

FORESTERS' NOTES FOR SUPPORTING  
COMMUNITY BASED MONITORING OF  
NATURAL RESOURCE USE AND FOREST QUALITY



## CREDITS

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The Village Natural Resources Committees and Patrol Guards in the 23 MEMA Project villages have tested field implementation through November 2002 – March 2003 and have commented on data forms and methods. These villages are Chamdindi, Ifuwa, Ikengeza, Ilamba, Isele, Itagutwa, Izazi, Lulanzi, Lusinga, Kidabaga, Kinywang'anga, Kitapilimwa, Kiwele, Magome, Makatapura, Makuka, Mangawe, Mfyome, Migoli, Mkulula, Nyang'oro, Udekwa and Usolanga.

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# 1. INTRODUCTION

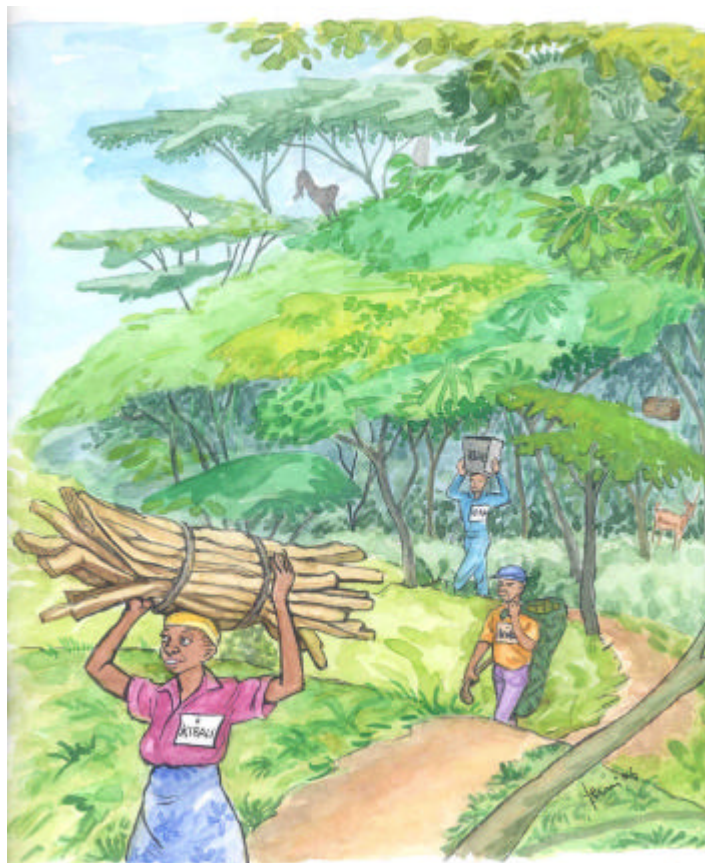
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Natural forests that were previously managed by Central and Local Government are now being managed jointly between district authorities and local communities. The local communities located adjacent to the forests are given new rights to use their natural resources. Along with these new rights come new responsibilities. Natural resources should be used sustainably, meaning that the present generation should derive benefits from the natural resources without compromising the needs of future generations. Local communities must look after (monitor) the forest and its resources to ensure that forest quality and natural resources are not depleted.

The 23 villages under the MEMA project have worked with staff of Iringa District Lands, Natural Resources and Environment Office to develop simple monitoring methods, which the villagers themselves can use to monitor natural resource use and forest quality. These methods are now described in a manual that the villagers use to guide them in their ongoing monitoring work. The manual used by the villagers is entitled *Preliminary Manual for Community Based Monitoring of Natural Resource Use and Forest Quality*.

The role of the forester is changing as district authorities and local communities enter into Joint Forest Management Agreements. Previously, the forester was primarily a watchman of the forest, whereas he now has to advise local communities on how to manage the forest and how to adjust management in accordance with the results of the monitoring.

The present document is entitled *Foresters Notes for Supporting Community Based Monitoring of Natural Resource Use and Forest Quality*. It is written for the foresters who are helping villagers to take on more responsibilities in the monitoring of natural resource use and forest quality in the natural forests. The document provides some background information on monitoring, it briefly describes the methods developed and it outlines the responsibilities of the forester in relation to the community based monitoring.



## Monitoring

Monitoring is a tool for adjusting management plans to ensure that natural resources and forest quality/biodiversity are not depleted. Human activities pose the most serious threat to the natural forests. It is unlikely that natural variations in the environment will result in the disappearance of species or major changes to the forest. Such changes are more likely to be caused by human activities. The monitoring of the forest should therefore focus on changes related to the use of the forest.

The monitoring methods now used have been developed in accordance with how management decisions are taken under the new Joint Forest Management agreements and in accordance with the financial and human resources that can be expected to be available over the longer term. More costly and sophisticated methods have been considered but rejected.

Monitoring can strengthen management by answering many useful questions such as:

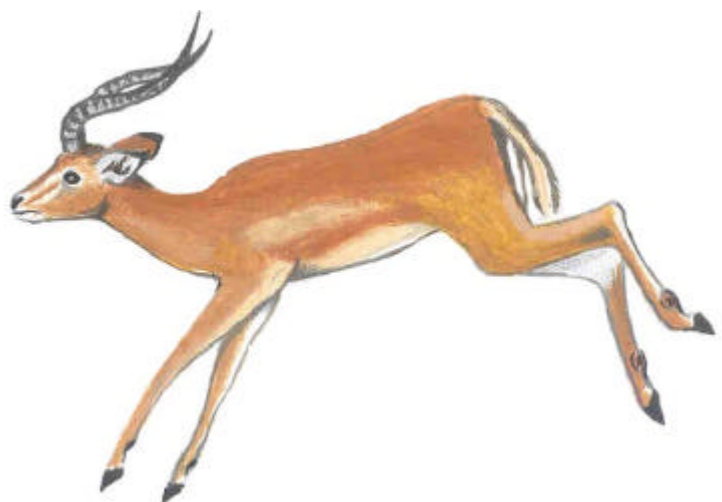
- Are natural resources being depleted?
- What are the impacts of issuing resource-use permits?
- Are habitats and ecosystems being degraded?
- Are populations of threatened species declining?
- Are there increased benefits to local communities from the forest?
- Are the management interventions working as intended?

The Village Natural Resource Committees (VNRCs) do not have the resources or skills to monitor, for instance, the status of a large number of plant and animal species that they do not normally use.

Resource uses and species for the monitoring have been selected on the basis of the following criteria:

1. Species (or their tracks, dung, etc.) that are easy to recognise.
2. Resources that are commonly used by villagers.
3. Resources uses and species that are easy and cost effective to collect data on.
4. Species that reveal trends in resource uses and biodiversity.
5. Species that are sufficiently sensitive to provide an early warning of change.
6. Species that are considered to be threatened or endangered.

No single resource or species possesses all these properties, but most criteria can be met by selecting a combination of resources and species for monitoring. Priority is given to the resources and species that the local communities find to be most important.



## Method selection for community based monitoring of natural resource use and forest quality

During the development of the community based monitoring of natural resource use and forest quality, emphasis was placed on a monitoring design that could be sustained in the long term. The monitoring has been built into the existing institutional set-up in order to become an integral part of the day-to-day work of the VNRCs, the Patrol Guards and the relevant staff from District Lands, Natural Resources and Environment Office.

Villagers can not be expected to store data in databases or to use computer programmes during data analysis. This may be possible for experts if there is funding available to pay them. Even if that happened, it is doubtful that the result would mean much to the villagers and therefore doubtful that any of the needed management changes would follow.

### The monitoring complies with the following criteria:

- It is cost effective.
- It requires a minimum of training and education of VNRC members and Patrol Guards.
- It strengthen village based natural resource management.
- It encourages the participation of local communities in management of natural forests.
- It builds the capacity of VNRC members and communities in environmental management.
- It stimulates discussions about conservation and sustainable use of natural resources among stakeholders.

### Based on these criteria, two methods were selected for monitoring the status and trend of natural resources and indicator species:

1. **Patrolling** - Patrols recording observations of selected resource uses, disturbances and indicator species.
2. **Perception Interviews** - Interview of villagers' perceptions of status of and trends in important natural resources and species that pose a threat to their livelihoods.

Together with information on VNRC meeting activities and permits/revenue/fines/expenses, these methods constitute the community based monitoring of natural resource use and forest quality.



## 2. DESCRIPTION OF THE MONITORING METHODS

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### Patrolling

Patrolling is described in detail in the *Preliminary Manual for Community Based Monitoring of Natural Resource Use and Forest Quality*. This method deals with observations on the state of the forest. The patrols are carried out by Patrol Guards in the natural forest. During the patrols, records are made of important natural resource uses, disturbances and selected indicator species. Repeated over time, this method can provide information on trends in resource use, illegal activities and selected indicator species.

If problems arise with resource uses/disturbances that are not listed on the form, it is the responsibility of the staff from the District Lands, Natural Resources and Environment Office to add these to the form. A copy of this form can be found in an annexe to the *Preliminary Manual for Community Based Monitoring of Natural Resource Use and Forest Quality*.

### Facts on Patrolling

- A one-page data form is used for every patrol.
- Patrols are carried out by Patrol Guards.
- Patrols are carried out once a week, or any time the Patrol Commander/ Village Natural Resource Committee (VNRC) may find it necessary (e.g. when disturbance levels increase).
- The Patrol Commander is responsible for patrols being carried out by Patrol Guards according to an agreed timetable.
- The VNRC is also responsible for patrols being carried out according on agreed timetable, should the Patrol Commander fail to carry out his duties.
- The Patrol Commander is responsible for ensuring that all Patrol Forms reach the VNRC Secretary.
- The VNRC Secretary is responsible for storing the Patrol Forms in a file.
- The VNRC Secretary, together with VNRC members and Patrol Guards, should summarise all Patrol Forms from a particular month on the monthly *Report from the Village Natural Resource Committee* form.

Patrol Guards should be compensated for their time spent on patrols. If they are not compensated, it is very likely that they will not continue to patrol. How they are compensated should be discussed by the Village Council.



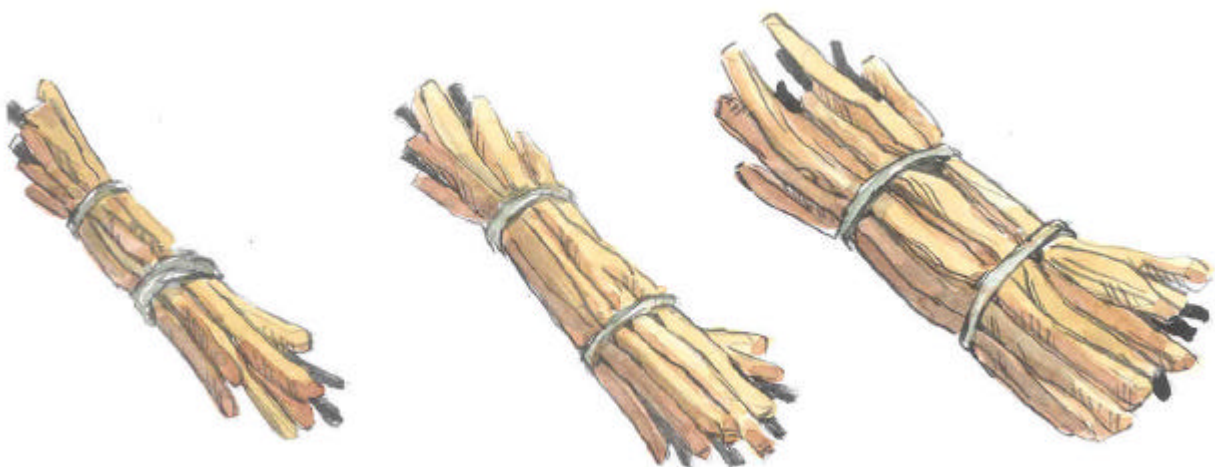
## **Perception interviews**

The perception interviews are described in detail in the *Preliminary Manual for Community Based Monitoring of Natural Resource Use and Forest Quality*. This method deals with villagers' perceptions and observations on status of and trends in selected resource use and wildlife that pose a threat to their livelihoods. Interviews are carried out of individual villagers or households by two VNRC members. The method provides a quick means for obtaining information on the status of resources considered important in the local community and, repeated over time, it can give a valid picture of general trends in resource availability.

If problems arise with resource uses that are not listed on the form, it is the responsibility of the staff from the District Lands, Natural Resources and Environment Office to add these to the form. A copy of this form can be found in an annexe to the *Preliminary Manual for Community Based Monitoring of Natural Resource Use and Forest Quality*.

### Facts on Perception Interviews

- A one-page data form is used for every interview.
- At least 5 interviews should be carried out by the VNRC every month.
- The VNRC Interview Chairman and the VNRC member from the interviewed person's sub-village carry out the interview.
- The VNRC Interview Chairman is responsible for ensuring that all forms reach the VNRC Secretary.
- The VNRC Secretary is responsible for storing the interview forms in a file.
- The VNRC Secretary, together with VNRC members and Patrol Guards, should summarise all interview forms from a particular month on the monthly Report from the Village Natural Resource Committee form.



## Monthly Report from the Village Natural Resource Committee

Every month each VNRC will enter monitoring data onto a summary form. This form is called the *Report from Village Natural Resource Committee* in English or *Taarifa Kutoka Kamati ya Maliasili* in Kiswahili. This form includes information on meeting activities, permits/revenue/fines/expenses, Patrolling and Perception Interviews. The information that should go into the monthly Report from VNRC is described in detail in the *Preliminary Manual for Community Based Monitoring of Natural Resource Use and Forest Quality*. A copy of this form can be found in an annexe to the *Preliminary Manual for Community Based Monitoring of Natural Resource Use and Forest Quality*.



### Facts on Monthly Report

- A one page data form (both front and back sides) will be used to report on monthly activities undertaken by the VNRC.
- The VNRC Secretary, together with VNRC members and Patrol Guards, is responsible for filling in the monthly Report from Natural Resource Committee.
- The VNRC Secretary, VNRC Chairman and Village Chairman should sign the form to verify that it has been filled in correctly.
- The VNRC Secretary is responsible for the storage of the monthly Report from the Village Natural Resource Committee forms.
- The VNRC Chairman is responsible for distributing the monthly Report from the Village Natural Resource Committee form to the District Lands, Natural Resources and Environment Office, Divisional Secretary and Ward Executive Officer.

### Copies of the completed form will be provided to:

- Ward Executive Officer
- Divisional Secretary
- District Lands, Natural Resources and Environment Office

The monthly reports that the District Lands, Natural Resources and Environment Office receives all present the same type of monitoring data in a very simple and easily accessible form. This data will enable the District Lands, Natural Resources and Environment Office to monitor the level of resource use and the general state of the natural forest and its resources. Through the revenue and expenditure information, it will also show if the management efforts are resulting in increased benefits for the villagers living adjacent to the natural forests.



### 3. DATA STORAGE

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The VNRC will use and keep the detailed monitoring data (Perception Interview Forms and Patrol Forms) as well as the monthly summary data (Report from the Village Natural Resource Committee), while the district authorities (through the District Lands, Natural Resources and Environment Office) will only use and keep the monthly summary data (Report from Village Natural Resource Committee) from each village.

#### Data used and kept by VNRC include:

1. Records of VNRC activities: VNRC meetings, Village General Assembly (if regarding VNRC activities), Training/workshops.  
- *Person responsible:* VNRC Secretary, records kept in Secretary's book.
2. Records of permits, revenue and expenses.  
- *Person responsible:* VNRC Treasurer, records kept in Treasurer's books.
3. Records of interviews of villagers' perception of resource status and trend.  
- *Person responsible:* VNRC Interview Chairman and one VNRC member, form filled out for every interview.
4. Records of resource use, disturbance and selected indicator species during patrols.  
- *Person responsible:* Patrol Guards, form filled out by Patrol Guards for every patrol.

#### Data used and kept by the District Lands, Natural Resources and Environment Office:

Monthly Report from the Village Natural Resource Committee (Taarifa Kutoka Kamati ya Maliasili) with:

1. Summary of VNRC meetings, village general assemblies and training.
  2. Summary of permits, revenue and expenses.
  3. Summary of villagers' perception interviews.
  4. Summary of patrol observations.
- *Person responsible:* VNRC Secretary.



## **4. USE OF THE COMMUNITY BASED MONITORING DATA**

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### Data used in the village

The monthly *Report from the Village Natural Resource Committee* form should be filled in at a monthly VNRC meeting in order to make all VNRC members aware of VNRC activities. The form can be used by the VNRC to get an overview of the level of resource use, the level of disturbances and villagers' perceived status of important natural resources.

The forester should make sure that the committee meets monthly to discuss the details of the monitoring. During their monthly meeting, the VNRC should at least discuss the level of resource use, illegal activities encountered and resources that are decreasing or have become scarce. This is very important in order to find solutions to activities that pose a threat to forest quality and resource availability.

It may happen that the forester encounters situations where villagers fail to react when resources are getting scarce or the forest is suffering in other ways. The forester must always first discuss such problems with the village authorities to see if mistakes can be rectified. If the village still fails to correct its unsustainable practices, it is questionable as to whether the Joint Management Agreement should be cancelled. This cannot be decided by the forester alone but only by the Directors who originally signed the agreement on the part of Iringa District.

The VNRC should also discuss details of the permits/revenue/fines/expenditure section so that all VNRC members know how much revenue the committee receives and what it is being spent on.

The *Perception Interview* form includes some additional information that can be used by the VNRC. This concerns wildlife that poses a threat to the livelihood of the villagers and information on the villagers' knowledge of VNRC work and responsibilities. If villagers are not aware of VNRC's work, they should be informed of the rules and regulations outlined in the Management Plan. This can be done through Village General Assemblies.

It is also important that the VNRC regularly discusses the chapter on monitoring in the Management Plan. This chapter includes indicators of successful management (e.g. Wild animals increasing in numbers inside and outside the forest; decrease in traps and forest fires inside the forest; water sources outside the forest have natural vegetation). The forester should make sure that the VNRC regularly discusses and decides how these *Indicators of Success* can be achieved.

Village General Assemblies should be used to inform villagers of VNRC activities. The committee should present revenue from permits and fines and should justify expenditure to the villagers. It should explain about illegal activities encountered in the forest, and what management actions have been agreed to stop these activities. Management actions intended to stop further decrease of a resource or intended to increase the availability of resources that are scarce should also be presented.

### Data used by District Lands, Natural Resources and Environment Office

The District Lands, Natural Resources and Environment Office receives the monthly *Report from the Village Natural resource Committee*. When these forms are received, District Lands, Natural Resources and Environment Office staff responsible for the particular area should read the information on the form. Here the forester can see the results of the community based monitoring

and the forester can read if there are any remarks from the VNRC. The forester should use the information on the forms as a basis for discussions during the regular visits to the VNRCs.

When the District Lands, Natural Resources and Environment Office receives this form every month and it is correctly filled in, it is very likely that the village is taking its responsibilities serious. This will be verified by District Lands, Natural Resources and Environment Office staff during yearly monitoring visits to each village. If forms are not received every month, the VNRC is either not taking its responsibilities seriously or it has encountered problems in relation to the monitoring activities. The village must then be visited by the forester to seek a solution to the problem and if necessary the village must be warned that their resource use rights are dependent upon fulfilling their responsibilities.

## **5. YEARLY EVALUATION AND REPORTING**

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Certain meetings and reports are needed once every year to ensure that the monitoring is happening as planned and that the results of the monitoring are leading to the necessary management changes.

These are:

1. A yearly joint evaluation meeting in each village
2. A yearly status report from each Forest Extension Officer
3. A yearly status report from the District Lands, Natural Resources and Environment Office

### **Yearly joint monitoring meeting**

At the village level, a large yearly meeting should be arranged by the Forest Extension Officer for: The Forest Extension Officer (and possibly other District Lands, Natural Resources and Environment Office staff), Village Council, VNRC and Patrol Guards. At this meeting, participants should discuss and conclude on the results of last year's monitoring. This arrangement should preferably include a joint visit to the natural forest for the Forest Extension Officer and village representatives to get a first-hand impression of the state of the forest.

Before the meeting, the forester should prepare by looking at last year's Monthly Report forms from the village, comparing this to data from previous years. This summary of the results should be presented and discussed during the meeting. The effects of the Management Plan should also be discussed and, if necessary, the meeting should reach agreements on additional management initiatives.



### **Yearly status report from each Forest Extension Officer**

Forest Extension Officers will produce a yearly report, giving a concentrated summary of monitoring work, findings and recommendations from the monitoring activities within his/her area. This report should be given to the Forest Extension Officer's superior.

#### The Forest Extension Officer's yearly report should include information on:

- Number of patrols, number of interviews, number of VNRC meetings, number of FCC meetings, and number of support visits during the last year for each village. Any change compared to data from earlier years?
- Type of permits issued, number of permits issued, income from the issued permits and income from fines during the last year for each village. Are there any changes compared to data from earlier years?
- The most important findings regarding status of and trends in natural resources and indicator species during the last year for each village. Are there any changes compared to data from earlier years?
- Any progress or violations in comparison to stated *Indicators of Success* in the Management Plan.
- Proposed adjustments to the Joint Forest Management Plan and related amendments to the by-laws (if any).

### **Yearly status report from the District Lands, Natural Resources and Environment Office**

The District Lands, Natural Resources and Environment Office shall produce a yearly report to the District Council. This report will provide an annual summary of how the monitoring work is progressing throughout the District. This report will also evaluate the effect of the Joint Forest Management Plans and include recommendations for improved management of the natural forests. This report can follow the same format as the Forest Extension Officers Yearly Report mentioned above.

## **6. INCORPORATING ADJUSTMENTS INTO MANAGEMENT PLANS**

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The Village Governments can make amendments to the agreed by-laws as long as these do not violate the Joint Forest Management Plan (e.g. destroy or deplete natural resources and forest quality/biodiversity). Joint Forest Management Plans can be adjusted at intervals indicated in the management plan.

Amendments and adjustments, suggested by a village, are first discussed with the Forest Extension Officer (and possibly other District Lands, Natural Resources and Environment Office staff) at the yearly joint evaluation meeting in the village. Here the changes to the management plan that will be proposed by the village will be agreed. Through the yearly status reports, the proposals for adjustments to the management plan will reach the District Lands, Natural Resources and Environment Office. The proposals from the villages will be supported if changes do not violate the Joint Forest Management Plan and changes to the Joint Forest Management Plan do not lead to degradation of natural resources and forests. The District Lands, Natural Resources and Environment Office will draft revised Joint Forest Management Plans and by-laws, which must be approved and signed by the Executive Director of Iringa District Council, the Director of Forestry and Beekeeping (for Catchment Forest Reserves only) and all involved Village Councils.

## **7. SUMMARY OF THE RESPONSIBILITIES OF DISTRICT STAFF**

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The Forest Extension Officers are responsible for:

- Supervising the work of the Village Natural Resource Committees.
- Checking incoming Monthly Reports from the Village Natural Resource Committee.
- Responding to all comments noted in the Monthly Reports.
- Visiting villages with weak or failing monthly reporting.
- Reporting to their superior (District Catchment Forest Officer or District Forest Officer) after each village visit.
- Arranging a yearly joint monitoring meeting in each village.
- Producing a yearly status report on the monitoring.

The District Catchment Forest Officer (for Catchment Forests) and the District Forest Officer (for other forests) are responsible for:

- Supervising the work of the Forest Extension Officers.
- Monitoring and ensuring that the Forest Extension Officers fulfil their responsibilities with regard to the Community Based Monitoring of Natural Resource Use and Forest Quality.
- Ensuring that a yearly report on monitoring is produced and submitted to the District Council and other relevant higher authorities.
- Ensuring that proposed revisions of by-laws and Joint Forest Management Plans are commented on and included in future plans, if relevant.

