

# Rufiji Environment Management Project<sup>1</sup>

**Environmental Management and Biodiversity Conservation of Forests,  
Woodlands, and Wetlands of the Rufiji Delta and Floodplain**

## **Report on the Design of Monitoring and Evaluation System**

**Winnie Bashagi**



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**For more information please contact**

Project Manager,

Rufiji Environment Management Project

P O Box 13513

Dar es Salaam, Tanzania.

Tel: 023 2402972 or 44 Utete Rufiji or 022- 2666088 / 0741 322366 Dar es Salaam

Email: [rempute1@bushmail.net](mailto:rempute1@bushmail.net) or [iucndar@epiq.or.tz](mailto:iucndar@epiq.or.tz)

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## Table of contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Background .....	1
1.2	Terms of Reference .....	2
1.3	Methodology .....	2
<b>2</b>	<b>Objectives for monitoring and evaluation.....</b>	<b>3</b>
2.1	Role of Monitoring and Evaluation.....	3
<b>3</b>	<b>REMP stakeholders.....</b>	<b>5</b>
3.1	Villagers.....	5
3.2	The District Council.....	6
3.3	National Level.....	6
3.4	IUCN.....	6
3.5	Project Steering Committee.....	6
3.6	Donor (Royal Netherlands Embassy).....	6
3.7	Other Similar Projects and Institutions.....	7
3.8	University Institutions .....	7
3.9	Villagers in other villages.....	7
<b>4</b>	<b>Project Hierarchy Objectives .....</b>	<b>14</b>
<b>5</b>	<b>Indicators .....</b>	<b>16</b>
5.1	Activity Output Indicators.....	21
5.2	Impact indicators.....	23
<b>6</b>	<b>Data collection strategies .....</b>	<b>23</b>
6.1	Socio-economic and Natural Resource Assessment.....	24
6.2	REMP Target Group .....	24
<b>7</b>	<b>Database .....</b>	<b>26</b>
7.1	Method of Data Collection.....	26
7.1.1	Project Field Records .....	26
7.1.2	Surveys and Studies.....	26
7.2	Data Analysis .....	30
<b>8</b>	<b>M&amp;E Process Approach &amp; Participatory Tools.....</b>	<b>31</b>
8.1	Comparative Institutional Analysis .....	31
8.2	Re-ranking Problems and Solutions to Reflect Changing Priorities.....	32
8.3	Improved Record Keeping .....	32
<b>9</b>	<b>Modes of Communicating M&amp;E Results.....</b>	<b>33</b>
9.1	Types of Written Reports .....	33
<b>10</b>	<b>Administrative and Control Forms.....</b>	<b>34</b>
<b>11</b>	<b>Appendices .....</b>	<b>35</b>
	Appendix 1: REMP Administration & Control Forms.....	35

## List of Figures

Figure 1: Groups with Interest in REMF.....	5
Figure 2: Rufiji Environment Management Project Logical Framework.....	15
Figure 3: REMF Components .....	24

## List of Tables

Table 1: REMF Information Matrix .....	8
Table 2: Summary of monitoring and evaluation activities.....	12
Table 3: REMF Hierarchy Objective Indicators.....	17
Table 4: Input and Output Indicators.....	22
Table 5: Socio-economic assessment database.....	27
Table 6: Natural Resource Assessment Database.....	30

# 1 Introduction

## 1.1 Background

The Rufiji Environmental Management Project (REMP) based at Utete Town, the Headquarters of Rufiji District in Tanzania, was formulated to reduce the increasing pressure on the Rufiji forests, woodlands and wetlands from the population growth; the commercialisation and subsequent over-harvesting of timber and fish resources; the conversion of mangrove areas to cultivation; and the use of riparian forest and woodland for fuel.

The three main objectives of the project's first five years phase are:

- To promote the integration of environmental conservation and sustainable development through environmental planning within the Rufiji Delta and floodplain.
- To promote the sustainable use of natural resources and enhance the livelihoods of local communities by implementing sustainable pilot development activities based on "wise use" principles.
- To promote awareness of the values of forests woodlands and wetlands and the importance of "wise use" at village, district, regional and central government levels and to influence national policies on natural resource management emphasizing the non-sectoral, multi-biome, integrated approach to the environment.

The project proposals entitled "Rufiji Delta and Floodplain: Environmental management and conservation of forests, woodlands and wetlands project" of May 1997 outline in detail the background and justification for the project, a description of the first phase of the project, its administration and its budget and timetable. The report of the first year planning workshop at Ikwiriri (June 1998) carries the project-planning matrix.

The project document (3.4.2) commit the project to developing and implementing a system of regular monitoring: *Assessment mechanisms are to be discussed and designed at the outset in order to establish base-line data for monitoring throughout the life and phases of the project. Criteria will be selected that can shed some light on the effect of the project activities on the conservation and sustainable development of the Rufiji Delta and Floodplain as well as people's attitudes to any changes brought about by the project. This process may involve such parameters as awareness of forest, woodland and wetland components and attitudes to the project's existence. Key ecosystem indicators will be identified such as fish catch sites, diversity of the species, crop yields and river flows while socio-economic indicators will also be incorporated. The monitoring programme will have to be designed in a cost-effective and appropriate way preferably relying on data which is within the normal data collection remit of the government departments involved.*

There have been several efforts in REMP to develop the monitoring and evaluation system. The M & E was initiated during the first project-planning workshop at Ikwiriri (June 1998). The project's logical framework was constructed by the District Environment Management Team (DEMT) at a brief training session on the development of indicators. Some indicators and means of verification of the project outputs were drafted. An Annual Plan for 1999 was prepared (June 1998) and subsequently revised (September 1998). The Annual Plan includes outputs on monitoring (Output 5.0) and on setting up a management evaluation system (7.2 vii). Further training in M & E skills task took place in April and June 1999. A workshop on preliminary design of Monitoring and Evaluation System for

REMP held on 10<sup>th</sup> May 1999 identified the project stakeholders, their roles and information required for the project. The District EMT members contributed to the workshop. Furthermore, studies to generate baseline data on both the natural resources and socio-economic status are underway. This consultancy input is expected to fill in gaps on the efforts that have been made by REMP.

## **1.2 Terms of Reference**

The objective of this consultancy is to design a suitable monitoring and evaluation system for the REMP which includes in general:

- The objectives of the Monitoring and Evaluation (M&E);
- The issues for monitoring;
- The process proposed for testing indicators at the various levels;
- The methodologies for data collection in relation to the indicators, and
- The management and feedback processes of data collected in future planning.

Specifically the consultancy will:

- Assess the project's clarification of who the stakeholders and target groups are and fill gaps in the description of their information needs.
- Assess the indicators which are already drafted for their relevance and usefulness (specific, relevant, measurable, timely and feasible) in monitoring and evaluating the project progress and impacts.
- Identify the gaps in terms of indicators for the project. Develop draft indicators, at all levels in the planning matrix and at all levels of participation, for the project's process and its impacts.
- Propose suitable means of verification for the indicators.
- Detail the data required, the sources, the means of collection and the timing and collection intervals necessary.
- Suggest suitable means of summarising and analysing data and the best methodology for use of this data by the project for improvement of its work and impact.
- Cost of the data collection component in terms of time and money involved and propose means to ensure that the data collection is sustainable.
- Consider cross-cutting issues such as sustainability of the monitoring and evaluation system, participation, gender, appropriate technology, poverty and wealth.
- Consider phasing the introduction of the M&E system in order to allow for an initial phase of concentration on implementation of the project at field level.
- Comment on other considerations which the project should take into account.

## **1.3 Methodology**

During the course of study the consultant used the following methodology:

- **Literature review of project** documents and other relevant documents as provided by the project management staff.
- **Discussions** held with relevant key staff involved with project management and implementation. These included the Project Manager, the TACD, and Programme Officer – Natural Resources from IUCN (who came in for 10 weeks to give a backstopping to the project after the sudden departure of the CTA).
- **Discussions** held with relevant Rufiji District Heads of departments who are involved in REMP activities such as the DPLO, DNRO, DCDO, DALDO, DFO and FO.

## 2 Objectives for monitoring and evaluation

Monitoring is the process of routine periodic measurements of programme inputs, activities and outputs undertaken during programme implementation.

The purpose of monitoring is to keep track of daily activities on a continuous basis in order to indicate as early as possible any shortcomings with regard to delivery of inputs and the execution of activities or production of outputs, in order that corrective measures can be undertaken in time. As such, monitoring is primarily a device for improving programme management.

By contrast, evaluation is understood to mean the process by which programme inputs, activities and results are analysed and assessed, in order to determine the effectiveness, impact and relevance of the implementation programme in the light of the stated programme objectives.

The purpose of evaluation is to analyse objectives and achievements in order to maximise the impact, and identify lessons learned throughout the implementation period.

The combined effect of monitoring and evaluation adds a management tool to the project. Monitoring activities (record, systematize and report information regularly), will help provide relevant insight for ongoing evaluations (e.g. in the regular meetings), and help build up necessary information for more comprehensive evaluations (e.g. the project mid-term programme reviews).

### 2.1 Role of Monitoring and Evaluation

This section gives the reasons why Monitoring and Evaluation (M&E) is required.

- (i) An M & E system has an informative function to begin with. It supplies information on matters such as efficiency, legitimacy, effectiveness, impact, relevance and sustainability of the project interventions. This information is used:
  - as an indication of strength and weakness of the activity or project, showing which elements require special attention, such as the form of research.
  - to strengthen the project and its management
  - to account for the use of inputs to other persons
  - to further develop policies. M&E may lead to a change of strategy.
  - to supply institutional memory
  - to influence public opinion.
- (ii) M&E has an **education function**. It functions as a constant feedback process, giving insight in other people's action and one's own action so that one learns from experience and from the experience of others.
- (iii) M&E stimulates and mobilizes human resources. It increases people's motivation and shows them their possibilities. Posting the results of a successful activity on a village public board may give the villagers a great sense of dignity and self-respect. It may also stimulate other villagers to try out such an activity themselves. The success of REMP project would not only give self esteem to the Rufiji people and all those involved in the execution of the project, but would also stimulate other districts in Tanzania adopt the same strategies.
- (iv) Finally M&E has a **Co-ordination function**. Mutual relations can be built up or strengthened through a systematic and constant exchange between persons or groups involved in the project. This also applies to relations with relevant institutions or similar projects that will create networks if viable networks are to be established.

The purpose of project monitoring is the provision of relevant information, to indicate to those concerned (donors, executing agency, project management) if resources are used according to plan, if project objectives are being achieved, and more practically if the operation performance and impact of a project is on the right track or whether these objectives need adjusting as corrective measures.

Monitored information which indicates inadequate operation, shortfall in performance and discrepancy between prescribed objectives or predicted impact and those achieved provide a basis for decision-making by project management. Inadequate objectives are modified to give the project more valid direction or to rectify deficiencies and to bring the project back on track. As a management tool, the priority task of a monitoring system must be the provision of information that contribute to effective decision making.

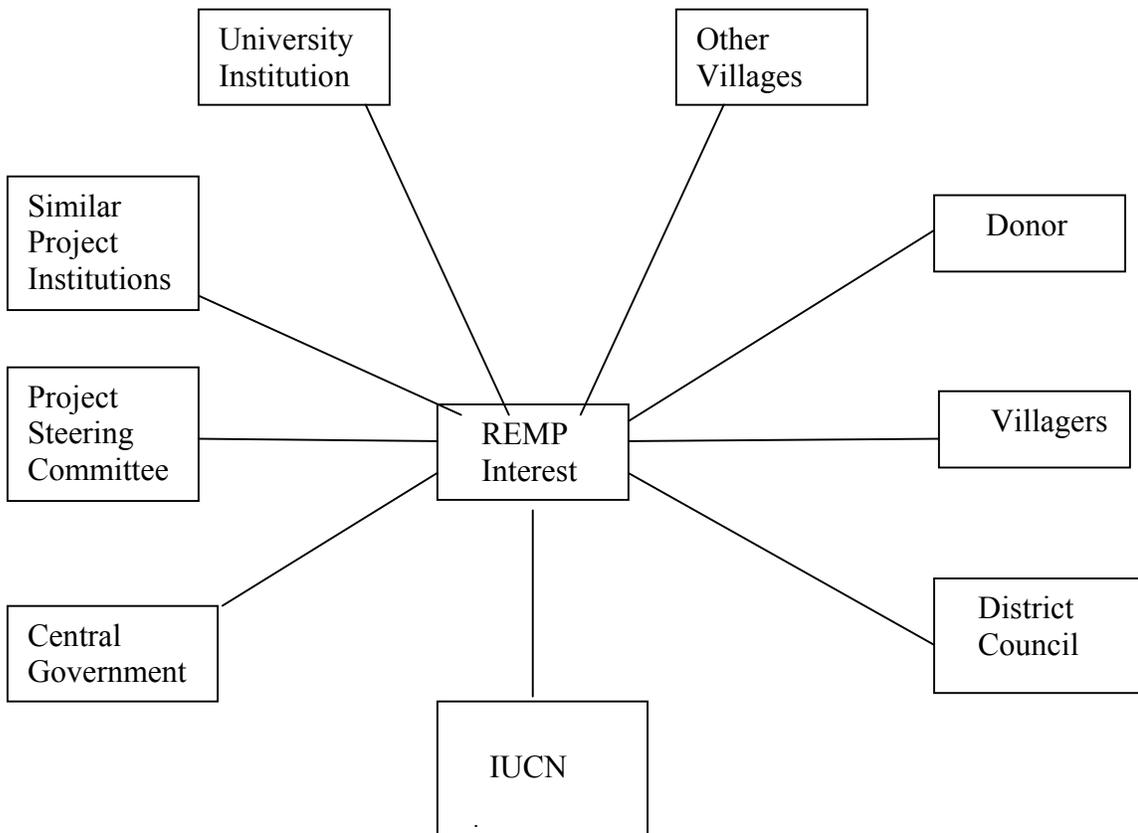
A well designed, properly functioning project monitoring system should provide the right information, in the right form, at the right time to administrators and tracer groups. However, significant delays in data processing and delivery of baseline survey results may render M&E useless where masses of data collected and not used and money is wasted.

It should be noted that monitoring and ongoing evaluation do not themselves comprise the decision making process but rather serve as inputs to guide project management and improve its decision making.

### 3 REMP stakeholders

The project expects to assist the people (starting with the four pilot villages) to make environmental management plans incorporating “wise use” activities and give technical advice to implement these plans. Monitoring which has its basis at the project village level should use the community based approach to monitor and evaluate the project activities. This is of interest to several groups as shown in Figure 1 below.

Figure 1: Groups with Interest in REMP



#### 3.1 Villagers

The villagers will implement many aspects of the Environmental Management plan. The project will promote the integration of environmental considerations into the planning and use the natural resources of the villages through awareness-raising, initiation of “wise use” activities and participatory planning. It will also ensure that government policies and regulations are taken into consideration. To facilitate these measures, the communities must:

- maintain its momentum and ownership of community action plans through periodic village discussions and review meetings.
- hold all project partners, both inside and outside the community accountable to provide the necessary resources, labour, technical assistance and financial support.
- draw lessons and guide future planning and action

### **3.2 The District Council**

The District Council's role is to oversee the production of the Environmental Management Plan. Ensure the integration of Environmental Management Plan into the district planning process. The Environmental Management Team (EMT) will be responsible for co-ordination and implementation of project activities including:

- To gather data from community how effectively their project investment are meeting community goal
- To report to sponsors the impact of project investment
- To guide future project planning, technical assistance and financial investment.

### **3.3 National Level**

The project will contribute to the review process, with respect to national forest policy and forest legislation.

### **3.4 IUCN**

- Provide management support to the project
- Maintain financial control of the project
- Provide technical advice through employed TAs
- Assist with publication of project reports in the world arena and with the exchange of staff and project associates to other relevant project
- Determine how best to formulate policies and provide resources to support sustainable community development effort
- Listen to community voices in organized and systematic ways by assessing data which village project evaluation can provide.
- Facilitate a two-way flow of information both to and from rural resource users.

### **3.5 Project Steering Committee**

Will meet twice yearly to:

- Approve annual work plans and budget
- Approve annual reports
- Approve any proposed changes in objectives and other project arrangement
- Advise on issues related to national policies
- Facilitate linkages with central government and with other regions and districts
- Approve senior project appointments

### **3.6 Donor (Royal Netherlands Embassy)**

- Provide final approval of the annual budgets and work plans
- Approve reports according to schedules of reporting
- Field an external review of the project
- Act as a partner in the project's progress assessment and review while assisting with interaction with other district's funded by the Netherlands Government in Tanzania
- Assess how best the formulated policies and resources provisions meet the needs of the people and the natural resources conservation and sustainability of Rufiji.

### 3.7 Other Similar Projects and Institutions

- Establish network to collaborate with REMP
- Promote the project strategies

### 3.8 University Institutions

- Test hypothesis
- Transfer knowledge from lessons and findings to students

### 3.9 Villagers in other villages

- Try out “wise use” activities and conservation.

The above analysis shows the different groups and with different interests in the project.

To address the needs of all interested groups, an analysis of the types of decision and information required for making decisions at different levels is very important with respect to:

- who needs information?
- on what?
- for what type of decisions?

Furthermore, questions arising from the answers given to the above concerns will need to be addressed:

- what type of information?
- from what sources?
- how precise and frequent?
- collected how and by whom?
- how will it be processed and analysed?
- how will it be reported and to whom?
- how long will data collection, analysis and reporting back take?
- what staff and equipment is required?
- how much will it cost?

Monitoring and Evaluation is an information system that raises questions on a number of issues in management decision making. Therefore an analysis of the types of decision and information required for making decisions at different levels is very important.

The information matrix in Table 1 below gives an analysis of the uses of information and the purpose for which the intended user is going to use the results, while Table 2 below gives an overview of the M&E activities.

**Table 1: REMP Information Matrix**

<b>User</b>	<b>Information Required</b>	<b>Purpose for which information is required</b>	<b>Form in which Information is required</b>	<b>When is the information required</b>	<b>Possible sources of Basic information</b>
Villagers residing in Rufiji Delta to flood plain	<ul style="list-style-type: none"> <li>- Project approach and objective.</li> <li>- results from “wise use” tests</li> <li>- value of their natural resources</li> <li>- knowledge on carrying out design, planning and implementation of their Village EMP</li> <li>- stress on their natural resource</li> <li>- Government policies and regulations on natural resource</li> <li>- outputs of activities</li> </ul>	<ul style="list-style-type: none"> <li>- to adopt “wise use” practices.</li> <li>- To continue supporting and implementing the activities that conserve and enhance their livelihood.</li> <li>- To make them responsible and accountable to the village resource management.</li> <li>- to develop and enact their bye laws.</li> </ul>	<ul style="list-style-type: none"> <li>- project leaflet</li> <li>- posters, pamphlets, brochures, audio visual materials</li> <li>- training modules</li> <li>- extension advice</li> <li>- Discussion and oral presentation</li> <li>- Charts and graphs</li> <li>- maps</li> </ul>	<ul style="list-style-type: none"> <li>- Entry point to the village</li> <li>- After testing and piloting the “wise use” practices</li> <li>- After every study on stress on natural resources is completed</li> <li>- During extension staff and district staff visits</li> </ul>	<ul style="list-style-type: none"> <li>- project document</li> <li>- Natural resources inventory</li> <li>- Secondary sources</li> <li>- PRAs</li> <li>- “Wise use” activity evaluation.</li> <li>- Research information</li> <li>- Study tours &amp; visits</li> <li>- Information from other projects in collaboration</li> <li>- Survey results</li> <li>- District Natural Resource office.</li> <li>- Field extension staff</li> </ul>
Village Government Leaders	<ul style="list-style-type: none"> <li>- Approach and objective of the project.</li> <li>- Policies and laws and other government circulars on natural resources</li> <li>- Feedback on findings of the studies and inventory on natural resources carried out by outside experts.</li> <li>- Progress of the village EMP</li> <li>- Results of activities implemented</li> </ul>	<ul style="list-style-type: none"> <li>- Consideration for use when giving recommendation for licence for natural resources exploitation.</li> <li>- Supervise EMP implementation</li> <li>- Enact by-laws and produce report on EMP</li> <li>- Integrate the EMP into the village holistic plan.</li> <li>- Support and mobilize villagers to participate in development of VEMP</li> </ul>	<ul style="list-style-type: none"> <li>- Project leaflet</li> <li>- Government policy and circulars documents</li> <li>- Feedback meetings after studies, reports produced.</li> <li>- Discussion and oral presentation</li> <li>- Charts and graphs</li> <li>- Maps</li> <li>- Annual plans</li> </ul>	<ul style="list-style-type: none"> <li>- After Govt. policies and laws are revised or when new ones are made.</li> <li>- After study/survey reports are submitted</li> </ul>	<ul style="list-style-type: none"> <li>- Project document</li> <li>- Government documents</li> <li>- Findings from studies carried out</li> <li>- PRA</li> <li>- District Natural Resource office</li> <li>- Field extension staff</li> </ul>

**Table 1 continued.**

<b>User</b>	<b>Information Required</b>	<b>Purpose for which information is required</b>	<b>Form in which Information is required</b>	<b>When is the information required</b>	<b>Possible sources of Basic information</b>
Councillors/ Committees	<ul style="list-style-type: none"> <li>- Project objective and approach</li> <li>- Government policies and laws on environmental conservation</li> <li>- Village by-laws</li> <li>- Project annual plan and progress</li> <li>- Project impact</li> <li>- Level and magnitude of district and villagers participation</li> <li>- Limitations and constraints of the project.</li> </ul>	<ul style="list-style-type: none"> <li>- Awareness on the objective and approach</li> <li>- Awareness raising</li> <li>- To approve village by-laws</li> <li>- To mobilize resources and villagers to participate in development of EMP.</li> <li>- To find solutions for the limitations at local level</li> <li>- To formulate/endorse district policies with regard to use of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>- Project leaflet</li> <li>- Presentation of project to councillors</li> <li>- Government, policy and circular documents (in Swahili language)</li> <li>- Village drafted by-laws</li> <li>- Presentation of project plan and progress report.</li> </ul>	<ul style="list-style-type: none"> <li>- At the beginning of the project</li> <li>- Whenever they are obtained</li> <li>- Whenever the by-laws are drafted</li> <li>- In each district full council and Environment Committee meeting.</li> </ul>	<ul style="list-style-type: none"> <li>- Project formulation document</li> <li>- Government Ministry of Natural Resources</li> <li>- Village by-laws</li> <li>- Village EMT</li> <li>- Feedback from extension staff report</li> <li>- Field visits</li> <li>- Annual project plan and budget document.</li> <li>- In-depth study results.</li> <li>- District natural resource office</li> </ul>
Extension Officers	<p><b>Project approach</b></p> <ul style="list-style-type: none"> <li>- Findings from project studies</li> <li>- Research information on environmental conservation</li> <li>- Government policies and laws on natural resources</li> <li>- New technical information on “wise use”</li> <li>- Participatory tools to monitor and evaluate community based resource management practices</li> <li>- Project area baseline information</li> <li>- Knowledge of village natural resources.</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- To advocate and give technical advice on developing EMP “wise use”</li> <li>- Application of participatory assessment and planning methodologies</li> <li>- For comparison of changes since initial assessment</li> <li>- Monitoring &amp; Evaluation</li> <li>- Preparation of progress report</li> <li>- Capacity building of extension officers</li> </ul>	<p><b>Project logical framework</b></p> <ul style="list-style-type: none"> <li>- Technical training</li> <li>- Government policies, law and implementation guidelines</li> <li>- Technical documents</li> <li>- Farmers’ views</li> </ul>	<p><b>At the start of the project</b></p> <ul style="list-style-type: none"> <li>- Continuous as the information becomes available</li> </ul>	<p><b>Project document</b></p> <ul style="list-style-type: none"> <li>- Government policies and circular documents</li> <li>- Plans and progress report</li> <li>- Feedback from district</li> <li>- Meetings</li> <li>- Training workshops seminars and short courses.</li> <li>- PRAs</li> <li>- Field visits</li> <li>- Discussion with farmers</li> <li>- District Natural resource office</li> <li>- District community development office</li> <li>- District Agric. &amp; livestock office.</li> </ul>

**Table 1 continued.**

<b>User</b>	<b>Information Required</b>	<b>Purpose for which information is required</b>	<b>Form in which Information is required</b>	<b>When is the information required</b>	<b>Possible sources of Basic information</b>
District staff EMT	<ul style="list-style-type: none"> <li>- <b>Natural resources inventory.</b></li> <li>- Project resources available</li> <li>- Polices, law and Govt. circulars</li> <li>- Technical development</li> <li>- Project activity progress</li> <li>- Project impact</li> <li>- Level and magnitude of participation</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Project planning according to available resources.</b></li> <li>- To modify activities. project implementation</li> <li>- To develop Technical support</li> <li>- To modify inadequate approach and strategy used.</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Reports and plans.</b></li> <li>- Government documents</li> <li>- Field observation reports on files</li> <li>- Research findings</li> <li>- Meeting with farmers</li> <li>- Workshops</li> </ul>	<ul style="list-style-type: none"> <li>- <b>On a monthly and quarterly basis.</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Reports and plans.</b></li> <li>- EMT meetings</li> <li>- Government documents</li> <li>- Files</li> <li>- Extension officers reports</li> <li>- Research reports</li> <li>- Progress reports</li> <li>- Department files</li> </ul>
IUCN	<ul style="list-style-type: none"> <li>- <b>Activities progress.</b></li> <li>- Results-being used</li> <li>- Inputs used according to plan and purpose</li> <li>- Critical external factors limiting the project implementation</li> <li>- Project impact</li> <li>- Research findings</li> <li>- Deviations from plan</li> <li>- Knowledge of project area</li> <li>- Lessons</li> <li>- Level and magnitude of district and village participation</li> <li>- Unplanned efforts</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Logistical administration</b></li> <li>- Technical support</li> <li>- To guide the project implementation</li> <li>- To ensure achievement of the project purpose</li> <li>- To complete targets and achievements (monitoring compliance of the project)</li> <li>- To promote the approach to other programmes.</li> <li>- To modify Project resource monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Annual work plan and budget.</b></li> <li>- Progress reports</li> <li>- Letters from the project</li> <li>- Technical documents produced by consultants and researchers</li> <li>- Financial report</li> <li>- TA reports</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Annually</b></li> <li>- Six-monthly</li> <li>- Quarterly</li> <li>- Informally on a weekly basis.</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Baseline information.</b></li> <li>- Research findings</li> <li>- Files</li> <li>- EMT meeting</li> <li>- Planning workshops</li> <li>- Field visits</li> </ul>

Table 1 continued.

User	Information Required	Purpose for which information is required	Form in which Information is required	When is the information required	Possible sources of Basic information
PSC Project Steering Committee	<ul style="list-style-type: none"> <li>- <b>Project Plan &amp; budget</b></li> <li>- Project Reports</li> <li>- Project Impact</li> <li>- Unplanned Effects</li> <li>- Lessons</li> <li>- Project contribution to the development</li> <li>- Achievement</li> <li>- Results</li> <li>- Community response to the project</li> <li>- Degree of integration of project into district</li> </ul>	<ul style="list-style-type: none"> <li>- <b>To modify inadequate objective.</b></li> <li>- To give project more valid direction</li> <li>- To rectify deficiencies and bring it on right track</li> <li>- <b>To draw lessons to be used at central level, and other districts</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Annual Plan.</b></li> <li>- Reports</li> <li>- Documents on lessons drawn</li> <li>- Presentation in charts, graphs and maps</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Annually</b></li> <li>- Six- monthly</li> </ul>	<ul style="list-style-type: none"> <li>- Planning workshops</li> <li>- Files</li> <li>- Study findings</li> <li>- Feld visits and observation</li> <li>- Cmmunity meetings</li> <li>- EMT meeting</li> </ul>
Donor	<ul style="list-style-type: none"> <li>- <b>Project plan &amp; budget</b></li> <li>- Resource use</li> <li>- Unplanned efforts</li> <li>- Contribution to the development goals</li> <li>- Achievement of immediate objects</li> <li>- Results</li> </ul>	<ul style="list-style-type: none"> <li>- <b>To approve the project plan and budget.</b></li> <li>- Audit of the resource use.</li> <li>- <b>Give reaction on the project impact.</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Financial reports</b></li> <li>- Annual plan and budget</li> <li>- <b>Progress report</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Monthly</b></li> <li>- <b>Six monthly</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Administration and financial control forms</b></li> <li>- Project meetings</li> <li>- Field visits</li> <li>- <b>reports from field</b></li> </ul>
Other similar projects	<ul style="list-style-type: none"> <li>- <b>Lessons drawn from the approach</b></li> <li>- Results</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Establish network to collaborate with the project.</b></li> <li>- try the approach and strategies</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Technical publications</b></li> <li>- Documents on lessons drawn</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Whenever relevant findings from studies in the field are obtained.</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Field</b></li> </ul>
Institutions e.g. University	<ul style="list-style-type: none"> <li>- <b>Lssons drawn from the approach</b></li> <li>- Results</li> <li>- Research findings</li> </ul>	<ul style="list-style-type: none"> <li>- Promote the approach and strategies</li> <li>- Verify hypothesis</li> <li>- Project collaboration</li> <li>- To transfer knowledge to students</li> </ul>	<ul style="list-style-type: none"> <li>- Technical publications</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Whenever technical publications are produced</b></li> </ul>	<ul style="list-style-type: none"> <li>- Field</li> </ul>

**Table 2: Summary of monitoring and evaluation activities**

<b>Activity</b>	<b>Input by/From</b>	<b>Data Processing Report Writing</b>	<b>Submitted to Feedback From</b>	<b>Frequency</b>
Monthly pilot village reports	Village participatory meetings	Village Environmental Department	EMT meeting and REMP	Linked to schedule of specific tasks which the District or REMP has agreed to help with
Monthly key district department reports	Village extension reports Pilot village reports Field visits Monthly district reports	Key HoDs	DED	Monthly
Quarterly district reports	Monthly district reports	Key HoDs	DED EMT meeting	Quarterly - January - April - July - October
REMP Quarterly Reports	Monthly district reports Specific report by TA and consultancies	Project Manager and REMP TA	DED IUCN	April October
Half Yearly Progress Reports	Monthly district reports and specific reports	PM and CTA	IUCN, Donor (via PSC for approval)	July
Annual Report	Quarterly and half yearly progress reports, semi annual report, specific reports by TA and consultancies, financial reports	PM & CTA	IUCN, Donor (via PSC for approval)	January
Annual workplan and budget	Project logframe Multi sectoral planning session	PM, TA and key district staff (EMT)	IUCN, Donor (via steering committee)	August
Project financial reports	Accounts records and control forms	PM Administration	Donor IUCN	Monthly
Specific reports	District staff studies, workshops Consultancies	District staff consultants	CTA EMT	Monthly

**REMP Technical Report No 5: Report on Design of Monitoring and Evaluation System**

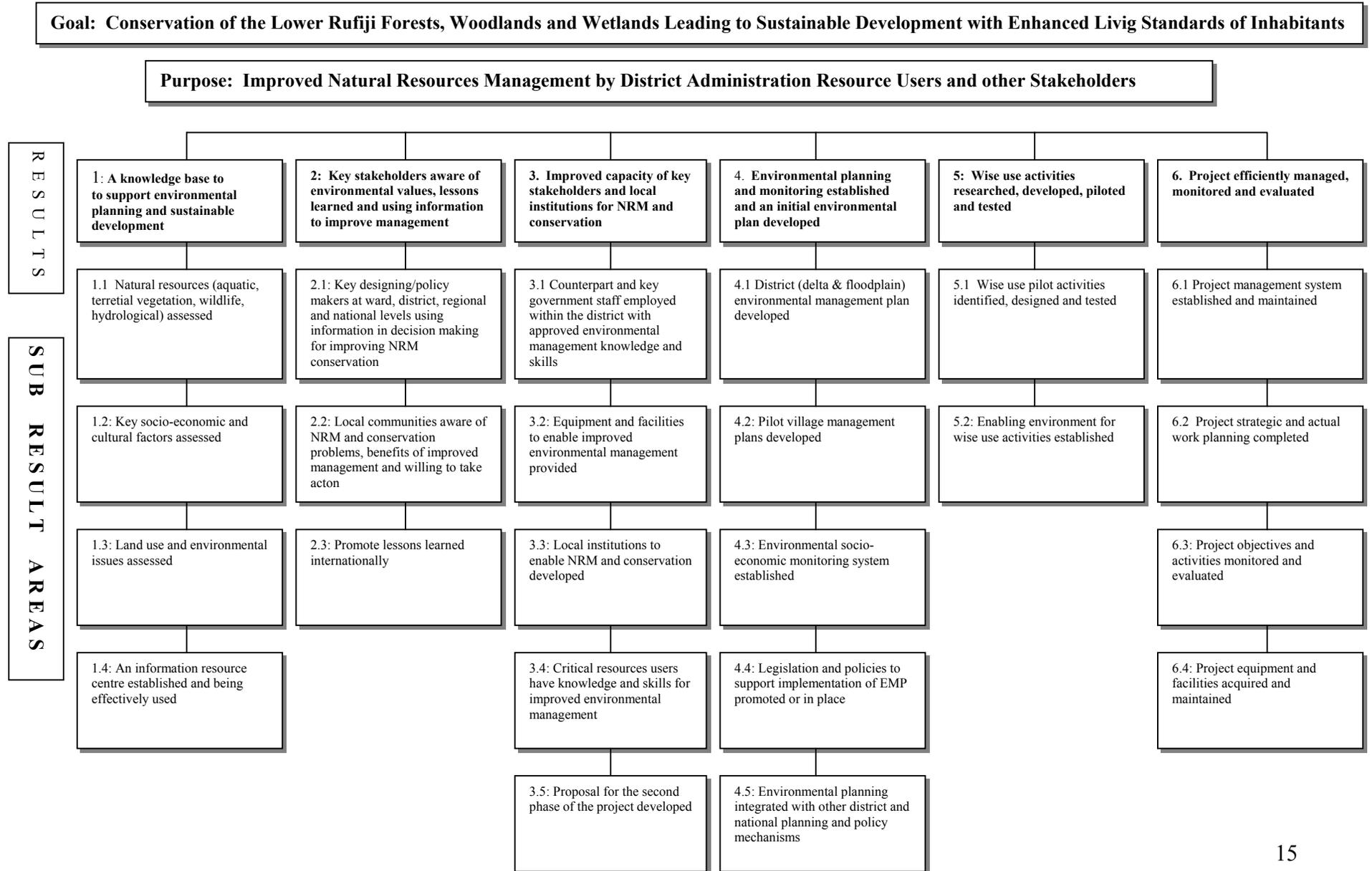
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<b>Activity</b>	<b>Input by/From</b>	<b>Data Processing Report Writing</b>	<b>Submitted to Feedback From</b>	<b>Frequency</b>
Village Environmental Committee meeting	PRA leading to: Environmental management plan Participatory evaluation on wise use Environment management	Village environmental committee	Village Government	Monthly
Field work and supervision	-Extension staff -HoDs advice - adoption rate and Feedback from the villagers	Field reports	-HoDs	Monthly
District EMT Meeting	Thematic workshops Multi-sectoral planning sessions Field visits Internal evaluation Project formulation document	PM/CTA	PSC	Bi-annual
Project Steering Committee Meeting	Workplans and budget Annual reports Proposed changes in objectives and other project arrangements Formulation document Project visits observations	PM/CTA		Bi-annual
Supervision of Project Administrative staff	Job description, overtime and leave forms	Project Manager	Stays internal	At least once a year
Vehicle logbooks	Driver, user of car	Driver	PM	Daily
Monthly vehicle reports	Logbooks	Driver	PM	Monthly
Motorbike logbook	Driver, user of the motorbike	Responsible staff	PM	Daily
Monthly motorbike reports	Logbook	Responsible technician	PM	Monthly
Boat Logbook	Boat Driver	Boat driver	PM	Daily
Monthly boat report	Boat Driver	Boat driver	PM	Monthly

## **4 Project Hierarchy Objectives**

Evaluation is a process of analysis of programme achievements and challenges in the light of the programme objectives set out. A hierarchy of objectives for the REMP Programme is shown in Figure 2 below.

Figure 2: Rufiji Environment Management Project Logical Framework



## 5 Indicators

Indicators are evidence, measures or observable outcomes that demonstrate whether the project purpose has been achieved. They are observable facts which provide evidence of progress towards the project goal.

Indicators represent a logical extension of the project objectives. The objectives are expressions of the project's aims, the indicators are tools to further clarify and more precisely define the objectives and the desired impact upon the intended beneficiaries.

Characteristics of high quality indicators are:

Relevant: It relates to an explicit objective

Representative: It covers all important aspects of the issue concerned

Accurate: It correctly reflects how the objective is met and the state of the issue

Measurable: Results stated in quantifiable terms meaning that the indicators can be rated on a numerical scale.

Feasible: It depends on data that are readily available or obtainable at reasonable cost

Analytically

Sound: It is well founded and uses standardized measurement wherever possible to permit comparison on the basis of validity and reliability.

Sensitive: It shows trend over time and space.

Responsive: It reflects change in conditions and differences between places and groups of people.

The indicators that were developed by REMP are compliance indicators. They give evidence of project processes.

The indicators of results or output are also required to give evidence on results. They should give early indication that the project is offering relevant services and that direct objectives (the purpose and the goal) are likely to be met.

It is important to identify how beneficiaries are expected to respond to project services, because the project managers will need evidence of that response if they are to modify their activities and strategies.

Several factors need to be kept in mind when selecting indicators. They should be:

- (i) **Specific:** Indicators should be specific in terms of magnitude. Terms such as “an increased number” are of little value as part of an indicator since it does not specify what sort of increase is called for. After all, the planner might have in mind a change from 100 to 110 or a change from 100 to 400. Furthermore, when an increase to specific number is called for – say 14 species of endemic trees observed in the survey carried out in 1999 – it is necessary to indicate how many species exist at the beginning of the project.

- (ii) **Independent:** Each development and immediate objective must have its own set of indicators. Since development and immediate objectives will be different, and each indicator is expected to reflect evidence of an achievement. It follows that the same indicator cannot normally be used for more than one objective.
- (iii) **Factual:** Each indicator should refer to fact rather than a subjective impression. It should have the same meaning to a project advocate as well as an informed sceptic.
- (iv) **Valid:** The indicators taken together should reflect the effect of the project rather than the effect of external factors.

**Based on obtainable data:** Indicators should draw upon data that are readily available or that will be collected as part of the project administration. Table 3 below gives the REMP **hierarchy objective indicators**

**Table 3: REMP Hierarchy Objective Indicators**

<b>Objective</b>	<b>Indicator</b>	<b>Means of Verification</b>
Goal: Conservation of the Lower Rufiji Forests, Woodlands and Wetlands leading to sustainable development with enhanced living standard of inhabitants	<ul style="list-style-type: none"> <li>- Continuing existence of critical ecological functions in Rufiji district</li> <li>- Amount of increase in household income</li> <li>- Amount of increase in employment from non farm activities</li> <li>- Percentage of household with sufficient food</li> <li>- Increase in existing knowledge of villagers on value of natural resources</li> <li>- No of men and women who adopted new land use practices and income generating activities</li> <li>- Conservation policy for the ecosystem and by-laws that is supported and promoted by all stakeholders</li> <li>- Increase in quality of housing</li> <li>- Proportion between men and women who have followed a specific training.</li> <li>- The women's accessibility to new technologies compared to that of men.</li> </ul>	<ul style="list-style-type: none"> <li>- Comparison with baseline data</li> <li>- Maps</li> <li>- PRA</li> <li>- Field observation</li> <li>- Policy document</li> </ul>
Purpose: Improved Natural Resources Management by District Administration, Resource users and other stakeholders	<ul style="list-style-type: none"> <li>- Availability of efficient and implementable natural resource management plans developed, accepted by stakeholders and incorporated into regular planning processes</li> <li>- Availability of District environmental management plan that has been tested and can be assured of working by the end of phase one.</li> <li>- Number of village natural resource management plans that feed into the district environmental management plan</li> </ul>	<ul style="list-style-type: none"> <li>- Maps and descriptive environmental management plans</li> </ul>

**Table 3 continued.**

<b>Objective</b>	<b>Indicator</b>	<b>Means of Verification</b>
Result 1: A knowledge base to support environmental planning and sustainable development established	<ul style="list-style-type: none"> <li>- Number and type of assessment conducted on ecosystems and their users that contribute to sustainable environmental planning.</li> <li>- Number and type of assessment of socio-economic condition of the people inhabiting and using the natural resources of the project area that generate information for sustainable that generate information for sustainable environmental planning</li> <li>- Type of information generated to form a data base for environmental planning and sustainable development.</li> </ul>	<ul style="list-style-type: none"> <li>- Ecosystem assessment documents</li> <li>- Socio-economic assessment document</li> <li>- Retrievable data base with required information</li> </ul>
Result 1.1: Natural resource (aquatic, forest vegetation, wildlife, hydrological) assessed	<ul style="list-style-type: none"> <li>- Threatened or extinct species % of total known species</li> <li>- Area, volume and structure of forest</li> <li>- Amount of Land conversion from natural state</li> <li>- Timber harvest as % of productive capacity</li> <li>- Stresses on bio-diversity components and the benefit from them</li> <li>- Degree of deforestation (scale1-5)</li> <li>- Relation between the area conserved and cultivated land.</li> <li>- Disappearance of certain types of critical flora and fauna</li> <li>- Deterioration of quality of water and soil (scale1-5)</li> </ul>	<ul style="list-style-type: none"> <li>- Assessment documents</li> <li>- Maps</li> <li>- Surveys</li> </ul>
Result 1.2: Key socio-economic and cultural factors assessed	<ul style="list-style-type: none"> <li>- The uses of and the degree of dependence on forest, woodland and wetlands resources</li> <li>- Population distribution, growth rate and immigration patterns</li> <li>- Participation of all men and women involved (response, making recommendations, etc.) in decision making during the planning, execution and monitoring of the natural resources.</li> <li>- % of migrants ( temporary/permanent)</li> <li>- Access to resource and resource ownership by men and women</li> <li>- Degree of men and women participation and decision making at both household and community level</li> <li>- % of household with sufficient food</li> <li>- Traditional methods of environmental management</li> <li>- Saving and investment rate of men and women.</li> <li>- % of cultivation owned by women in relation to men</li> <li>- is there an equal division of the benefits among men and women involved in the project</li> <li>- proportion of men and women who have followed each project specific training</li> </ul>	<ul style="list-style-type: none"> <li>- Maps</li> <li>- Assessment documents</li> <li>- Data base</li> </ul>

**Table 3 continued.**

<b>Objective</b>	<b>Indicator</b>	<b>Means of Verification</b>
Sub Result 1.3: Land use and environmental issues assessed	<ul style="list-style-type: none"> <li>- Current area and % of land that is converted to cultivation (cropland, pasture)</li> <li>- Current area and % of land converted to settlement, infrastructure or other human structure</li> <li>- Current area that is unconverted</li> <li>- The extent of soil degradation</li> <li>- Rate of timber extraction from forests</li> <li>- How much pressure is on fisheries</li> <li>- How much harvesting pressure is on land, animals and plants</li> <li>- Acquisition and opening up of natural resources</li> <li>- Mineral exploitation</li> <li>- Rate of tourism</li> </ul>	<ul style="list-style-type: none"> <li>- Maps</li> <li>- Assessment documents</li> <li>- Field visits and observations</li> <li>- Tourist records at control gates</li> </ul>
Sub Result 1.4: An information resource centre established and being effectively used	<ul style="list-style-type: none"> <li>- Number, type and relevance of plans and report documents available in the resource centre.</li> <li>- Documents on assessments and studies made</li> <li>- Documents on methodologies and lessons drawn available</li> <li>- Technical reference books relevant to the project available</li> <li>- Availability of Copies of leaflets, pamphlets and posters distributed to villagers</li> <li>- Availability of Documents from other collaborating institutions and projects</li> <li>- The amount of information available in Swahili language</li> <li>- Availability of Videos and photo albums documenting project activities and field situation.</li> <li>- Number and type of people using the centre</li> <li>- Degree of women use of the REMP information centre in relation to men.</li> </ul>	<ul style="list-style-type: none"> <li>- Library in place</li> <li>- Type and quality of information documents available in the resource centre</li> <li>- Library Register of users.</li> <li>- Library catalogue</li> </ul>
Result 2: Key stakeholders aware of environmental values, lessons learned and using information to improve management	<ul style="list-style-type: none"> <li>- The degree to which conservation policy and bye-laws are supported and promoted by all stakeholders</li> <li>- Adoption rate of “wise use” practices introduced</li> <li>- The degree to which villagers are raising issues pertaining environmental conservation in the meetings</li> </ul>	<ul style="list-style-type: none"> <li>- Field observation</li> <li>- Village meeting minutes</li> </ul>

**Table 3 continued.**

<b>Objective</b>	<b>Indicator</b>	<b>Means of verification</b>
Sub Result 2.1: Key decision/policy makers at ward , district, regional and national levels using information in decision making for improving NRM conservation	<ul style="list-style-type: none"> <li>- Number of decisions made to improve natural resource management and conservation based on the outcome of natural resource assessment and socio-economic assessment in the project area</li> <li>- The extent to which critical issues on natural resource considered in issuing of licences for use of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>- Meeting minutes</li> <li>- Field surveys</li> </ul>
Sub Result 2.3: Promote lessons learned internationally	<ul style="list-style-type: none"> <li>- Number of papers published and distributed internationally/Number of papers presented to international fora.</li> </ul>	<ul style="list-style-type: none"> <li>- Publications in the resource centre.</li> </ul>
Result 3: Improved capacity of key stakeholders and local institutions for NR management and conservation.	<ul style="list-style-type: none"> <li>- Are there clear signals that the capacity to solve problems and take initiatives is stimulated in the target group and the district level.</li> </ul>	<ul style="list-style-type: none"> <li>- Field reports</li> </ul>
Sub Result 3.1: Counterpart and key government staff employed within the district with improved environmental management knowledge and skills	<ul style="list-style-type: none"> <li>- Quality of technical materials prepared and disseminated by counterpart and key government staff</li> <li>- Degree of participation of counterpart and key government staff in the development of the Rufiji Natural Resource Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>- Documents/material prepared</li> <li>- Workshops</li> <li>- Meetings/seminars</li> <li>- Ideas given</li> </ul>
Sub Result 3.2: Equipment and facilities to enable improved environmental management provided	<ul style="list-style-type: none"> <li>- Amount of required equipment acquired and functional</li> </ul>	<ul style="list-style-type: none"> <li>- Stock inventory</li> </ul>
Sub Result 3.3: Local institutions to enable NRM&C developed	<ul style="list-style-type: none"> <li>- Existence of Environmental management team</li> <li>- Existence of Village natural resource management team</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- EMT meeting schedules</li> <li>-</li> <li>- Plan of activities</li> </ul>
Sub Result 3.4: Critical resource users have knowledge and skills for improved environmental management	<ul style="list-style-type: none"> <li>- Participation of all persons involved (response, making recommendations, etc.) in decision making during the planning, execution and M&amp;E of the natural resource management.</li> <li>- Is there a contribution of resource users in the field of finance, labour, and knowledge</li> <li>- number of times that the women have asked for information and/or advice from extension staff on the project.</li> </ul>	<ul style="list-style-type: none"> <li>- Field surveys</li> <li>- Comparison with baseline data</li> </ul>
Sub Result 3.5: Proposal for second phase of project developed	<ul style="list-style-type: none"> <li>- Project phase II proposal</li> </ul>	<ul style="list-style-type: none"> <li>- Document</li> </ul>
Result 4: Environmental planning and monitoring processes established and an initial environmental plan developed	<ul style="list-style-type: none"> <li>- are there Planning and monitoring systems developed</li> <li>- the degree of Environmental plan development</li> </ul>	<ul style="list-style-type: none"> <li>- E&amp;M document</li> <li>- Progress report</li> </ul>

**Table 3 continued.**

<b>Objective</b>	<b>Indicator</b>	<b>Means of Verification</b>
Sub Result 4.1: District (delta and flood plan) Environmental Management Plan developed	– Maps and Environmental Management Description plan for district (delta and flood plain)	– Maps – Description document
Sub Result 4.2: Pilot village environmental management plans developed	– Maps and Environmental Management Description plan for the pilot villages	– Maps – Description document
Sub Result 4.3: Environmental and socio-economic monitoring system established	– Environmental and socio-economic monitoring system in use	– E&M document
Sub Result 4.4: Legislation and policies issues	– Relevant Policies formulated – Relevant Bye-laws for environmental conservation and sustainable development	– Policy and by-law documents
Sub Result 4.5: Environmental planning integrated with other district and national planning and policy mechanisms	– Integrate plans developed – Reviewed Environmental Management policy	– District plan and reports
Result 5: Wise use activities researched, developed, pilot and adopted	– % of farmers applying wise use practices.	– Field surveys
Sub Result 5.1: Wise use pilot activities identified, designed and tested	– Number of pilot wise use activities tested	– Reports
Result 6: Project effectively managed, monitored and evaluated	– Extent of achievement of the project planned activities	– Progress report
Sub Result 6.1: Project management systems established and maintained	– Availability of clear Project Management Information system in place	– Management forms – Frequency of reports
Sub Result 6.2: Project strategic and annual work planning completed	– Extent of achieving planned targets	– Reports (achievement vs. planned targets)
Sub Result 6.3: Project objectives and activities monitored and evaluated	– Trend of Performance and impact of the project determined	– Progress report – Evaluation report
Sub Result 6.4: Project equipment and facilities acquired and maintained	– Number and type of project equipment and facilities received and functioning	– Control forms

### **5.1 Activity Output Indicators**

The other level that needs indicators is the **activity level**. The indicator that is suggested to be used is its accomplishment, i.e. whether it was undertaken as planned or not. The means of verification for activity execution is the project report whereby the achievement of planned activities are reported, i.e. date by which a certain activity is completed. Also the report produced from the activity undertaken is

a means of verification, e.g. survey reports, PRA reports, assessment report, financial records, extension materials and village reports.

**The indicators for input level are:**

- The number of equipment procured and received,
- The amount of budget expenditure against budget
- The amount of staff time spent of activities
- The availability of technical assistance required

Input indicators can be verified by means of :

- Project equipment and facilities inventory:
- Financial reports
- Staff field visit reports

Table 4 shows type and elements of input output that are to be monitored:

**Table 4: Input and Output Indicators**

Type	Element to be Monitored	Data Collection Methods	Data Analysis	Frequency
Inputs	Technical Staff - Arrival date - Work plan - Leave	- Records - Staff meetings records - Record - Record	- Recording - Network analysis - Accounting - Network analysis - Recording	Daily
	Equipment - Arrival date - Quality - Cost - Stocks held - Maintenance	- Technical check - Accounts - Bookkeeping records - “ - Records	- Accounting - Stock management - Accounting	
	Project Inputs - Arrival date - Quality - Cost - Stock held	Ibid	Ibid	
	Fuel consumption - km used - cost per km - consumption/km	Requisition & issue Records Logbook Local purchases	Recording “ “ “	
Activity Operations	Recurrent Budget - Receipts - Expenses	- Accounts - Accounts	- Accounting & Audit - Accounting & Audit	Daily
	Activities Achieved - % Activity Quality - Services Activity cost .....	- Internal reports - Technical checks - Beneficiaries interviews - Cost accounting	- Aggregation & network - Comparison with standards - Cost accounting	Quarterly

## **5.2 Impact indicators**

The Ultimate goal is stated as conservation of the Lower Rufiji forests woodlands and wetlands leading to sustainable development with enhanced living standard of inhabitants.

Impact indicators are therefore concerned with the goal hierarchy level. The issues of poverty reduction, and sustainability have to be reflected on this level. Increase in knowledge of villagers on the value of natural resources and continuing existence of critical ecological functions in Rufiji district refers to sustainability. Increased household income, % of household with sufficient food refers to enhancement of living standard of inhabitants.

## **6 Data collection strategies**

Data required to construct the above indicators generally should be gathered from the records and documents kept at the Project Office at Utete. A special consideration should be placed on the data for the construction of indicators of the project purpose.

REMP Project was formulated to address the problem of increased pressure on the critical natural resource. The data collected for this component should lead to indicators on the pressure forces, state and response.

Pressure indicators are necessary to assess stresses on biodiversity (the problem that the project is set to address). The response indicators, the measure taken to implement the conservation of biodiversity and the state indicators which are most direct and reliable measures of results and hence of performance.

The main concern for REMF should be to establish the baseline data that is to be used:

- (i) For developing villages and the District Environmental Management Plan,
- (ii) As a bench-mark for comparison at a later time in order to see the changes and the impact that the project has made on the livelihood of people inhabiting the project area (socio-economic changes),
- (iii) As a reference to assess the accomplishment of the project purpose and contribution to the project goal in evaluation.

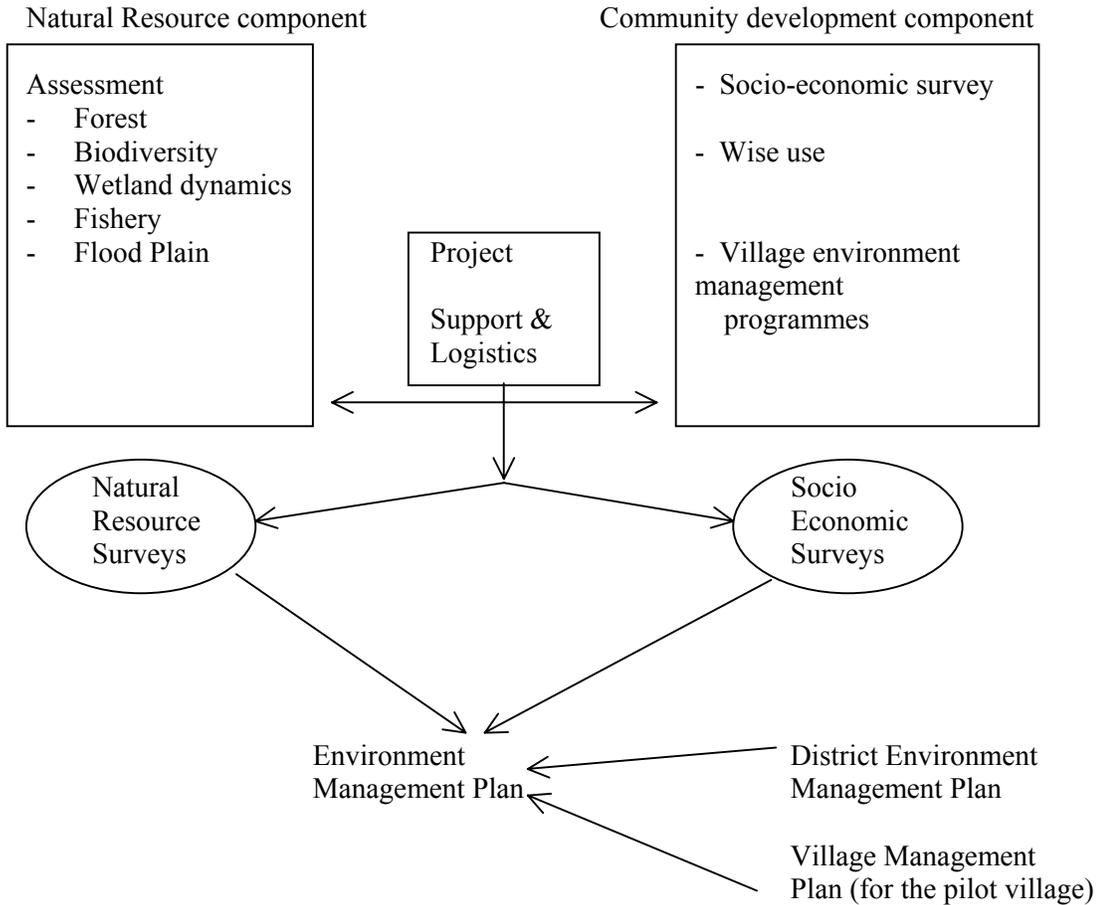
Baseline data is therefore important for all stakeholders of REMF.

There are three main sub-components in REMF:

- The natural resources sub-component
- The community development component
- The project management sub-component (that supports and provides logistics to the other two sub-components).

In principle, the integrated conservation and development plan will draw from two sub-components as shown in Figure 3 below:

Figure 3: REMP Components



### 6.1 Socio-economic and Natural Resource Assessment

REMP’s goal is to improve and maintain the well being of people and their ecosystem. People depend on the ecosystem which surrounds and support them but a healthy ecosystem is no compensation if people are victims of poverty or misery. Human wellbeing is a requirement for sustainability which is determined by the standard of living. Ecosystem wellbeing is a requirement because it is the ecosystem that supports life and makes possible any standard of living.

### 6.2 REMP Target Group

The main target group of REMP is the villagers residing in the project area, depending on the natural resources for their livelihood. However, there is no such thing as an undifferentiated target group where the same needs and interest exist. Moreover, interest, cannot be based on sex differences as different interests exist in women and men’s groups. This means that in social economic assessment, data collection should be carried out in a gender disaggregated way. Data collection should be collected from:

- heads of households
- de facto heads of households
- men
- married women
- young and old

Women heads of households include single women and widows. De facto heads of households are those who are married but not living with husbands due to polygamy or due to men migration and working away from home while married women are those living in the same house with their husbands.

Gender therefore should be mainstreamed in the project. it should not be viewed separately. Therefore all data collected should be gender disaggregated.

To facilitate getting gender desegregated data, a method of stratified sampling should be employed, and in conducting PRAs all these categories of target group should be included.

## **7 Database**

### **7.1 Method of Data Collection**

#### **7.1.1 Project Field Records**

Indicators of inputs and processes should come from project management records originating from field sites. The field extension workers should gather the information for M&E while carrying out other activities. The field worker record information in their diary for monthly and quarterly reports. Initially this could be felt as awkward and time consuming but later keeping a diary will facilitate the writing of monthly reports and consequently the planning of future activities. The data collected about villagers should include sample socio-economic characteristics such as age, sex (in a gender desegregated manner) to improve the scope of analysis.

#### **7.1.2 Surveys and Studies**

To measure output and impact may require the collection of data from sample surveys or special studies (including, where appropriate participatory methods). Studies to investigate staff skills and training beyond those needed for regular collection of data to create a time series. Special studies may be more manageable by project TA directly, or contracted to university or consultants if the special studies are to make comparisons with data from other surveys, it is vital that the same methods be used for data collection.

Changes in methods for data collection, such as interviewing household members in one survey and only heads of households in another and changes in techniques such as measuring crop output in one survey and collecting farmers' estimates in another create problems which can invalidate any comparison intended to show changing performance.

Table 5 & 6 below summarise the data required, sources and means of collection and frequency for each sub-component of REMP above.



**Table 5: Socio-economic assessment database (continued)**

<b>Indicator</b>	<b>Data Required</b>	<b>Source</b>	<b>Means of Collection</b>	<b>Collection Intervals</b>
<b>Living Condition</b>	<b>Type of housing</b> <ul style="list-style-type: none"> <li>- Household amenities</li> <li>- Geographical mobility (transport)</li> <li>- Social services (access &amp; affordability)</li> <li>- Primary school</li> <li>- Dispensary</li> <li>- Mosque, church</li> <li>- Milling machine</li> <li>- Shops</li> <li>- Football playing ground</li> <li>- Violence and theft</li> <li>- Menace from wild animals</li> <li>- Ownership of capital for production (nets, livestock, shops)</li> </ul>	<b>HH surveys</b>	<b>Core welfare indicator questionnaire</b>	<b>After every two years</b>
<b>Land use</b>	<b>Land use history</b> <ul style="list-style-type: none"> <li>- Dominant land use problems</li> <li>- Household energy needs &amp; sources</li> <li>- Non timber products by type and amount of production</li> <li>- Farming systems</li> <li>- Labour &amp; equipment used at household level</li> <li>- Local use traditionally made of trees, forests, and household resources</li> </ul>	<b>Village focus group</b> H.H. Surveys  H.H. Surveys  H.H. Surveys  PRA	<b>Interviews</b>	<b>After every two years</b>
<b>Size of Household</b>	<b>Number of dependants in H.H.</b> <ul style="list-style-type: none"> <li>- Able bodied and in active production Vs. not able bodied and not active in production</li> </ul>	H.H. Surveys	Interviews	Yearly
<b>Status of head of household</b>	<b>Age</b> <ul style="list-style-type: none"> <li>- Education level</li> <li>- Gender</li> <li>- Local position</li> </ul>	H.H. Surveys	Interviews	Yearly
<b>Permanence of Settlement</b>	<b>Geographical origin</b> <ul style="list-style-type: none"> <li>- Duration of present settlement</li> <li>- Rate of immigration</li> </ul>	H.H. Surveys “ “	Interviews	Yearly
<b>“Wise Use” Adoption</b>	Number of men and women in the village Number of men and women adopted alternative enterprises Plot size	Field Survey	Field observation Interviews Field management (sampling techniques)	Quarterly

**Table 5: Socio-economic assessment database (continued)**

<b>Indicator</b>	<b>Data Required</b>	<b>Source</b>	<b>Means of Collection</b>	<b>Collection Intervals</b>
Perceived benefits of Conservation	Women and men views (qualitative) on the benefits perceived.	Village Focus Group	Measuring changes in attitudes towards conservation Development interviews	Yearly
Participation in decision making	Prevailing customs and social attitudes regarding the decision making pattern at HH and community level % if non representation and participation in village environmental committee and VG.	Village Focus Group  Field Survey	PRA  Village records	
Major ecosystems of the land – whether ecosystems continue to be lost, which ones and to what extent	Current area unconverted Area converted to cultivation (rice farming, plantations) Area converted to settlement Infrastructure & other human structures Mangrove area converted to rice farming Degree of fragmentation of the unconverted portion of each land ecosystem % of each land with a high frequency of introduced spp Status of trend of ecological communities within each ecosystem	Land cover and land use map of project area	Aerial surveys and remote sensing and ground truthing	Yearly

**Table 6: Natural Resource Assessment Database**

Indicator	Data Required	Source	Means of Collection	Collection Intervals
<b>Status and trend of species</b>	<b>Rising number of plant, animals and other species threatened with extinction</b> Usefulness of available species – Supplying food – Raw materials – Medicine – Recreation resources		<b>Biodiversity inventory using “barefoot” collectors</b>  Car as might be advised by consultant	
<b>Woodland areas rate of timber and logs extraction from forests</b>	<b>Size of logs sawn</b> – Counting stumps for cut trees for the whole project area	Field Surveys	Counting and measuring stumps	
<b>Pressure on fisheries</b>	<b>Number of fish per fish catch per fishing area</b> – Size of fish per fishing area – Fishing methods, scale and impact of destruction – Breeding patterns	Field Surveys	Sampling	
<b>Extracted resources (controlled)</b>	<b>Killed or removed alive for food</b> – Timber – Fuel (fuel-wood & charcoal) – Medicine	Village and District license records	Secondary data	
<b>Extracted resources (uncontrolled)</b>	<b>Killed or removed alive for food</b> – Timber – Fuel (fuel-wood & charcoal) – Medicine	Field Surveys	Comparative Data Total - controlled	
<b>Effect of upstream development</b>	<b>Upstream/downstream linkages</b> – Existing and proposed activities within the catchment on forest, woodland and wetland – River siltation	Views  River	<b>Workshops at all those interested in the upstream/downstream linkages</b>  measurement	<b>Every two years</b>
<b>Water quality</b>	Safeness (contamination)	River	Analysis	yearly

REMP natural resource database and socio-economic database have been established.

Establishing a database is not the end. Data should be updated frequently to make it valid and relevant to decision making. It therefore needs to be updated to the proper timing for decision making. Data collection and updating should therefore be lined up with the frequency of the communication of information to the user. Some data will be collected from secondary sources by the district staff.

## 7.2 Data Analysis

Data collected should be analysed and interpretations made to be used to facilitate decision making. Valuable data can be rendered useless by inability to turn them into usable information.

For the decision makers, simple explanatory analysis should be used to carefully present tabular materials, graphs or maps and not complex statistical techniques.

## 8 M&E Process Approach & Participatory Tools

The following community participatory monitoring techniques should be used to monitor the impact of the project.

- To consider villagers' views of what has changed. This is useful in establishing direction and severity of a particular problem issue. This tool can be used to establish trends in their communities on soil erosion, deforestation, increase of rice cultivation area, flood production and population growth, availability of fuel-wood, time saved, income, rainfall. Using these data as baseline one can ask community groups to comment on what has happened concerning the more important issues since the work on community action plan has began. While the responses will not provide numbers they will yield very interesting discussions. Further they will enable many different voices to be heard in public for setting priorities.

Trend lines work well to monitor qualitative data. The succinct form of information presentation of trend line make it easy for villagers to "report" trend data to district or national organizations. This is one way they can influence policies and decisions at district and national levels.

### 8.1 Comparative Institutional Analysis

This tool can also be used to track changes in community performance and to measure the changes brought about by the project. The techniques are to let the villagers:

- (i) Determine the importance of effectiveness of each village institution;
- (ii) Assign a circle with size calibre to the institution's or group significance;
- (iii) Arrange the circles in ways to show which group co-operate with the another

Like the trend lines, comparative institution analysis are good tools to monitor community based development. They are visual and draw many people into intense and interactive discussions.

The charts prepared portray institutional capacities and capability, a better way to bring transparency to community governance.

- **Recharge village energy:** Public discussions to monitor change keep people aware of and involved in Village environment plan activities.
- **Fine Tuning the plan:** Continued discussions enable community leaders to adjust the goals of local action plans in accordance with changing times and findings of the evaluations.
- **Importance of tracking variables:** Creating diagrams and monitoring change help the community to see the importance of record keeping and the use of good management principles.
- **Communicating with outside agencies:** Information can also be made available to donor, NGO and other external groups.
- **Reporting up to districts and nation:** Similar to using trend lines, institutional diagrams enable community groups to report their condition and accomplishments to higher national decision making levels.

- **Strengthening accountability:** Perhaps most important, public assessments of changed institutional capacities help to maintain accountability among groups inside the community as well as external groups that have made commitments to village action plans.

All of these points are important. The principal virtue of institutional assessments is to inform all members of the community that good management means keeping track of what is on in the community. It is taking a periodic check of the community groups and determining what needs to be corrected. If community groups are to become full partners in development planning and action, they too will have to become skilled in keeping track of their own progress.

## **8.2 Re-ranking Problems and Solutions to Reflect Changing Priorities**

With this tool, the initial ranking, established when PRA assessment is first conducted become the baseline. Re-ranking causes people to come together, think about why things are evolving as they are, and what has been responsible for these changes. It is a time to consider what the future might hold and how best to amend or act in order to perform more effectively.

## **8.3 Improved Record Keeping**

Task records, action plan follow up and financial tracking records can be kept by the community. These can be used to monitor community contribution, in labour and materials and in measuring changes in attitudes towards conservation and development. Changes in attitudes towards conservation is a fundamental change required for community group to assume large roles in designing and implementing the project. The tool can best be used for monitoring the degree of awareness on the value of natural resources.

A focus group discussion could be used to measure changes in attitudes towards conservation. The environmental committee can use time to learn how people are feeling, what attitudes they are expressing, and what might be done if problems are identified. Such attitudes are essential if livelihood resources are to be managed in sustainable and productive ways.

## 9 Modes of Communicating M&E Results

M&E results should be communicated in a way that could be readily understood and used. Outputs from the management information system can be communicated in:

- written reports,
- verbal presentations,
- visual displays.

### 9.1 Types of Written Reports

- (i) **Regular Progress Reports:**
  - Every 6 months to the donor
  - Every 3 months to the district

This is the minimum reporting that should be required for the project implementers to be accountable.
- (ii) **Financial Report and Audit:-**

On a monthly basis. A basic financial report should be made transparent at the district level to avoid accusation of mismanagement of funds.
- (iii) **Audit Report:**

-Yearly basis
- (iv) **Tour Reports by Field Visits:**

These will be prepared by field staff. They will give observation and impressions from the field.
- (v) **Reports from Project Visitors:**

Field staff should insist e.g. from IUCN, RNE, etc. submit a short report giving their impressions, the more external comments available, the fuller the impression one can get of the project.
- (vi) **Reports by external consultants:**

Where consultants are employed, they should maintain their contact with the project over a long period and participate in the reporting, reviewing and evaluating the process rather than be employed for short single visits. For this reason, local consultants have the advantage of being readily accessible for consultations.

## 10 Administrative and Control Forms

A number of Administrative and Control forms for input monitoring have been developed and are being used by REMP for input monitoring. These forms are :

- Rufiji Environment Management Project Accounts Voucher
- Expenses Retirement Record
- Payment Voucher
- Travel Allowance Voucher
- Non-Receipted Payment Voucher
- Miscellaneous Claim Form
- Stock Record Form
- Upokeaji wa Vifaa Vijijini
- Requisition and Issue Note
- Personal Record Form
- Leave Request Form
- Extra Hours Record Form
- Fuel Purchase Order
- Vehicle Log Sheet
- Disclaimer and Passenger Manifest Form
- Mail Dispatch Sheet

**These forms are relevant and should continue to be used in input monitoring. These forms are attached in annex I .**





**PAYMENT VOUCHER**

Voucher No. ....

Rufiji Environmental Management Project (REMP)  
 P.O. Box 13513 Dar es Salaam, Tanzania  
 P.O. Box 11 Utete, Rufiji, Tanzania  
 Tel. No. 900 Ext. 44, Utete, Rufiji  
 Tel. No. 73731, Dar es Salaam

Date...../...../.....

<b>Cash/Cheque paid in favour of:</b>		
Cheque No. ....		
<b>Being Payment for:</b>		
	<b>Amount</b>	
	Tsh.	Cts.
Total		

**Total Amount in Words**

.....  
 .....

Budget Line	Allocation According to Budget Line	Amount	
	Description	Tsh.	Cts.
Total			

**Prepared/Checked by  
 Accountant**

**Authorised by  
 PM/CTA**

**Payee**

.....

.....

.....

**REMP**

**TRAVELLING ALLOWANCE/ADVANCE REQUEST FORM**

Name of Employee..... Date:.....

Position: .....

Signature: .....

Journey From..... To: .....

Purpose: .....

Approved by: .....

Expenses Details	Dates		No. of Nights	Rate	Budget Line	Amount Tsh.
	From	To				
1. DEAs/Per diem: City and Municipality						
District Towns						
Villages, etc.						
2. Advances/Imprest						
3. Diesel No. of Lts.						
4. Petrol No. of Lts.						
Other Expenses:						
					Total	

Outstanding Advances T.Shs.  
.....

Checked by: ..... Date:  
.....

**Accountant/Administrator**

Authorised by: ..... Date:  
.....

**CTA/Project Manager**

## Rufiji Environmental Management Project (REMP)

**Non-Receipted Payment**

Date:

.....

Name.....

Being payment  
for.....

Amount in words.....

.....

Amount in Figures

.....

Signature of Payee

.....

Paid by

.....

**Non-Receipted Payment**

Date:

.....

Name.....

Being payment  
for.....

Amount in words.....

.....

Amount in Figures

.....

Signature of Payee

.....

Paid by

.....

**Rufiji Environmental Management Project (REMP)**

**MISCELLANEOUS CLAIM FORM**

Name of Claimant: ..... Date:.....

Nature of work/services rendered.....

.....

.....

.....

Amount claimed T.Shs. ....

Claimant's Signature .....

Approved by: .....

PM/CTA



**REMP**

**The Rufiji Environmental Management Project  
Utete, Coast Region**

P.O. Box 13513  
Dar es Salaam  
Tanzania

Tel. 051 73731 Dar  
051 900 Ext.44 Utete, Rufiji  
E-mail: [remputete@twiga.com](mailto:remputete@twiga.com)

**UPOKEAJI WA VIFAA VIJIJINI**

JINA LA KIJJI: ..... TAREHE: .....

NA.	AINA YA VIFAA	IDADI

Ninathibitisha upokeaji wa vifaa vilivyotajwa hapo juu kutoka kwa Mradi wa Usimamizi wa Mazingira Rufiji (MUMARU) kwa ajili ya uendelezaji wa Usimamizi wa Mazingira katika vijiji vyetu.

Jina: ..... Sahihi: .....

Cheo: .....

**REMP STORES REQUISITION AND ISSUE NOTE**

NO.	ITEM	QUANTITY REQUESTED	QUANTITY ISSUED	DATE RETURNED BACK TO STORE	INITIALS	COMMENTS

**REQUESTED BY:** .....

**ISSUED BY:** .....

**APPROVED BY:** .....(Administrator)

**DATE:** .....

**RUFIJI ENVIRONMENT MANAGEMENT PROJECT  
(REMP)**

**PERSONAL RECORD FORM**

- 1. Name of Employee .....
- 2. Designation:.....
- 3. Date of Birth: .....Sex: Male  Female:
- 4. Place of Domicile: .....
- 5. Permanent Address: .....
- 6. Marital Status: .....
- 7. Number of Children below 18 years:

No.	Name	Date of Birth/Year
- 8. Date of Engagement:.....
- 9. Contract Period:.....
- 10. Date of Confirmation: .....
- 11. Monthly Basic Salary:.....
- 12. Education/Qualification: .....
- Name of School: .....
- Date Attained: .....
- 13. Profession/Qualification:.....
- Name of College/Institution: .....
- .....
- Date Attained: .....
- 14. Name of Last Employer: .....
- Period Employed From: ..... To:.....
- Reasons for Leaving:.....
- Employee's Signature: ..... Date: .....

**RUFIJI ENVIRONMENT MANAGEMENT PROJECT  
(REMP)**

**Utete, Coast Region**

**LEAVE REQUEST FORM**

**Name of Employee:**

.....

Starting Date	Ending Date	Total Working Days Requested	Previous Balance	New Balance

Signature of Applicant: .....Date: .....

---

Leave balance confirmation by Administrator..... Date: .....

Salary Advance Paid:

.....

Leave Travelling Allowance Paid: .....

Project Manager's Approval: ..... Date: .....



**REMP**

**The Rufiji Environment Management Project  
Utete, Coast Region**

Date: .....

P.O. Box 13513  
Dar es Salaam  
Tanzania

Tel: 051-73731 Dar  
051 900 Ext. 44 Utete, Rufiji  
E-mail: [remputel@bushmail.net](mailto:remputel@bushmail.net)

**FUEL PURCHASE ORDER**

No: .....

Date:.....

To: M/S.....

Please supply us with the following items as per the terms of our agreement.

S.No.	Item	Unit	Qty. Ordered	Qty. Supplied	Unit Price	Value T.Shs.
1.	Diesel	Lts.				
2.	Super Petrol	Lts.				
3.						
4.						
5.						
<b>TOTAL</b>						

Authorised Signature..... Goods collected by:.....

Vehicle Reg. No. ....

Kindly forward your invoice accompanied with the original copy of this order to the Project Manager.

**NB: Not valid without the official project rubber stamp.**

**RUFIJI ENVIRONMENT MANAGEMENT PROJECT  
(REMP)  
Vehicle Logsheets**

Vehicle Registration Number:.....

Vehicle Type: .....

Driver's Name: .....

Date	Start Time	End Time	Journey From	Journey To	Purpose of Journey	Responsible Officer	Mileage Reading at start	Checked oil level	Checked acid battery level	Checked tyre pressure	Repairs done	Fuel/oil bought	Driver's initials

Driver's Signature: .....

Date: .....

Checked by Administrator: .....

Date: .....

# REMP

## The Rufiji Environment Management Project Utete, Coast Region

### DISCLAIMER AND PASSENGER MANIFEST FORM ORODHA YA ABIRIA NA KUKATAA JUKUMU

IF YOU TRAVEL IN THIS VEHICLE NEITHER THE DRIVER NOR THE PROJECT TAKES ANY RESPONSIBILITY OVER PASSENGERS IN CASE OF ACCIDENTS OR ANY OTHER UNFORTUNATE OCCURANCE THAT MAY CAUSE DAMAGE OR LOSS OR PASSENGERS PROPERTY OR LIFE. THE DRIVER UNDER INSTRUCTIONS TO ENSURE THAT ANY PASSENGER BOARDS THIS VEHICLE, SIGNS HIS/HER DETAILS ON THE SPACE PROVIDED BELOW AND ACCEPT THESE TERMS PRIOR TO COMMENCEMENT OF THE JOURNEY. THE DRIVER IS ALSO UNDER INSTRUCTION NOT TO OVERLOAD THE VEHICLE EITHER WITH PERSONNEL OR PROPERTIES.

WHOEVER IS ASSISTED BY THE DRIVER SHOULD GIVE MAXIMUM COOPERATION. THE DRIVER IS NOT ALLOWED TO CHARGE FARE.

UKISAFIRI NA GARI HII SI DEREVA WALA SI MRADI UTAKAOCHUKUA JUKUMU LA AINA YOYOTE IKIWA GARI HII ITAPATA AJALI AU KUTATOKEA TUKIO LOLOTE LITAKALOSABABISHA KUPOTEZA MAISHA AU MALI YA MTU ALIYEPAKIWA. DEREVA WA GARI AMEELEKEZWA KWAMBA KILA ANAYEPANDA GARI HII NI LAZIMA ATOE MAELEZO YAKE NA KUSAINI KUKUBALIANA NA SHARTI HILI KABLA YA SAFARI KUANZA. DEREVA PIA AMEELEKEZWA KUTOKUBALI KUJAZA ABIRIA AU MIZIGO MINGI KUPITA UWEZO WA GARI HII. DEREVA HATAKIWI KUTOZA NAULI. MTU YEYOTE ATAKAYESAIDIWA KWENYE GARI HII ATAKUBALI KUTOA USHIRIKIANO KATIKA KUTEKELEZA MAAGIZO HAYA.

TAREHE DATE	JINA/NAME	ANWANI/ADDRESS	SAHIHI/SIGNATURE

