>
<tr>
<td>2</td>
<td>Send ToR to, and agree with Expert</td>
<td>Core Team</td>
<td>23-27 March, 09</td>
</tr>
<tr>
<td>3</td>
<td>Send training Module to expert for review</td>
<td>Core Team/Expert</td>
<td>25-30 March, 09</td>
</tr>
<tr>
<td>4</td>
<td>Development of training Materials (in Moshi)</td>
<td>Expert</td>
<td>06-10 April, 09</td>
</tr>
<tr>
<td>5</td>
<td>Draft training materials Report submission to IUCN</td>
<td>Experts</td>
<td>20-21 April, 09</td>
</tr>
<tr>
<td>6</td>
<td>Feedbacks from IUCN</td>
<td>IUCN and Partners</td>
<td>22 – 24, April, 09</td>
</tr>
<tr>
<td>7</td>
<td>Improvement of training materials and development of training activity guidelines, after receiving feedbacks from IUCN (5 days needed)</td>
<td>Experts</td>
<td>27 April to 1st May, 09</td>
</tr>
<tr>
<td>8</td>
<td>Training of Facilitation Team (in Moshi/Arusha)</td>
<td>Expert + CT + PMU</td>
<td>25 May – 6th June 09</td>
</tr>
<tr>
<td>9</td>
<td>Translation of training materials by experts/facilitation Team</td>
<td>To be discussed in the partners meeting</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Guiding the facilitation Team to train the Community</td>
<td>Expert/Core and Facilitation Teams</td>
<td>Backstopping to be determined</td>
</tr>
<tr>
<td>11</td>
<td>Submission of final training report</td>
<td>Experts</td>
<td>17th June, 2009 (7 working days)</td>
</tr>
</tbody>
</table>

ANNEXURE II: Duties and Responsibilities of Experts

Duties and responsibilities for the Community participation expert

The expert will undertake the following specific tasks using consultative and participatory approaches and methods:

1. Develop the training material to be used for the ToT. The training material should include but not limited to: community participation strategies/mechanisms within IWRM framework; stakeholder analysis principle (influence and power relations); gender mainstreaming in IWRM in relation to roles, rights and responsibilities among others;

2. Use the training material for the ToT;

3. During the ToT ensure that the ToT participants develop the training material and programme for community training;
4. Follow-up to ensure that the ToT participants carry out the community training as per the training programme developed during the ToT;

5. Implement the monitoring and evaluation (M&E) for the ToT and ensure that a similar M&E system is developed and implemented for the community training;

6. Submit the report on the ToT as well as the community training.

**Duties and responsibilities for the IWRM Expert**

The expert will undertake the following specific tasks using consultative and participatory approaches and methods:

1. Develop the training material to be used for the ToT. The training material should include but not limited to: introduction to IWRM key issues and Dublin principles and benefits in implementing IWRM; WRM approaches at river basin scale with emphasizes on Institutional arrangements for performing the function; water allocation issues with an emphasis on water permits procedures under existing policies, laws and registrations; pollution control and management at water sources and needs for monitoring systems; water resources planning at basin and subcatchment level, in holistic and participatory way, considering up/down stream water users relationships; approaches to conflict management by analyzing possible/existing conflict at local scale, and using IWRM approaches, discuss methods of negotiation; basic issues on climate change and its effects to water resources availability at river basin scale; impacts of climate changes on water resources and livelihood, climate variability and climate change adaptation measures during planning and allocation of water resources at local, basin and sub-catchment level;

2. Use the training material for the ToT;

3. During the ToT ensure that the ToT participants develop the training material and programme for community training;

4. Follow-up to ensure that the ToT participants carry out the community training as per the training programme developed during the ToT;

5. Implement the monitoring and evaluation (M&E) for the ToT and ensure that a similar M&E system is developed and implemented for the community training;

6. Submit the report on the ToT as well as the community training.

**Duties and responsibilities for the Co-operative Expert**

The expert will undertake the following specific tasks using consultative and participatory approaches and methods:

1. Develop the training material to be used for the ToT. The training material should include but not limited to: water user organizations and entrepreneurship principle; Cooperative principles in relation to water user entities and Water resources management; benefits of registering Water user association as an income generating organizations;

2. Use the training material for the ToT;

3. During the ToT ensure that the ToT participants develop the training material and programme for community training;

4. Follow-up to ensure that the ToT participants carry out the community training as per the training programme developed during the ToT;

5. Implement the monitoring and evaluation (M&E) for the ToT and ensure that a similar M&E system is developed and implemented for the community training;

6. Submit the report on the ToT as well as the community training.
The Pangani River Basin Management Project is generating technical information and developing participatory forums to strengthen Integrated Water Resources Management in the Pangani Basin, including mainstreaming climate change, to support the equitable provision and wise governance of freshwater for livelihoods and environment for current and future generations.

The Pangani Basin Water Board is implementing the project with technical assistance from IUCN (International Union for Conservation of Nature), the Netherlands Development Organization (SNV) and the local NGO PAMOJA. The project is financially supported by the IUCN Water & Nature Initiative, the Government of Tanzania, the European Commission through a grant from the EU-ACP Water Facility, and the Global Environment Facility through UNDP.

Pangani Basin Water Board

The Pangani Basin Water Board was established in 1991 and is one of 9 basin water boards in Tanzania. The PBWB has a number of roles and responsibilities including: data collection, processing and analysis for water resource management monitoring and resource assessment; technical aspects of trans-boundary issues in the basin; co-ordinate and approve basin WRM planning / budgets; approve, issue and revoke water use and discharge permits; enforce water use permits and pollution control measures; co-operate between sectors at the local level; and resolve conflicts and co-ordinate stakeholders.