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TECHNICAL PAPER 16

Participatory environmental action plans for five
villages surrounding Mafwomero Forest Reserve in
the Rubeho Mountains

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Front cover photograph: View of Mafwomero Forest Reserve. Photo by Michele Menegon, MTSN.

Executive Summary

1. Introduction

The three largest forests in the Rubeho Mountains are Mafwemela¹, Mang'alisa and Ukwiva. These forests are part of the Eastern Arc Mountains, and support a high concentration of endemic species. They have been identified as a priority region for the conservation of biodiversity, but until recently the Rubeho forests have not been a focus for conservation efforts. Forest management in the Rubehos has been neglected, for which reason the Rubeho Environmental Action Plan project (REAP), led by TFCG working with Mpwapwa District Council and funded by the Critical Ecosystem Partnership Fund, have initiated conservation planning and fund raising for Mafwemela. A socio-economic assessment was done of the five villages (Mbuga, Kizi, Galigali, Lufu and Lufusi), followed by the development of environmental action plans with each village.

2. Methodology

One day meetings were held in each village to come up with community visions for village environmental development, and to make an action plan around the vision. Representatives from the village were selected to take part. The planning process consisted of:

- presentation of previous research studies (socio-economic study, a biodiversity study and a disturbance study)
- a discussion about the changes which have taken place in each village and its forests
- a reflection of how the participants wanted their villages to be in the next ten years, culminating in the crafting of a vision for the village
- a discussion of how they could attain the vision, and an identification of important forces supporting and opposing their desired future scenario
- drawing up an action plan, based on the research studies, the discussion of changes and the visions, and the opposing forces.

3. Summary of the results

Changes

Changes have taken place in the villages in the last ten years, as follows:

- Forest – the forest has decreased, there are fewer timber trees and firewood is further away;
- Animals – some animals have disappeared completely, while the populations of others have decreased, mainly through hunting;
- Village environment – water sources have dried up, rain is less, the fertility of shambas has decreased and the population of the villages has increased.

But people were optimistic about the future, saying that now there are laws in places about the forests, they would recover and the people are now more aware about environmental issues, so everything will now start to get better.

Visions

The participants in each meeting drew up visions, containing the following points:

- a return to the way things were in the past,
- protection of the forest and conservation of water sources,
- prevention of hunting,
- tree planting,
- training on the environment and agriculture,
- search for income generating projects,
- improvement of the roads.

¹ The Reserve is cited as Mafwomero in the Government gazette however local people know the forests as 'Mafwemela'.

Supporting and opposing forces

The supporting forces suggested in the villages were generally similar – they have land, a forest, water, groups, SACCOS in some villages, grazing land, people who can work. The opposing forces included a lack of experts, a lack of agricultural inputs and expertise, no capital, a bad road, lack of education, no tree seeds, weak economy, no local market. Ways were sought to solve these opposing forces themselves without outside assistance.

Action plans

Most of the action plans were similar, and were based on the socio-economic study results, the opposing forces and the visions. The action plans were mostly organised into four sections, as follows, with activities suggested under each heading:

- forests and tree planting
- agriculture and livestock
- economy and low incomes
- governance and leadership

4. Conclusions

This was a difficult exercise because of lack of exposure of the participants to similar processes. But the plans are still their own.

The villages are fairly similar in the sort of issue they need to address.

There is a lack of leadership skills and good governance which affects the way the village governments work with their people

The people are enthusiastic to protect their forests and to work with a project.

5. Recommendations

The following are recommendations which emerge from the study:

- Awareness raising – there is already some awareness about the forest reserve, but little about the village woodlands.
- Forest conservation – people need to be facilitated to manage their own forest and village woodland reserves.
- Tree planting - there are places where tree planting is needed but in places where there are large areas of woodland, more emphasis should be put on managing the natural forests for sustainable use. Make sure that tree planting isn't seen as the sole solution to environmental problems.
- Village Environmental Committees - each village has a VEC, but they now need training.
- Leadership - all village governments need training in leadership skills, roles and responsibilities and good governance. Ordinary people in the villages also need training in this.
- Agriculture – attention needs to be devoted to agriculture since it is the way most people generate their income and since it contributes to environmental degradation. New cash crops need to be sought.
- Alternative income generating activities – these need to be sought, to diversity from agriculture.
- Improved technologies – these would include fuel saving stoves, and expertise on donkey health and breeding.
- Schools - A programme of environmental education should be instituted in schools.
- Involvement of the district authorities - The district should be involved in project activities to promote sustainability.

Table of contents

Executive summary	ii
1. Introduction	1
2. Methodology	1
3. Summary of the results	2
4. Conclusions	6
5. Recommendations	6
Appendices	
Appendix 1: Terms of reference	9
Appendix 2: Summary of research results	11
Appendix 3: List of participants at each village meeting	13
Appendix 4: Village plans	
Lufu	17
Lufusi	22
Mbuga	27
Galigali	32
Kizi	37

List of abbreviations

REAP	Rubeho Environmental Action Plan
TFCG	Tanzania Forest Conservation Group
VEC	Village Environmental Committee

1. Introduction

The Rubeho Mountains, situated in Mpwapwa and Kilosa districts, are a large mountain block which makes up part of the Eastern Arc Mountains. In the Rubeho Mountains are three forests – Mafwemela, Mang'alisa and Ukwiva – found mainly along the ridges of the mountains. The Eastern Arc Mountains support a high concentration of endemic species, and it is for this reason that they have been identified as a priority region for the conservation of biodiversity. However, the Rubeho Mountains have not until recently been a focus for conservation efforts, due partly to their inaccessibility.

Forest management in the Rubeho Mountains has been chronically neglected. Annual government investment for natural resource management for the whole of Mpwapwa District is US\$ 1000. External investment has been minimal and primarily focused on research. As a result of under-investment in forest management, natural resource dependence by the forest adjacent communities, weak governance and low awareness of the forest's values, forest loss appears to be increasing.

The Rubeho Environmental Action Plan project (REAP), which is led by the Tanzania Forest Conservation Group (TFCG) working closely with the Mpwapwa District Council and funded by the Critical Ecosystem Partnership Fund, will initiate a process of conservation planning and fund raising for the most biologically unique of the three Rubeho forests, Mafwemela. As a first step, an assessment of the socio-economic status of five villages in the Rubeho Mountains surrounding the Mafwemela FR was carried out, followed by the development of environmental action plans with these villages. The socio-economic information will also constitute monitoring data for the project. The assessment covered the five villages selected for inclusion in the project: Mbuga, Kizi, Galigali, Lufu and Lufusi.

This vision based planning process was carried out to contribute to the project's second output:

'Through a participatory planning process, a strategy has been developed to guide sustainable natural resource management in the Mafwemela Forest landscape and resources have been mobilized for the implementation of the plan.'

The action plan as a whole was designed to elucidate stakeholders' shared vision and common goals, and to spell out the activities which must be done to meet each objective. The planned activities should culminate in a future where access to and control over natural resources – and the distribution of subsequent costs and benefits – is more just. In recent years it has become clearer that local people and government authorities (which are charged with ensuring that resources are managed for the benefit of future generations and the country as a whole, and which have obligations under conventions such as the CBD) have greater rights than outsiders, therefore should be more closely involved.

2. Methodology

One day meetings were held in each village to come up with community visions for village environmental development, and to make an action plan around the vision. Each village meeting had around 25 participants. These participants included village government representatives, with ward representatives in Mbuga, the ward centre, village environment committee members, sub-village chairpersons, sometimes traditional healers and others who had a direct stake in the forest reserve, village elders, religious representatives, teachers and members of environmental groups. There were women present in each meeting, but generally not as many as men. The project manager sent a letter to the village governments, making suggestions as to who should take part, but also leaving it open for the village government to select people who they thought should be present.

The meetings began when the project manager explained the background to the process.

TFCG has already carried out three research studies in Galigali and Mafwemela FR – a socio-economic study, a biodiversity study and a disturbance study. A summary of each of these research studies was presented, and the participants were given the opportunity to ask questions and comment on the findings. The summary of the research studies can be found in Appendix 2.

A discussion was then started about the changes which had taken place in the forests in the last ten years in order to develop a common understanding amongst the participants about the current condition of the forests. Participants were invited to list trees and animals which had disappeared or which were not seen with such frequency as they were in the past, and also to list any other changes which had taken place in the last decade.

After talking about the future and looking at the changes that had taken place in the last ten years, the participants then began to talk about how the village could be if things kept going the way they were at present. They reflected on how they wanted their village to be in ten years' time, taking into account the research results and the list of changes. In most villages they sat in two or three groups, usually women, younger men and older men in order to discuss their vision for the future of their village. Each group came up with a vision, and a representative from each group came to explain their vision to the other participants. After each group had read out their vision to the others, the three visions were put together to make one overall vision.

After completing the village vision, the participants discussed how they could attain the vision, and to identify important forces supporting and opposing their desired future scenario. It was clear that there were things which could help people to reach the vision (supporting forces), but also that there were things which would hinder them on the way (opposing forces). A list of these forces was made. Each opposing force was written on a yellow card and each supporting force on a blue card. The one who made the suggestion came to the front and held the card up, so that everyone could see all the forces. Once all the forces were listed, each opposing force was taken and suggestions were made as to what the people in the village could do themselves to weaken it, if anything.

The opposing forces cards were then collected and used to form the basis of the action plan for the village for the next ten years, together with the suggestions of the participants. Also taken into consideration were the three presentations at the beginning and the vision drawn up by the participants. An issue was taken, the participants suggested activities which would help to deal with the issue, then it was decided who would be able to provide help and what inputs would be needed.

3. Summary of the results

In all of the meetings, the participants agreed with the findings of the research studies and said that they represented an accurate picture of the village and its environment.

Changes

The participants went on to describe the changes which had taken place over the past ten years. At first, many said that not much had changed, but when we asked about individual aspects of their village and forest, they began to consider the situation and came up with the following changes:

Forest

- The forest has decreased in size and in density – in the past it was very dense, but nowadays it is much more open
- There are fewer mipodo trees (this was mentioned in Lufu particularly)
- There is less firewood – in the past it was very close by. This was mentioned even in villages which have large areas of village forest.
- In Kizi people said that there are fewer trees in the village forest because the forest is repeatedly burnt during the dry season, and some species have decreased in number through harvesting, e.g. mikobora (sandalwood), miguhu, mizambarau

Animals

- Some animals have disappeared completely, including elephant, buffalo, tandala, wildebeest, lion, leopard, palahala – different reasons were given in different villages, e.g. they died out because of ECF or rinderpest, or because the population increased or because of over-hunting

- The populations of some animals have decreased, e.g. bush buck, wild pig, dikdik, funo, haruzi. In some villages they rather shamefacedly admitted that only edible animals have decreased, pointing at hunting as the main cause for this decline
- In Lufu, people said that also wild dogs and eagles had decreased in numbers because their prey has decreased.

The village environment

- There is less rain
- Water sources have dried up
- Areas of wetlands have shrunk
- Fertility of shambas has decreased through continuous use
- The population has increased, putting pressure on all village resources.

However, in most villages, people were optimistic about the future, explaining that because of the new laws to protect the forest and the enthusiasm of people to plant trees and to look after the environment, it is not possible that further destruction will take place. In Lufusi, the people in the meeting said 'We forgot ourselves for a time, but now everything's going to be fine.' In Mbuga, the participants said that since so many people now kept pigs, there would be less hunting too, since hunting is a much more difficult way of getting meat than buying it at the butcher. Mbuga has also set aside an area for gathering firewood, which they say will help to protect other areas of the forest. The only less optimistic notes came from Lufu and Kizi – in Lufu the participants said that they understood that if their road was significantly improved, people might begin to come up and destroy their forests. They added, however, that they were ready for this and would make sure that no-one was allowed to do this. In Kizi the people in the meeting told us that the community has already begun to understand about the importance of protecting the environment. But they did admit that if they don't take steps immediately, they will be faced with a desert.

Visions

The participants drew up visions, basing them largely on what had come previously – the research reports, and the discussions around the changes in the villages. There were many elements which were similar in all the visions:

- A desire to return to the way the forest was in the past, including a return of all the animals which had disappeared. In Lufu, women were keen that their children should see animals which should be in their forests.
- Protection of the forest by preventing fires and illegal harvesting in order that there should be enough rain, water and clean air
- Conserving water sources
- Preventing hunting, either with laws or by increasing the number of livestock kept for meat
- Tree planting, for timber, firewood, building poles, fruit, shade and beekeeping, around houses, on shamba boundaries and in designated areas in the villages
- Training from experts on the environment so that the people know how to protect their village
- Training from experts on all aspects of agriculture, so as to stop doing things which destroy the environment and to make the most of land which in many of the villages is now under increasing pressure.
- Looking for new projects which are not directly based on agriculture to increase their income, e.g. keeping small animals, beekeeping, cultivating vegetables
- Seeking different cash crops which suit the environment and which have a market
- Although we made it clear that TFCG couldn't address the issue of the bad roads in the mountains, most villages added a point about improving the state of their road, also having modern houses, a dispensary, good schools, etc.
- In Mbuga, taking up a discussion point, the group of older men said that they would like to do their own research into propagating indigenous and exotic trees.

In both Lufusi and Kizi, the visions included a point that they should look after the village forest areas so that they can meet their needs for forest products, e.g. firewood, building poles, fruit, etc. This came as a result of a discussion about their woodland areas which are extensive – we discussed how it is an important resource and how if managed well it could provide for many of their needs. They are still keen to plant trees, however, to meet these needs, as they are in the other villages. The concept of managing the forests for their own use is new to the people in these villages, and their overriding desire for the forest reserve seems to be to stop all use, rather than to benefit from its existence by harvesting timber. Certainly no-one has heard of joint forest management. The village woodlands are undervalued and are generally not seen as a resource to be husbanded, although people know that they make use of these areas. Only in Mbuga, where there is very little woodland, did we hear about an area set aside for firewood.

Supporting and opposing forces

The supporting forces suggested in the villages were generally similar, as follows:

- We have land
- There is a good area of land for farming
- We have people who can work
- We have a forest in good condition
- We have village woodland
- We have water
- We have groups
- We have a sacco (Mbuga)
- There is livestock and grazing land

The opposing forces were also generally similar:

- We don't have any experts
- We don't have agricultural inputs or equipment (e.g. ox ploughs, fertilisers, pesticides)
- We don't have capital
- The road is bad
- There is a lack of education
- We don't have tree seeds
- We have a weak economy
- Our agriculture is poor
- There is no local market (Mbuga)

Various solutions were suggested to deal with the opposing forces:

- No experts or education – They all agreed that without experts, things would be very difficult, since there would be no-one to bring new ideas in. But suggestions included grasping any opportunity to attend seminars, and being prepared to share with each other the skills they already have, e.g. one woman in Mbuga explained about beekeeping, others know how to raise tree seedlings. 'If we all work together, it can at least help,' said one man in Lufu.
- No agricultural inputs or equipment (e.g. ox ploughs, fertilisers, pesticides) – the general agreement in all of the villages was that there was nothing they could do about this, without outside assistance.
- No capital – There were various suggestions from different villages to address this problem. In Lufusi the participants said that they have a large area of land which they can cultivate more intensively, and in addition there is a sacco where they can invest their money and take out loans to increase their possibilities of bringing in income. Others suggested forming groups, opening bank accounts and looking for alternative cash crops and new projects to bring in cash
- Poor agriculture – this was particularly seen as a problem in Kizi, since they don't have a large irrigated area, as other villages do. They saw that they should motivate themselves to try to dig their own irrigation channels. Others in other villages suggested trying out using ox or donkey ploughs to increase the areas they cultivate, and using fertiliser more.

- No tree seeds – This came up as an issue in several villages, and the solution suggested was to look for seeds in the villages, or in nearby villages, and to experiment with propagating trees which are useful to them from the forest and woodlands.
- In Mbuga the participants said that a major problem for them was that there was no market (mnada) in their ward. They suggested requesting the district authorities to start up a market in Mbuga ward.
- Poor road – this was the biggest problem in all villages. Although they know that they can't solve the problem, they recognise that in every village there is a large labour force which can be called upon to work on the roads at least to improve them, or to do temporary repairs to make the roads passable.

Action plans

Again, most of the action plans were fairly similar, and were based largely on the socio-economic study results, the opposing forces and the visions, with reference to the two forest based research studies. The action plans were mostly organised into four sections. Activities suggested under each heading were as follows:

Issue	Activity
Forests and tree planting	Prepare an area for planting trees Set up nurseries and plant trees Set up or join tree propagating and planting groups Provide education for the community about the environment Provide education for farmers, hunters and livestock keepers about the environment and living creatures. Do a survey of the forest Prepare a management plan for Mafwemela Look after the village forest land by making a sustainable use plan Make bye-laws about the forest Provide training about roles and responsibilities for the VEC Set up forest patrols Get training about fuel saving stoves
Agriculture and livestock	Look for alternative cash crops which suit the climate of the villages Get training about improved agricultural techniques and livestock keeping Farmers to join cooperatives Increase the number of livestock Use modern improved seeds Seek a way to build an intake (Kizi)
Economy and low incomes	Access education on how to increase income Think up small income generating projects like beekeeping, small animal husbandry, café, vegetables, etc. Start up or join income generating groups Join saccos Engage in improved agriculture and livestock keeping Look for local markets
Governance and leadership	Education on good governance for everyone in the village Make sure village activities are properly supervised Make sure laws are enforced Outlaw corruption

	Hold regular public meetings Encourage people to attend meetings so that they know what is going on
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4. Conclusions

This was not an easy exercise for the people involved. It seems that they have not done planning of this type before, so the capacity to come up with ideas and suggestions was limited. In addition, most have a narrow frame of reference on which to draw – they have not seen development activities in other villages, so have nothing to inspire them. For this reason, it was difficult to elicit responses to more than the most basic of questions (e.g. they were able to give many suggestions about what had changed in their villages in the last ten years, but the other sections of the planning process were more difficult) and the facilitation had to be intensive, with many detailed questions and prompting, drawing their attention to the research reports and the changes in the villages. But even with this level of facilitation, people were involved in each step of the process, they did come up with ideas in the end, nothing was written down which they didn't agree with, the whole plan reflects the reality of their individual village and we believe that the participants feel that the plan is theirs.

The villages are fairly similar in the sort of issues we were addressing, although of course there are some differences, e.g. Lufusi is more business oriented in the way it deals with its agriculture due to an intake, a large irrigated area and its relative closeness to a market, Galigali has serious leadership problems, Mbuga is a ward centre and has a large mission and a secondary school, Lufu is less accessible than the other villages by vehicle.

Lack of leadership skills and knowledge of good governance was something we encountered in all villages, although it was extreme in Galigali. Village governments have not had training in these areas and this affects the way they are able to mobilise their communities and enforce laws. Because of the isolated nature of the communities, the majority of people in the villages tend to be related in some way, which also has an effect on leadership and law enforcement.

However, despite these problems, we found that the communities were enthusiastic to welcome us and our mandate, they feel strongly that there is a need to protect their forests and they were keen to start moving. Other organisations have not worked in this area before, it seems, and government officials rarely make it to these isolated communities, so there is none of the 'development fatigue' which is becoming apparent in other areas of the country.

5. Recommendations

The following are recommendations which emerge from the study:

Awareness raising

There is considerable awareness about a variety of forest issues, but this awareness needs to be built on. The knowledge is also almost exclusively focused on the forest reserve, which is relatively unthreatened, and there is little awareness about the woodlands and the general environment of the villages, which have suffered from greater degradation, as well as the threats posed by hunting and fires. Awareness, therefore, needs to be raised in a much wider context. People need to know about the VEC and its role, in order to hold them accountable for their actions, the Forest Act and its implications, and future forest/village forest management plans.

Forest conservation

Facilitate VECs, village governments and the people in the villages to set up and manage their own village forest reserves, including sustainable harvesting plans with rotating usage, especially in the villages where there are extensive tracts of woodland. Ensure that there is the mechanism to have the village forest reserves recognised legally.

Tree planting

There are places where tree planting is needed and efforts already begun should be continued. If possible, people should be encouraged to seek out sources of seeds themselves. In places where there are large areas of woodland, more emphasis should be put on managing the natural forests for sustainable use, although trees can still be planted for specific purposes, e.g. shade around the house, boundary planting, fruit, timber. Fruit trees need to be sought which are suitable for cold places, e.g. apples, pears, plums. Make sure that tree planting isn't seen as the sole solution to environmental problems, and that the problems are more extensive than can be solved by planting trees only.

VECs

Each village now has a VEC, but they have received no training. All VECs need to be trained in their roles and responsibilities, and other activities can be included such as exchange visits to areas with functioning and active VECs. People in the villages, including subvillages, need to know what the roles of the VECs are, so that the VECs can be held accountable for their actions by the ordinary people.

Leadership

All village governments need to have training in leadership skills, roles and responsibilities and good governance. Ordinary people in the villages need to be trained to understand what makes a good leader, how a village should be run, how a VEC should operate, the roles and responsibilities of their leaders, and how they as ordinary people should have a say in the way their village is run.

Agriculture

Since agriculture is almost the exclusive income generating activity in the area, much attention should be devoted to it, particularly since in its present form it is contributing to environmental degradation. Farmers should be exposed to agricultural techniques which ensure that they cultivate areas with more expertise, in order to reduce erosion, decrease pressure on water sources and restore fertility. Different cash crops need to be sought, which are suitable for the cold climate of the area, and which are easy to transport using donkeys.

Alternative income generating activities

People's entire economic lives are centred around agriculture. Groups of people told us that they would welcome other opportunities to generate income. One option which was suggested was beekeeping, which no-one does in the villages. Another might be to find some way of propagating sandalwood trees in villages where it grows (Kizi, Galigali) and develop ways of producing and processing a saleable product. Other options need to be sought, and exchange visits arranged so that people can see what others are doing and broaden their limited perspectives, e.g. to places with similar terrain and climate such as Dabaga/Kilolo in Iringa, where Danish projects have worked for many years, and Mufindi. Then suitable income generating activities need to be introduced and carefully followed up.

Improved technologies

Women in Mbuga where firewood is scarce requested fuel saving stoves. In Lufu, a group of men complained that the health of their donkeys is so poor that they don't live as long as they should and don't produce young. Expertise on donkey health and breeding should be sought, so that the population of donkeys can increase in the villages.

Schools

A programme of environmental education should be instituted in schools, both primary and secondary. The programme should be designed around the existing curriculum rather than imposed as extra work for the teachers, and should be designed specifically for the area, reflecting the environmental issues and problems found in the Rubeho mountains.

Involvement of the district authorities

The district should be involved in project activities for several reasons - the activities carried out by the project should be embedded in local government, there is more chance of the activities carrying on once the project has closed if local government has been involved, and people often feel that information

carries more weight if a member of the government is delivering the message. In addition, involvement of local government encourages familiarity and accountability at district level with the communities.

Appendix 1: Terms of Reference

Title: Development of participatory environmental action plans for five villages in the Rubeho Mountains.

1) Background

The Tanzania Forest Conservation Group is seeking a consultant to facilitate the development of environmental action plans with the five villages in the Rubeho Mountains of Mpwapwa District. This work is being carried out as part of the project 'Rubeho Environmental Action Plan'. The project is being led by the Tanzania Forest Conservation Group with funding from the Critical Ecosystem Partnership Fund.

Forest management in the Rubeho Mountains has been chronically neglected. Annual government investment for natural resource management for the whole of Mpwapwa District (one of the two Rubeho districts) was US\$ 1000. External investment has been minimal and primarily focused on research. As a result of under-investment in forest management, natural resource dependence by the forest adjacent communities, weak governance and low awareness of the forest's values, forest loss appears to be increasing.

The Rubeho Environmental Action Plan project (REAP), which is led by the Tanzania Forest Conservation Group, working closely with the Mpwapwa District Council, will initiate a process of conservation planning and fund raising for the most biologically unique of the three Rubeho Forests, Mafwomero.

The plans that are developed by each of the villages will form the basis of the Rubeho Environmental Action plan. Planning will cover the five villages selected for inclusion in the project: Mbuga, Kizi, Galigali, Lufu and Lufusi.

The work outlined in this terms of reference contributes to Output 2 of the project:

'Through a participatory planning process, a strategy has been developed to guide sustainable natural resource management in the Mafwomero Forest landscape and resources have been mobilized for the implementation of the plan.'

Objectives

- To facilitate the development of a natural resource management plan for Kibakwe Division with the involvement of a wide range of stakeholders.

Methods

3.1 *Participatory natural resource management planning*

The consultant will use a visioning approach in developing the natural resource management plans. This approach enables communities to define a vision of how they would like the village's natural resources to be managed. There are three key steps in developing a vision-based action plan. The first step involves assessing the current situation; the second step involves defining a vision of a desirable future state for the natural resources in the vicinity of the village. The final step is to identify actions needed to achieve that vision. These actions should be timed over a ten-year period and resources / inputs necessary to fulfil these actions should be identified. The workshops will be conducted during village assembly meetings. As such, any adult member of the community may participate. At least 30% of the participants should be women.

These methods are detailed in the planning handbook developed by the PEMA Programme.

4) Activities

4.1 Natural resource planning

The consultant will conduct one-day visioning workshops in five villages:

The consultant will be responsible for:

- Preparatory activities (ensuring that village leaders have been properly briefed about the nature of the workshop and that they will convene a "village assembly")
- Facilitating workshops as per methodology documented in PEMA's field guide
- Writing-up the results

5) Outputs

The consultant will produce one report that will include the following information:

5.1 Participatory environmental action plan report

1. Title page
2. Executive summary
3. Table of contents
4. Introduction: background to the project
5. Methods: Describe the methods and activities that were undertaken as part of this consultancy. This will include a detailed description of the timetable of activities.
6. Results including summaries of the results for all of the villages including participation and some analysis of the similarities and differences between the villages. It should also include a synthesised version of the plans which will be the overall plan for Kibakwe.
7. Conclusions
8. Recommendations

The appendices should include brief reports for each of the villages including:

- Introduction including name of village, number of participants (male / female), meeting location and date.
- Description of the current situation
- Statement of shared vision
- List of supporting and opposing forces
- List of actions required to achieve that vision with a timeline and list of inputs required to achieve those actions

List of participants and their position

6) Time Frame

Day	Activity	Location
1	Travel to Mpwapwa	
2 – 6	Planning meetings in villages	
7	Travel	
8 – 9	Data analysis and report writing	
10	Report finalization	

Appendix 2: Research results

The results of the research were summarised briefly. From the socio-economic study, issues that stood out as important for development were presented:

Forest

Limited capacity of central government to manage its own forest
No management plan for Forest Reserves or for forests on village land
Participatory inventory of forests not yet done
VEC not yet trained, therefore they are not aware of their responsibilities
Fires
Harvesting of timber, poles and firewood
Hunting
Lack of timber, poles and firewood on village land
No environmental education for the community
Some communities under threat from being moved by the government
Limited amount of tree planting – lack of seeds and seedlings

Agriculture

Lack of expertise of agriculture
Dependency on small number of crops
Farming on steep slopes and too close to streams and rivers

Government

No training in good governance
Few public and government meetings

Economy

Few groups, with little experience
Lack of alternative ways of increasing income (agriculture only)

Infrastructure

Bad road

We stressed the point that we were aware that the bad road was a considerable problem, but that it was not within the scope of TFCG to do anything about it – it was only for that reason that we put it at the end. After the socio-economic study, a brief summary of the disturbance study was presented:

6 transects were done in Mafwemela FR

Poles

2055 poles were recorded
87% were alive
9% had died naturally
4% old cut
0% fresh cut

Timber

1297 trees were recorded
83% were alive
14% had died naturally
2% old cut
0% fresh cut

Disturbance observed

Pitsawing
Paths
Fires
Hunting – 12 wire snares
Agricultural encroachment (on the W side)

A brief summary of the biodiversity study, carried out between 2000 and 2002, was then presented:

Rubeho Forests (Ukwiva, Mang'alisa, Mafwemela) – managed principally by central government for the purpose of the protection of watersheds, soil conservation and protection of wild plants

Eastern Arc Mountains – run from Kenya to S Tanzania

There is a high concentration of endemic species – important for the world, therefore needs protection

Birds, mammals, reptiles and amphibians were studied.

35 mammal species]

107 bird species] were observed in the 3 FRs

10 reptile species]

107 vertebrate species were observed in Mafwemela

11 species endemic to the Eastern Arc were observed, including bushbaby, owl, partridge, chameleons, genet, akalat

The Rubeho partridge and a newly discovered frog were found in Mafwemela FR only

Rubeho used to hold 9th place for biodiversity out of the 11 mountain blocks of the EA

As a result of this study, they have now gone up to 5th place.

And the research is not yet complete.

Appendix 3: List of participants at each village meeting**VILLAGE NAME: LUFU****DATE: 28TH OCTOBER 2007**

S/NO	PARTICIPANTS' NAMES	TITTLE
1	JOHN MLOWOSA	VILLAGE CHAIRMAN
2	KOLONELY S. MTAMBULO	MEMBER
3	VILIJILIO MLOWOSA	MEMBER
4	JACOB MWAKALINGA	MEMBER
5	BEATUS MFALINGUNDI	MEMBER
6	COSMAS KASANGA	MEMBER
7	DAMASI MWANDENGA	MEMBER
8	GILBERT MSIGALA	MEMBER
9	ELMINA MHANGA	MEMBER
10	KANDIDO NGWEMBELE	MEMBER
11	WILLIAM MSUNGU	MEMBER
12	SEVERINI MANGA	MEMBER
13	YASINTHA MNYANG'ALI	MEMBER
14	JERIDA MAKUYA	MEMBER
15	ADELINA MDOGA	MEMBER
16	EKARIST MTAMBULO	MEMBER
17	REHEMA KASANGA	MEMBER

VILLAGE NAME: LUFUSI**DATE: 29TH OCTOBER 2007**

S/NO	PARTICIPANTS' NAMES	TITTLE
1	MOPILIO MWACHALI	FIELD ASSISTANT
2	SIMONI MTALAM	MEMBER VC
3	ALEXANDER MSUMARI	AG. VEO
4	RENJUO KITWANGE	MEMBER VC
5	SAMWELI KAJEMBE	MEMBER VC
6	EDWARD MSUMARY	MEMBER VC
7	BALTAZARY SENDWA	MEMBER VNRC
8	MAWAZO KIKOTI	MEMBER
9	AMOSI PIUSI	MEMBER

10	KENETH MUSSA	MEMBER
11	FERDINAND KAJEMBE	MEMBER
12	ANITHA MILIMO	MEMBER
13	MARIAMU KINIGU	MEMBER
14	JULIANA SADANI	MEMBER VNRC
15	EVODIA MWAMBA	MEMBER VNRC
16	JULIUS CHAEKA	MEMBER
17	JOYCE SAMWELI	MEMBER
18	JOSEPH SADANI	MEMBER - RC
19	NOVATI MATAGI	MEMBER - TEACHER
20	JOSEPH MANYIKA	MEMBER
21	YASINTA CHAYEKA	MEMBER
22	SILVANO MSUMARY	MEMBER
23	AGAPITH NJOLE	VILLAGE CHAIRMAN

VILLAGE NAME: MBUGA

DATE: 30TH OCTOBER 2007

S/NO	PARTICIPANTS' NAMES	TITTLE
1	JULIANI MWAMBA	VILLAGE CHAIRMAN
2	ALPHONCE F. MBWANI	AG. VEO
3	BASLEI LUHAMO	MEMBER
4	JAMES MNYAMBULI	MEMBER
5	CHARLES MNDENGELE	MEMBER
6	THEODORY MNYENYELWA	MEMBER
7	MERDADI LUKWAWILA	MEMBER
8	NOVATUS N. MHUMBA	MEMBER
9	ALPHONCE LUSITO	MEMBER
10	EGIDIO S. KIGOMBA	MEMBER
11	ADAM P. MNYENYELWA	MEMBER
12	ALISPISIA S. KITINYA	MEMBER
13	DOTIVA J. MLOWOSA	MEMBER
14	TRESPHORY M. LUSITO	MEMBER
15	PASKWINA S. LUKWAWILA	MEMBER
16	EKARISTA P. MHONDELE	MEMBER
17	SEVELINI M. MNYANG'ALI	MEMBER
18	PRIMO MLANDALI	MEMBER
19	EMELESIANA KIYANGA	MEMBER
20	DEVOTA KIYANGA	MEMBER

21	GAUDENCE P. MWAKITINYA	MEMBER
22	SIMON A. LUHAMO	MEMBER
23	STEPHEN MWAGISENENE	MEMBER
24	DOVICK MBULULO	MEMBER
25	PIUS MNDENGELE	MEMBER
26	ELIZABETH MWONGI	MEMBER
27	EDITHA KITINYA	MEMBER

VILLAGE NAME: GALIGALI

DATE: 31ST OCTOBER 2007

S/NO	PARTICIPANTS' NAMES	TITTLE
1	JEREMIA NGIMBA	AG. VILLAGE CHAIRMAN
2	ROMANA MWANOSA	MEMBER
3	ELENINA KIKOTI	MEMBER
4	MENGI PWELEZA	MEMBER
5	OLIPA LESIJILO	MEMBER
6	HALIMA ELIAS	MEMBER
7	VENASLA MUNYI	MEMBER
8	TEVIANA MWANOSA	MEMBER
9	AULERIA CHALI	MEMBER
10	VENELANDA KIKOTI	MEMBER
11	MAGDALENN KITINYA	MEMBER
12	BLANDINA MNYENYELWA	MEMBER
13	JEREMIA MZINZIRI	MEMBER
14	RICHARD FESTO	MEMBER
15	ANISTASI MWANOSA	MEMBER
16	AMOSI MWANOSA	MEMBER
17	JULIUS G. MWAKITWANGE	MEMBER
18	FAIBELIUS MGOMBA	MEMBER
19	NICOLAUS KAPWAGA	MEMBER
20	IBRAHIM CHALI	MEMBER
21	ROBERT MAULANA	MEMBER
22	CHRISTINA KIKOTI	MEMBER
23	G. NG'ALA	MEMBER
24	SYLIVESTER MWAMIHO	MEMBER
25	ALEX E. MWAMIHO	MEMBER
26	SIMTAMBULE NGIMBA	MEMBER
27	MARTINA ANDREA	MEMBER

VILLAGE NAME: KIZI

DATE: 01ST NOVEMBER 2007

S/NO	PARTICIPANTS' NAMES	TITTLE
1	MELCHIOLY CHALI	VILLAGE CHAIRMAN
2	THEODORY KIYANGA	AG. VEO
3	PHILIMINA MILIMO	MEMBER
4	ODILIA MBWANI	MEMBER
5	DELFINA MBWANI	MEMBER
6	CECILIA PAULO	MEMBER
7	VALELIANA MWAMBA	MEMBER
8	FARIDA MSUNGU	MEMBER
9	SCOLASTICA PWELEZA	MEMBER
10	COSTANSIA MALENDIA	MEMBER
11	LEONARD KIYANGA	MEMBER
12	INNOCENT MWALUGA	MEMBER
13	RONJIRO KIYANGA	MEMBER
14	STANLEY MWIKANU	MEMBER
15	SEVELIN KIYANGA	MEMBER
16	PONSIAN CHALI	MEMBER
17	MARTINA KITIME	MEMBER
18	MATHIAS KIYANGA	MEMBER
19	RICHARD R. KITIME	MEMBER
20	YERONIMI E. KITIME	MEMBER
21	CHRISTOPHER D. KIYANGA	MEMBER
22	GABRIEL MWACHALI	MEMBER
23	PLASHID ANTHONY	MEMBER
24	LEDAS CHALI	MEMBER
25	DEOGRAS KIYANGA	MEMBER
26	ASHELY MNYAMBULI	MEMBER
27	IZIDORY GAILANZILO	MEMBER
28	PAULO KIYANGA	MEMBER
29	ALANI MGOMBA	MEMBER
30	PAUL MWACHALI	MEMBER

Appendix 4: Village plans

Village Visioning and Planning Meeting Lufu, Mpwapwa District – 28th October, 2007

The Rubeho Mountains, situated in Mpwapwa and Kilosa districts, are a large mountain block which makes up part of the Eastern Arc Mountains. In the Rubeho Mountains are three forests – Mafwemela, Mang'alisa and Ukwiva – found mainly along the ridges of the mountains. The Eastern Arc Mountains support a high concentration of endemic species, and it is for this reason that they have been identified as a priority region for the conservation of biodiversity. However, the Rubeho Mountains have not until recently been a focus for conservation efforts, due partly to their inaccessibility.

Forest management in the Rubeho Mountains has been chronically neglected. Annual government investment for natural resource management for the whole of Mpwapwa District is US\$1000. External investment has been minimal and primarily focused on research. As a result of under-investment in forest management, natural resource dependence by the forest adjacent communities, weak governance and low awareness of the forest's values, forest loss appears to be increasing.

The Rubeho Environmental Action Plan project (REAP), which is led by the Tanzania Forest Conservation Group working closely with the Mpwapwa District Council and funded by the Critical Ecosystem Partnership Fund, will initiate a process of conservation planning and fund raising for the most biologically unique of the three Rubeho forests, Mafwemela. As a first step, an assessment of the socio-economic status of five villages in the Rubeho Mountains surrounding the Mafwemela FR was carried out, followed by the development of environmental action plans with these villages. The socio-economic information will also constitute monitoring data for the project. The assessment covered the five villages selected for inclusion in the project: Mbuga, Kizi, Galigali, Lufu and Lufusi.

This vision based planning process was carried out to contribute the project's second output:
'Through a participatory planning process, a strategy has been developed to guide sustainable natural resource management in the Mafwemela Forest landscape and resources have been mobilized for the implementation of the plan.'

A meeting was held in Lufu to come up with a vision for village environmental development, and to make an action plan around the vision. The meeting was attended by 4 women and 12 men, including village government officials, and was facilitated by TFCG. The meeting was opened by the village chairman.

The facilitators were:

Devis Mlowe	Project manager, REAP TFCG
Kate Forrester Kibuga	Facilitator

After we were introduced to the participants of the meeting, the project manager began by explaining the background to the meeting and the purpose of today's meeting. TFCG has already carried out three research studies in Lufu and Mafwemela FR – a socio-economic study, a biodiversity study and a disturbance study. The objective of this meeting was to present the findings of the research and then for the participants to come up with a plan for the village natural resources.

1. Research results

The results of the research were summarised briefly. From the socio-economic study, issues that stood out as important for development were presented:

Forest

- Limited capacity of central government to manage its own forest
- No management plan for FR or for forests on village land
- Participatory inventory of forests not yet done
- VEC not yet trained, therefore they are not aware of their responsibilities
- Fires
- Harvesting of timber, poles and firewood

Hunting
 Lack of timber, poles and firewood on village land
 Cultivation in the forest reserve
 No environmental education for the community
 Some communities under threat from being moved by the government
 Limited amount of tree planting – lack of seeds and seedlings

Agriculture
 Lack of expertise of agriculture
 Dependency on few crops
 Farming on steep slopes and too close to streams and rivers

Government
 No training in good governance
 Few public and government meetings

Economy
 Few groups, with little experience
 Lack of alternative ways of increasing income (agriculture only)

Infrastructure
 Bad road

We stressed the point that we were aware that the bad road was a considerable problem, but that it was not within the scope of TFCG to do anything about it – it was only for that reason that we put it at the end. After the socio-economic study, a brief summary of the disturbance study was presented:

6 transects were done in Mafwemela FR

Poles

2055 poles were recorded
 87% were alive
 9% had died naturally
 4% old cut
 0% fresh cut

Timber

1297 trees were recorded
 83% were alive
 14% had died naturally
 2% old cut
 0% fresh cut

Disturbance observed

Pitsawing
 Paths
 Fires
 Hunting – 12 wire snares
 Agricultural encroachment (on the W side)

A brief summary of the biodiversity study, carried out between 2000 and 2002, was then presented:

Rubeho Forests (Ukwiva, Mang'alisa, Mafwemela) – managed principally by central government for the purpose of the protection of watersheds, soil conservation and protection of wild plants

Eastern Arc Mountains – run from Kenya to S Tanzania
 There is a high concentration of endemic species – important for the world, therefore needs protection

Birds, mammals, reptiles and amphibians were studied.

35 mammal species]
 107 bird species] were observed in the 3 FRs
 10 reptile species]
 107 vertebrate species were observed in Mafwemela

11 species endemic to the Eastern Arc were observed, including bushbaby, owl, partridge, chameleons, genet, akalat

The Rubeho partridge and a newly discovered frog were found in Mafwemela FR only

Rubeho used to hold 9th place for biodiversity out of the 11 mountain blocks of the EA
 As a result of this study, they have now gone up to 5th place.
 And the research is not yet complete.

The participants at the meeting agreed with the findings and said that they represented an accurate picture of the village and its environment.

2. The past and the future of the forests

The facilitator then began a discussion about the changes which had taken place in the forests in the last ten years in order to develop a common understanding amongst the participants about the current condition of the forests. Participants were invited to list trees and animals which had disappeared or which were not seen with such frequency as they were in the past, and also to list any other changes which had taken place in the last decade. The results of the discussion were as follows:

Trees	Animals which have disappeared	Animals which are found less frequently
mipodo	elephant buffalo tandala pofu lion leopard (all these disappeared in the 1950s because of ndigana (rinderpest?))	mbawala wild pig wild dog funo. eagle

Participants explained about the above, but they were also optimistic about their forest, saying that since there were now laws in place to protect the forest, further destruction would not take place. They did understand, however, that if their road was significantly improved, people might begin to come up and destroy their forests. They said they were ready for this and would make sure that no-one was allowed to do this.

3. Visions

After talking about the future and looking at the changes that had taken place in the last ten years, we then began to talk about how the village could be if things kept going the way they were at present. Participants reflected on how they wanted their village to be in ten years' time, taking into account the research results and the list of changes. They sat in three groups, one group of women, one group of older men and one group of young men, in order to discuss their vision for the future of Mbuga. Each group came up with a vision, and a representative from each group came to explain their vision to the other participants.

Group 1 - Women

We would like to see tourists coming to see all our animals in our forest. Animals which even we don't know will be seen, which don't exist anywhere else in the world. After 10 years, even our generation will benefit from this forest, because of a lot of rain and water. Our lives should change, we should build houses from trees which we have planted and we should start lots of different projects as business.

Group 2 – Men

We should change the appearance of the landscape by planting trees, and control illegal felling of trees. We should let animals which disappeared a long time ago come back. We should build our educational capacity, by increasing the number of primary and secondary schools and we should bring electricity to our communities. We should make fish ponds to have more food so

that there is less hunting, and we should keep bees. We should change our lives from being hard to being much better.

After each group had read out their vision to the others, we put the three visions together to make one overall vision for Lufu:

Vision for Lufu

The forest should be protected so that we and our children can see the living creatures which are there and which have disappeared, so that we can attract tourists and so that we can continue to enjoy lots of water and rain. We should plant trees for firewood, timber, fruit and building poles, so that we can protect our forest. We should have education, and we should look for various projects so that we can change our lives, from being so hard to being easier. We should improve our local social services, such as the road, the schools and the dispensary.

4. Supporting and opposing forces

After completing the village vision, we began to think about how to attain the vision, and to identify important forces supporting and opposing their desired future scenario. It was clear that there were things which could help people to reach the vision (supporting forces), but also that there were things which would hinder them on the way (opposing forces). We made a list of these forces. Each opposing force was written on a yellow card and each supporting force on a blue card. The one who made the suggestion came to the front and held the card up, so that everyone could see all the forces. The supporting and opposing forces generated were as follows:

Supporting forces	Opposing forces
We have land We have people who can work Our forest is in good condition We have water	Money is a problem We don't have any agricultural experts, nor inputs Lack of education Infrastructure is a problem

We then took each of the opposing forces in turn and looked at what the people in the village could do to weaken it, if anything. The suggestions made were as follows:

Opposing forces

Money is a problem

We should form groups, open bank accounts, look for alternative cash crops which bring in money

We don't have any agricultural experts, nor inputs

There's nothing we can do about this

Lack of education

If we all work together, it can help

Infrastructure is a problem

We have plenty of people who can work which can help to solve the problem

5. Plan for the village

We collected the opposing forces cards and we used them to form the basis of the action plan for the village for the next ten years, together with the suggestions of the participants. We also took into consideration the three presentations at the beginning and the vision drawn up by the participants. We took an issue, the participants suggested activities which would help to deal with the issue, then we decided who would be able to provide help and what inputs would be needed. The action plan was as follows:

Lufu Action Plan

Issue	Activity	Who	Inputs
Forests and trees	Provide training about roles and responsibilities for the VEC Set up nurseries and plant trees Provide education for farmers, hunters and livestock keepers about the environment and living creatures. Set up forest patrols Prepare a management plan for Mafwemela Make bye-laws about the forest	Village people District council Village government TFCG VEC	Training materials Facilitators Nursery equipment
Expertise about agriculture and livestock	Look for alternative cash crops which suit the climate of Lufu Get training about improved agricultural techniques	Village government District council Village people TFCG	Examples of crops Improved seeds Training materials Facilitators
Alternative means of increasing income	Join saccos Start up or join groups Think up small projects for the groups	TFCG Village government District council Village people	Examples of projects Group materials Facilitators Capital
Governance	Education on good governance Hold regular public meetings in order to provide education for the community and to let people know what is going on.	TFCG Village government District council Village people	Training materials Facilitators

After finishing the action plan, the project manager promised that he would bring it back soon and present it to the whole village at a public meeting. The village chairman then thanked everyone who had attended and closed the meeting.

**Village Visioning and Planning Meeting
Lufusi, Mpwapwa District – 29th October, 2007**

The Rubeho Mountains, situated in Mpwapwa and Kilosa districts, are a large mountain block which makes up part of the Eastern Arc Mountains. In the Rubeho Mountains are three forests – Mafwemela, Mang'alisa and Ukwiva – found mainly along the ridges of the mountains. The Eastern Arc Mountains support a high concentration of endemic species, and it is for this reason that they have been identified as a priority region for the conservation of biodiversity. However, the Rubeho Mountains have not until recently been a focus for conservation efforts, due partly to their inaccessibility.

Forest management in the Rubeho Mountains has been chronically neglected. Annual government investment for natural resource management for the whole of Mpwapwa District is US\$1000. External investment has been minimal and primarily focused on research. As a result of under-investment in forest management, natural resource dependence by the forest adjacent communities, weak governance and low awareness of the forest's values, forest loss appears to be increasing.

The Rubeho Environmental Action Plan project (REAP), which is led by the Tanzania Forest Conservation Group working closely with the Mpwapwa District Council and funded by the Critical Ecosystem Partnership Fund, will initiate a process of conservation planning and fund raising for the most biologically unique of the three Rubeho forests, Mafwemela. As a first step, an assessment of the socio-economic status of five villages in the Rubeho Mountains surrounding the Mafwemela FR was carried out, followed by the development of environmental action plans with these villages. The socio-economic information will also constitute monitoring data for the project. The assessment covered the five villages selected for inclusion in the project: Mbuga, Kizi, Galigali, Lufu and Lufusi.

This vision based planning process was carried out to contribute the project's second output: *'Through a participatory planning process, a strategy has been developed to guide sustainable natural resource management in the Mafwemela Forest landscape and resources have been mobilized for the implementation of the plan.'*

A meeting was held in Lufusi to come up with a vision for village environmental development, and to make an action plan around the vision. The meeting was attended by 6 women and 17 men, including village government officials, and was facilitated by TFCG. The meeting was opened by the village chairman.

The facilitators were:

Devis Mlowe	Project manager, REAP TFCG
Kate Forrester Kibuga	Facilitator

After we were introduced to the participants of the meeting, the project manager began by explaining the background to the meeting and the purpose of today's meeting. TFCG has already carried out three research studies in Lufusi and Mafwemela FR – a socio-economic study, a biodiversity study and a disturbance study. The objective of this meeting was to present the findings of the research and then for the participants to come up with a plan for the village natural resources.

1. Research results

The results of the research were summarised briefly. From the socio-economic study, issues that stood out as important for development were presented:

Forest

Limited capacity of central government to manage its own forest
No management plan for FR or for forests on village land
Participatory inventory of forests not yet done
VEC not yet trained, therefore they are not aware of their responsibilities
Fires

Harvesting of timber, poles and firewood
Hunting
Lack of timber, poles and firewood on village land
Cultivation in the forest reserve
No environmental education for the community
Some communities under threat from being moved by the government
Limited amount of tree planting – lack of seeds and seedlings

Agriculture
Lack of expertise of agriculture
Farming on steep slopes and too close to streams and rivers

Government
No training in good governance
Few public and government meetings

Economy
Few groups, with little experience
Lack of alternative ways of increasing income (agriculture only)

Infrastructure
Bad road

We stressed the point that we were aware that the bad road was a considerable problem, but that it was not within the scope of TFCG to do anything about it – it was only for that reason that we put it at the end. After the socio-economic study, a brief summary of the disturbance study was presented:

6 transects were done in Mafwemela FR

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Timber

1297 trees were recorded
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0% fresh cut

Disturbance observed

Pitsawing
Paths
Fires
Hunting – 12 wire snares
Agricultural encroachment (on the W side)

A brief summary of the biodiversity study, carried out between 2000 and 2002, was then presented:

Rubeho Forests (Ukwiva, Mang'alisa, Mafwemela) – managed principally by central government for the purpose of the protection of watersheds, soil conservation and protection of wild plants

Eastern Arc Mountains – run from Kenya to S Tanzania

There is a high concentration of endemic species – important for the world, therefore needs protection

Birds, mammals, reptiles and amphibians were studied.

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Rubeho used to hold 9th place for biodiversity out of the 11 mountain blocks of the EA
 As a result of this study, they have now gone up to 5th place.
 And the research is not yet complete.

The participants at the meeting agreed with the findings and said that they represented an accurate picture of the village and its environment.

2. The past and the future of the forests

The facilitator then began a discussion about the changes which had taken place in the forests in the last ten years in order to develop a common understanding amongst the participants about the current condition of the forests. Participants were invited to list trees and animals which had disappeared or which were not seen with such frequency as they were in the past, and also to list any other changes which had taken place in the last decade. The results of the discussion were as follows:

Forest	Animals which have disappeared	Animals which are found less frequently
The forest was very dense, but now it is more open	elephant buffalo tandala pofu lion leopard (all these disappeared in the 1960s because the population increased)	mbawala wild pig haruzi dikdik

Participants explained about the above, but they were also optimistic about their forest, saying that since there were now laws in place to protect the forest, further destruction would not take place. They said 'We forgot ourselves for a time, but now everything's going to be fine.'

3. Visions

After talking about the future and looking at the changes that had taken place in the last ten years, we then began to talk about how the village could be if things kept going the way they were at present. Participants reflected on how they wanted their village to be in ten years' time, taking into account the research results and the list of changes. They sat in three groups, one group of women, one group of older men and one group of young men, in order to discuss their vision for the future of Lufusi. Each group came up with a vision, and a representative from each group came to explain their vision to the other participants.

Group 1 - Women

Every house should have planted trees for fruit and shade. We should have lots of forests planted by groups. We want a good road to transport our crops. There will be lots of animals, even the types that disappeared long ago.

Group 2 – Older men

The forest should be very dense. Animals like paa, elephant, buffalo, palahala, pofu should be seen in the places where they used to be. Every household should have planted at least 100 trees. There should be more water in the rivers. Every household should have a modern house, not made out of poles. We'd also like to see a good road which will make transport easier.

Group 3 – Younger men

There should be a village forest enough for our needs. The forest reserve should be closed as it was in the past. The amount of water should be increased. The animals that disappeared long ago should return. The climate should be better.

After each group had read out their vision to the others, we put the three visions together to make one overall vision for Lufusi:

Vision for Lufusi

We should have a dense forest so that animals can return to where they were long ago, and so that we will have enough rain and water and a good climate. We should plant trees and look after the village forest areas so that we can meet our needs, e.g firewood, building poles, fruit, etc. Everyone should have received education about the environment. We should have modern houses, a dispensary and a road that is passable all year round.

4. Supporting and opposing forces

After completing the village vision, we began to think about how to attain the vision, and to identify important forces supporting and opposing their desired future scenario. It was clear that there were things which could help people to reach the vision (supporting forces), but also that there were things which would hinder them on the way (opposing forces). We made a list of these forces. Each opposing force was written on a yellow card and each supporting force on a blue card. The one who made the suggestion came to the front and held the card up, so that everyone could see all the forces. The supporting and opposing forces generated were as follows:

Supporting forces	Opposing forces
We have people who can work	We don't have any experts
We have a forest	We don't have agricultural inputs or equipment (e.g. ox ploughs, fertilisers, pesticides)
We have water	We don't have capital
We have groups	The road is bad
We have a saccos	
There is livestock and grazing land	
There is a good area of land for farming	

We then took each of the opposing forces in turn and looked at what the people in the village could do to weaken it, if anything. The suggestions made were as follows:

Opposing forces

We don't have any experts

We should attend seminars

We don't have agricultural inputs or equipment (e.g. ox ploughs, fertilisers, pesticides)

There is nothing we can do about this

We don't have capital

We have a large area which we can cultivate, we have a saccos

The road is bad

We have people who can work on it

5. Plan for the village

We collected the opposing forces cards and we used them to form the basis of the action plan for the village for the next ten years, together with the suggestions of the participants. We also took into consideration the three presentations at the beginning and the vision drawn up by the participants. We took an issue, the participants suggested activities which would help to deal with the issue, then we decided who would be able to provide help and what inputs would be needed. The action plan was as follows:

Lufusi Action Plan

Issue	Activity	Who	Inputs
Forests and tree planting	Prepare an area for planting trees Set up nurseries and plant trees Provide education for the community about the environment Prepare a management plan for Mafwemela Make bye-laws about the forest Provide training about roles and responsibilities for the VEC	Village people District council Village government TFCG VEC	Training materials Facilitators Nursery equipment
Agriculture and livestock	Farmers to join cooperatives Get training about improved agricultural techniques and livestock keeping Increase the number of livestock	Village government District council Village people TFCG Livestock keepers	Training materials Facilitators Livestock
Economy and low incomes	Join saccos Engage in improved agriculture and livestock keeping Think up small projects or alternative means of increasing income	TFCG Village government District council Village people	Examples of projects Facilitators Capital
Governance	Education on good governance Hold public meetings according to the schedule	TFCG Village government District council Village people	Training materials Facilitators
Road	Improve the road	Village people District council	Material for road repair

After finishing the action plan, the project manager promised that he would bring it back soon and present it to the whole village at a public meeting. The village chairman then thanked everyone who had attended and closed the meeting.

**Village Visioning and Planning Meeting
Mbuga, Mpwapwa District – 30th October, 2007**

The Rubeho Mountains, situated in Mpwapwa and Kilosa districts, are a large mountain block which make up part of the Eastern Arc Mountains. In the Rubeho Mountains are three forests – Mafwemela, Mang'alisa and Ukwiva – found mainly along the ridges of the mountains. The Eastern Arc Mountains support a high concentration of endemic species, and it is for this reason that they have been identified as a priority region for the conservation of biodiversity. However, the Rubeho Mountains have not until recently been a focus for conservation efforts, due partly to their inaccessibility.

Forest management in the Rubeho Mountains has been chronically neglected. Annual government investment for natural resource management for the whole of Mpwapwa District is US\$1000. External investment has been minimal and primarily focused on research. As a result of under-investment in forest management, natural resource dependence by the forest adjacent communities, weak governance and low awareness of the forest's values, forest loss appears to be increasing.

The Rubeho Environmental Action Plan project (REAP), which is led by the Tanzania Forest Conservation Group working closely with the Mpwapwa District Council and funded by the Critical Ecosystem Partnership Fund, will initiate a process of conservation planning and fund raising for the most biologically unique of the three Rubeho forests, Mafwemela. As a first step, an assessment of the socio-economic status of five villages in the Rubeho Mountains surrounding the Mafwemela FR was carried out, followed by the development of environmental action plans with these villages. The socio-economic information will also constitute monitoring data for the project. The assessment covered the five villages selected for inclusion in the project: Mbuga, Kizi, Galigali, Lufu and Lufusi.

This vision based planning process was carried out to contribute the project's second output: *'Through a participatory planning process, a strategy has been developed to guide sustainable natural resource management in the Mafwemela Forest landscape and resources have been mobilized for the implementation of the plan.'*

A meeting was held in Mbuga to come up with a vision for village environmental development, and to make an action plan around the vision. The meeting was attended by 8 women and 14 men, including village government officials, and was facilitated by TFCG. The meeting was opened by the village chairman.

The facilitators were:

Devis Mlowe	Project manager, REAP TFCG
Kate Forrester Kibuga	Facilitator

After we were introduced to the participants of the meeting, the project manager began by explaining the background to the meeting and the purpose of today's meeting. TFCG has already carried out three research studies in Mbuga and Mafwemela FR – a socio-economic study, a biodiversity study and a disturbance study. The objective of this meeting was to present the findings of the research and then for the participants to come up with a plan for the village natural resources.

1. Research results

The results of the research were summarised briefly. From the socio-economic study, issues that stood out as important for development were presented:

Forest

Limited capacity of central government to manage its own forest
No management plan for FR or for forests on village land
Participatory inventory of forests not yet done
VEC not yet trained, therefore they are not aware of their responsibilities
Fires
Harvesting of timber, poles and firewood
Hunting

Lack of timber, poles and firewood on village land
No environmental education for the community
Some communities under threat from being moved by the government
Limited amount of tree planting – lack of seeds and seedlings

Agriculture

Lack of expertise of agriculture
Dependency on few crops
Farming on steep slopes and too close to streams and rivers

Government

No training in good governance
Few public and government meetings

Economy

Few groups, with little experience
Lack of alternative ways of increasing income (agriculture only)

Infrastructure

Bad road

We stressed the point that we were aware that the bad road was a considerable problem, but that it was not within the scope of TFCG to do anything about it – it was only for that reason that we put it at the end. After the socio-economic study, a brief summary of the disturbance study was presented:

6 transects were done in Mafwemela FR

Poles

2055 poles were recorded
87% were alive
9% had died naturally
4% old cut
0% fresh cut

Timber

1297 trees were recorded
83% were alive
14% had died naturally
2% old cut
0% fresh cut

Disturbance observed

Pitsawing
Paths
Fires
Hunting – 12 wire snares
Agricultural encroachment (on the W side)

A brief summary of the biodiversity study, carried out between 2000 and 2002, was then presented:

Rubeho Forests (Ukwiva, Mang'alisa, Mafwemela) – managed principally by central government for the purpose of the protection of watersheds, soil conservation and protection of wild plants

Eastern Arc Mountains – run from Kenya to S Tanzania

There is a high concentration of endemic species – important for the world, therefore needs protection

Birds, mammals, reptiles and amphibians were studied.

35 mammal species]
107 bird species] were observed in the 3 FRs
10 reptile species]
107 vertebrate species were observed in Mafwemela

11 species endemic to the Eastern Arc were observed, including bushbaby, owl, partridge, chameleons, genet, akalat

The Rubeho partridge and a newly discovered frog were found in Mafwemela FR only

Rubeho used to hold 9th place for biodiversity out of the 11 mountain blocks of the EA
 As a result of this study, they have now gone up to 5th place.
 And the research is not yet complete.

The participants at the meeting agreed with the findings and said that they represented an accurate picture of the village and its environment.

2. The past and the future of the forests

The facilitator then began a discussion about the changes which had taken place in the forests in the last ten years in order to develop a common understanding amongst the participants about the current condition of the forests. Participants were invited to list trees and animals which had disappeared or which were not seen with such frequency as they were in the past, and also to list any other changes which had taken place in the last decade. The results of the discussion were as follows:

Forest	Animals	Other changes
The forest has decreased. There is less firewood.	elephant buffalo tandala pofu lion leopard (all these disappeared in the 1950s because of ndigana (rinderpest?)) mbawala wild pig dikdik funo	Less rain Small water sources have disappeared Itetema has got smaller Fertility on shambas has decreased The population has increased.

Participants explained about the above, but said that they felt that the forests were returning – they said that there were now more trees growing than were cut down. They also said that they had set aside a place for gathering firewood, so there was not so much indiscriminate cutting any more. The people were optimistic, saying that after ten years, everything would be better, there would be less hunting too, since more and more people are now keeping pigs.

3. Visions

After talking about the future and looking at the changes that had taken place in the last ten years, we then began to talk about how the village could be if things kept going the way they were at present. Participants reflected on how they wanted their village to be in ten years' time, taking into account the research results and the list of changes. They sat in three groups, one group of women, one group of older men and one group of young men, in order to discuss their vision for the future of Mbuga. Each group came up with a vision, and a representative from each group came to explain their vision to the other participants.

Group 1 - Women

We will plant lots of trees so that we won't have to go so far to get firewood. We will plant fruit trees for our health and for business. We'll also cultivate vegetable gardens. We'll make a big effort to cultivate with terraces on steep slopes and plant trees to prevent erosion. We'll also make an effort to keep various types of animals so that we'll have a source of meat and income, in order to prevent illegal hunting. We'll try to plant minyaa (euphorbia?) trees so that we can keep bees and harvest honey for our own use and for business.

Group 2 – Older men

Everywhere will be planted with trees. Everyone should have their own forest, with fruit trees too. We would like to have the water sources the way they were in the past. Lots of people should keep

livestock so that no-one needs to hunt any more. Since the village is very mountainous, all shambas should have contour bunds to stop the loss of fertility. We will make sure that everyone gets education about looking after the environment. We'll find different cash crops to cultivate. We will become researchers in the field of propagating indigenous trees. We'll work closely with experts to improve our economic situation. We would like to be a good example for other villages about looking after our environment.

Group 3 – Younger men

We will make sure that we will have a large forest of planted trees, for timber, firewood and fruit. We will look after the water sources with greater care, because there will be more trees planted near them. We will make an effort to look after the environment, by preventing fires and hunting, and making sure people don't live near the forest. We expect that we will be working with experts who will help us to do environmental training for everyone.

After each group had read out their vision to the others, we put the three visions together to make one overall vision for Mbuga:

Vision for Mbuga

We should look after the forest by preventing fires, hunting, harvesting trees and conserving water sources as they were in the past. We should plant trees as individuals and as a village, for timber, firewood, building poles, fruit and beekeeping. We should get training from experts about the environment and about farming, e.g. farming on steep slopes and near to water sources. And we should do our own research into propagating indigenous and exotic trees. We should increase our income and decrease our dependency on the forest by thinking up small projects like keeping small animals, beekeeping, cultivating vegetables and looking for alternative cash crops. We should become an example for other villages in caring for the environment.

4. Supporting and opposing forces

After completing the village vision, we began to think about how to attain the vision, and to identify important forces supporting and opposing their desired future scenario. It was clear that there were things which could help people to reach the vision (supporting forces), but also that there were things which would hinder them on the way (opposing forces). We made a list of these forces. Each opposing force was written on a yellow card and each supporting force on a blue card. The one who made the suggestion came to the front and held the card up, so that everyone could see all the forces. The supporting and opposing forces generated were as follows:

Supporting forces	Opposing forces
We have land We have people who can work We have a forest, trees and animals	There is no local market We don't have any experts nearby We don't have agricultural inputs We don't have money The road is bad There is water but it isn't safe

We then took each of the opposing forces in turn and looked at what the people in the village could do to weaken it, if anything. The suggestions made were as follows:

Opposing forces

There is no local market

Request the district authorities to start a market in our village

We don't have any experts nearby

We should teach each other the skills we have

We don't have agricultural inputs

We can't do anything

We don't have money

We should increase agricultural production and think of new projects

The road is bad

We have our own labour which we can use to improve the road

There is water but it isn't safe

We should boil our water (but there isn't enough firewood)

5. Plan for the village

We collected the opposing forces cards and we used them to form the basis of the action plan for the village for the next ten years, together with the suggestions of the participants. We also took into consideration the three presentations at the beginning and the vision drawn up by the participants. We took an issue, the participants suggested activities which would help to deal with the issue, then we decided who would be able to provide help and what inputs would be needed. The action plan was as follows:

Mbuga Action Plan

Issue	Activity	Who	Inputs
Forests and trees	Set up forest patrols Set up nurseries and plant trees Get environmental education Prepare a management plan for Mafwemela and a survey for the forest Get training about fuel saving stoves	Village people District council Village government TFCG VEC	Training materials Facilitators Nursery equipment Tree seeds Survey equipment Stoves
Agriculture	Look for alternative cash crops which suit the climate of Mbuga Get training about improved agricultural techniques	Village government District council Village people TFCG	Examples of crops Training materials Facilitators
Economy	Join saccos Set up a crop market Think up small projects (e.g. café, vegetables, bees, etc.)	TFCG Village government District council Village people	Examples of projects Facilitators Capital
Governance	Education on good governance for everyone in the village Make sure village activities are properly supervised Make sure laws are enforced Outlaw corruption Encourage people to attend meetings so that they know what is going on	TFCG Village government District council Village people	Training materials Facilitators

After finishing the action plan, the project manager promised that he would bring it back soon and present it to the whole village at a public meeting. The village chairman then thanked everyone who had attended and closed the meeting.

Village Visioning and Planning Meeting Galigali, Mpwapwa District – 31st October, 2007

The Rubeho Mountains, situated in Mpwapwa and Kilosa districts, are a large mountain block which makes up part of the Eastern Arc Mountains. In the Rubeho Mountains are three forests – Mafwemela, Mang'alisa and Ukwiva – found mainly along the ridges of the mountains. The Eastern Arc Mountains support a high concentration of endemic species, and it is for this reason that they have been identified as a priority region for the conservation of biodiversity. However, the Rubeho Mountains have not until recently been a focus for conservation efforts, due partly to their inaccessibility.

Forest management in the Rubeho Mountains has been chronically neglected. Annual government investment for natural resource management for the whole of Mpwapwa District is US\$1000. External investment has been minimal and primarily focused on research. As a result of under-investment in forest management, natural resource dependence by the forest adjacent communities, weak governance and low awareness of the forest's values, forest loss appears to be increasing.

The Rubeho Environmental Action Plan project (REAP), which is led by the Tanzania Forest Conservation Group working closely with the Mpwapwa District Council and funded by the Critical Ecosystem Partnership Fund, will initiate a process of conservation planning and fund raising for the most biologically unique of the three Rubeho forests, Mafwemela. As a first step, an assessment of the socio-economic status of five villages in the Rubeho Mountains surrounding the Mafwemela FR was carried out, followed by the development of environmental action plans with these villages. The socio-economic information will also constitute monitoring data for the project. The assessment covered the five villages selected for inclusion in the project: Mbuga, Kizi, Galigali, Lufu and Lufusi.

This vision based planning process was carried out to contribute the project's second output: *'Through a participatory planning process, a strategy has been developed to guide sustainable natural resource management in the Mafwemela Forest landscape and resources have been mobilized for the implementation of the plan.'*

A meeting was held in Galigali to come up with a vision for village environmental development, and to make an action plan around the vision. The meeting was attended by 10 women and 17 men, including village government officials, and was facilitated by TFCG. The meeting was opened by the acting village chairman.

The facilitators were:

Devis Mlowe	Project manager, REAP TFCG
Kate Forrester Kibuga	Facilitator

After we were introduced to the participants of the meeting, the project manager began by explaining the background to the meeting and the purpose of today's meeting. TFCG has already carried out three research studies in Galigali and Mafwemela FR – a socio-economic study, a biodiversity study and a disturbance study. The objective of this meeting was to present the findings of the research and then for the participants to come up with a plan for the village natural resources.

1. Research results

The results of the research were summarised briefly. From the socio-economic study, issues that stood out as important for development were presented:

Forest

Limited capacity of central government to manage its own forest
No management plan for FR or for forests on village land
Participatory inventory of forests not yet done
VEC not yet trained, therefore they are not aware of their responsibilities
Fires

Harvesting of timber, poles and firewood
Hunting
Lack of timber, poles and firewood on village land
Cultivation in the forest reserve
No environmental education for the community
Some communities under threat from being moved by the government
Limited amount of tree planting – lack of seeds and seedlings

Agriculture
Lack of expertise of agriculture
Dependency on small number of crops
Farming on steep slopes and too close to streams and rivers

Government
No training in good governance
Few public and government meetings

Economy
Few groups, with little experience
Lack of alternative ways of increasing income (agriculture only)

Infrastructure
Bad road

We stressed the point that we were aware that the bad road was a considerable problem, but that it was not within the scope of TFCG to do anything about it – it was only for that reason that we put it at the end. After the socio-economic study, a brief summary of the disturbance study was presented:

6 transects were done in Mafwemela FR

Poles

2055 poles were recorded
87% were alive
9% had died naturally
4% old cut
0% fresh cut

Timber

1297 trees were recorded
83% were alive
14% had died naturally
2% old cut
0% fresh cut

Disturbance observed

Pitsawing
Paths
Fires
Hunting – 12 wire snares
Agricultural encroachment (on the W side)

A brief summary of the biodiversity study, carried out between 2000 and 2002, was then presented:

Rubeho Forests (Ukwiva, Mang'alisa, Mafwemela) – managed principally by central government for the purpose of the protection of watersheds, soil conservation and protection of wild plants

Eastern Arc Mountains – run from Kenya to S Tanzania

There is a high concentration of endemic species – important for the world, therefore needs protection

Birds, mammals, reptiles and amphibians were studied.

35 mammal species]
107 bird species] were observed in the 3 FRs
10 reptile species]
107 vertebrate species were observed in Mafwemela

11 species endemic to the Eastern Arc were observed, including bushbaby, owl, partridge, chameleons, genet, akalat

The Rubeho partridge and a newly discovered frog were found in Mafwemela FR only

Rubeho used to hold 9th place for biodiversity out of the 11 mountain blocks of the EA
As a result of this study, they have now gone up to 5th place.
And the research is not yet complete.

The participants at the meeting agreed with the findings and said that they represented an accurate picture of the village and its environment.

2. The past and the future of the forests

The facilitator then began a discussion about the changes which had taken place in the forests in the last ten years in order to develop a common understanding amongst the participants about the current condition of the forests. Participants were invited to list trees and animals which had disappeared or which were not seen with such frequency as they were in the past, and also to list any other changes which had taken place in the last decade. The results of the discussion were as follows:

Forest	Animals	Other changes
The forest has got smaller There is less firewood – in the past it was very close by	elephant buffalo tandala pofu lion leopard (all these disappeared in the 1960s because the population increased) mbawala wild pig funo dikdik (there are fewer of these)	There is less rain Water sources have dried up Shambas are less fertile The population has increased

Participants explained about the above, but they said that because of new forest laws, destruction of the forest will not continue. The community has already begun to understand about the importance of protecting the environment.

3. Visions

After talking about the future and looking at the changes that had taken place in the last ten years, we then began to talk about how the village could be if things kept going the way they were at present. Participants reflected on how they wanted their village to be in ten years' time, taking into account the research results and the list of changes. They sat in three groups, one group of women, one group of men and one group of young men, in order to discuss their vision for the future of Galigali. Each group came up with a vision, and a representative from each group came to explain their vision to the other participants.

Group 1 - Women

We should get some expertise, we should plant trees, so that we can have building poles, timber and easily available firewood. We should look after the environment. Every household should have planted 15 trees.

Group 2 – Men

Every household should have a quarter acre of planted trees. Water sources will be better. The forests will have increased, as well as all indigenous plants. Transport will be easier.

Group 3 – Younger men

We should look after the environment so that we will have the animals again which disappeared because of clearing and burning the forest. We should plant trees to get timber, firewood, building poles and to protect water sources. We need to protect the forest.

After each group had read out their vision to the others, we put the three visions together to make one overall vision for Galigali:

Vision for Galigali

We should look after the forest so that it increases in size, and the animals which disappeared in the past can return, and we should protect water sources. We should plant trees for timber, firewood and building poles for the use of future generations. We should have experts nearby so that we can get education about agriculture and the environment. We will have a good road so that we can transport our crops at any time.

4. Supporting and opposing forces

After completing the village vision, we began to think about how to attain the vision, and to identify important forces supporting and opposing their desired future scenario. It was clear that there were things which could help people to reach the vision (supporting forces), but also that there were things which would hinder them on the way (opposing forces). We made a list of these forces. Each opposing force was written on a yellow card and each supporting force on a blue card. The one who made the suggestion came to the front and held the card up, so that everyone could see all the forces. The supporting and opposing forces generated were as follows:

Supporting forces	Opposing forces
We have land	We haven't got a forest officer in the village
We have a school	The road is bad
We have water	There are crop and tree pests
We have a health facility	We don't have tree seeds

We then took each of the opposing forces in turn and looked at what the people in the village could do to weaken it, if anything. The suggestions made were as follows:

Opposing forces

We haven't got a forest officer in the village

We can ask village experts

The road is bad

We can use our own labour to help to repair it

There are crop and tree pests

There is nothing we can do about this

We don't have tree seeds

We will find seeds in this village and in other neighbouring villages

5. Plan for the village

We collected the opposing forces cards and we used them to form the basis of the action plan for the village for the next ten years, together with the suggestions of the participants. We also took into consideration the three presentations at the beginning and the vision drawn up by the participants. We took an issue, the participants suggested activities which would help to deal with the issue, then we decided who would be able to provide help and what inputs would be needed. The action plan was as follows:

Galigali Action Plan

Issue	Activity	Who	Inputs
Forests and trees	Set up nurseries and plant trees Provide education for the community about the environment and protecting the forest Prepare a management plan for the forests in which there is an area set aside for use	Village people District council Village government TFCG VEC	Training materials Facilitators Nursery equipment Tree seeds
Agriculture	Seek alternative cash crops which suit Galigali's climate Get training about improved agricultural techniques	Village government District council Village people TFCG	Training materials Facilitators Examples of crops
Economy	Think up small income generating projects Join saccos	TFCG Village government District council Village people	Examples of projects Facilitators Capital
Governance	Education on good governance for village government and the community Hold public meetings according to the schedule	TFCG Village government District council Village people	Training materials Facilitators

After finishing the action plan, the project manager promised that he would bring it back soon and present it to the whole village at a public meeting. The acting village chairman then thanked everyone who had attended and closed the meeting.

Village Visioning and Planning Meeting Kizi, Mpwapwa District – 1st November, 2007

The Rubeho Mountains, situated in Mpwapwa and Kilosa districts, are a large mountain block which makes up part of the Eastern Arc Mountains. In the Rubeho Mountains are three forests – Mafwemela, Mang'alisa and Ukwiva – found mainly along the ridges of the mountains. The Eastern Arc Mountains support a high concentration of endemic species, and it is for this reason that they have been identified as a priority region for the conservation of biodiversity. However, the Rubeho Mountains have not until recently been a focus for conservation efforts, due partly to their inaccessibility.

Forest management in the Rubeho Mountains has been chronically neglected. Annual government investment for natural resource management for the whole of Mpwapwa District is US\$1000. External investment has been minimal and primarily focused on research. As a result of under-investment in forest management, natural resource dependence by the forest adjacent communities, weak governance and low awareness of the forest's values, forest loss appears to be increasing.

The Rubeho Environmental Action Plan project (REAP), which is led by the Tanzania Forest Conservation Group working closely with the Mpwapwa District Council and funded by the Critical Ecosystem Partnership Fund, will initiate a process of conservation planning and fund raising for the most biologically unique of the three Rubeho forests, Mafwemela. As a first step, an assessment of the socio-economic status of five villages in the Rubeho Mountains surrounding the Mafwemela FR was carried out, followed by the development of environmental action plans with these villages. The socio-economic information will also constitute monitoring data for the project. The assessment covered the five villages selected for inclusion in the project: Mbuga, Kizi, Galigali, Lufu and Lufusi.

This vision based planning process was carried out to contribute the project's second output: *'Through a participatory planning process, a strategy has been developed to guide sustainable natural resource management in the Mafwemela Forest landscape and resources have been mobilized for the implementation of the plan.'*

A meeting was held in Kizi to come up with a vision for village environmental development, and to make an action plan around the vision. The meeting was attended by 10 women and 21 men, including village government officials, and was facilitated by TFCG. The meeting was opened by the acting village chairman.

The facilitators were:

Devis Mlowe	Project manager, REAP TFCG
Kate Forrester Kibuga	Facilitator

After we were introduced to the participants of the meeting, the project manager began by explaining the background to the meeting and the purpose of today's meeting. TFCG has already carried out three research studies in Kizi and Mafwemela FR – a socio-economic study, a biodiversity study and a disturbance study. The objective of this meeting was to present the findings of the research and then for the participants to come up with a plan for the village natural resources.

1. Research results

The results of the research were summarised briefly. From the socio-economic study, issues that stood out as important for development were presented:

Forest

Limited capacity of central government to manage its own forest
No management plan for FR or for forests on village land
Participatory inventory of forests not yet done
VEC not yet trained, therefore they are not aware of their responsibilities
Fires

Harvesting of timber, poles and firewood
Hunting
Lack of timber, poles and firewood on village land
No environmental education for the community
Some communities under threat from being moved by the government
Limited amount of tree planting – lack of seeds and seedlings

Agriculture
Lack of expertise of agriculture
Dependency on small number of crops
Farming on steep slopes and too close to streams and rivers

Government
No training in good governance
Few public and government meetings

Economy
Few groups, with little experience
Lack of alternative ways of increasing income (agriculture only)

Infrastructure
Bad road

We stressed the point that we were aware that the bad road was a considerable problem, but that it was not within the scope of TFCG to do anything about it – it was only for that reason that we put it at the end. After the socio-economic study, a brief summary of the disturbance study was presented:

6 transects were done in Mafwemela FR

Poles

2055 poles were recorded
87% were alive
9% had died naturally
4% old cut
0% fresh cut

Timber

1297 trees were recorded
83% were alive
14% had died naturally
2% old cut
0% fresh cut

Disturbance observed

Pitsawing
Paths
Fires
Hunting – 12 wire snares
Agricultural encroachment (on the W side)

A brief summary of the biodiversity study, carried out between 2000 and 2002, was then presented:

Rubeho Forests (Ukwiva, Mang'alisa, Mafwemela) – managed principally by central government for the purpose of the protection of watersheds, soil conservation and protection of wild plants

Eastern Arc Mountains – run from Kenya to S Tanzania

There is a high concentration of endemic species – important for the world, therefore needs protection

Birds, mammals, reptiles and amphibians were studied.

35 mammal species]
107 bird species] were observed in the 3 FRs
10 reptile species]
107 vertebrate species were observed in Mafwemela

11 species endemic to the Eastern Arc were observed, including bushbaby, owl, partridge, chameleons, genet, akalat

The Rubeho partridge and a newly discovered frog were found in Mafwemela FR only

Rubeho used to hold 9th place for biodiversity out of the 11 mountain blocks of the EA
 As a result of this study, they have now gone up to 5th place.
 And the research is not yet complete.

The participants at the meeting agreed with the findings and said that they represented an accurate picture of the village and its environment.

2. The past and the future of the forests

The facilitator then began a discussion about the changes which had taken place in the forests in the last ten years in order to develop a common understanding amongst the participants about the current condition of the forests. Participants were invited to list trees and animals which had disappeared or which were not seen with such frequency as they were in the past, and also to list any other changes which had taken place in the last decade. The results of the discussion were as follows:

Forest	Animals	Other changes
The forest has got smaller Trees in the village forest have decreased, because of burning and harvesting, e.g. mikobora (sandalwood), miguhu, mizambarau There is less firewood – in the past it was very close by	elephant buffalo tandala palahala pofu lion leopard (all these disappeared in the 1960s because the population increased and because of hunting) mbawala wild pig funo dikdik (there are fewer of these because of hunting)	There is less rain Water sources have dried up Shambas are less fertile The population has increased

Participants explained about the above, but they said that because of laws to protect the forest and the enthusiasm of people to plant trees and to look after the environment, it is not possible that further destruction will take place. The community has already begun to understand about the importance of protecting the environment. But they did admit that if they don't take steps immediately, they will be faced with a desert.

3. Visions

After talking about the future and looking at the changes that had taken place in the last ten years, we then began to talk about how the village could be if things kept going the way they were at present. Participants reflected on how they wanted their village to be in ten years' time, taking into account the research results and the list of changes. They sat in three groups, one group of women, one group of men and one group of young men, in order to discuss their vision for the future of Kizi. Each group came up with a vision, and a representative from each group came to explain their vision to the other participants.

Group 1 - Women

We should protect the environment by planting trees, not clearing forest land, and planting fruit trees for our health. We need to have good agriculture so that we can make sure we don't end up with a desert.

Group 2 – Men

There will be a lot of trees in the forest. There won't be drought. The economy of the community will be good. There will be lots more birds and animals. There will be lots of water – all water sources will have water. The environment will look good.

Group 3 – Younger men

We should plant trees on the boundaries between shambas. Each household should plant at least a quarter of an acre of trees. The village leaders should make sure people don't set fires or clear areas of village forest land. In order that we shouldn't end up living in a desert, we should look at protecting the whole environment.

After each group had read out their vision to the others, we put the three visions together to make one overall vision for Kizi:

Vision for Kizi

We should protect the forests and the village forest lands by controlling fire, clearance and hunting so that we will have lots of animals and birds, lots of water and avoid drought and deserts. Every household should have planted trees at home and around their shambas for use as timber, building poles, fruit, firewood and shade. We should increase our economy by engaging in improved agriculture, livestock keeping and by setting up small income generating projects.

4. Supporting and opposing forces

After completing the village vision, we began to think about how to attain the vision, and to identify important forces supporting and opposing their desired future scenario. It was clear that there were things which could help people to reach the vision (supporting forces), but also that there were things which would hinder them on the way (opposing forces). We made a list of these forces. Each opposing force was written on a yellow card and each supporting force on a blue card. The one who made the suggestion came to the front and held the card up, so that everyone could see all the forces. The supporting and opposing forces generated were as follows:

Supporting forces	Opposing forces
We have land	Weak economy
There is a forest and village forest land	Poor agriculture
We have water	No equipment to help us with work
We have a road (but it's bad)	Insufficient education
	We don't have tree seeds

We then took each of the opposing forces in turn and looked at what the people in the village could do to weaken it, if anything. The suggestions made were as follows:

Opposing forces

Weak economy

Start cultivating alternative crops, start up groups so that we can work together, and we should have a fund to help us with our activities

Poor agriculture

Use ox or donkey ploughs, use fertiliser. We should find the motivation to dig our own irrigation channels

No equipment to help us with work

We can't do anything

Insufficient education

We could share our own knowledge and skills around

We don't have tree seeds

We can find seeds in this village

5. Plan for the village

We collected the opposing forces cards and we used them to form the basis of the action plan for the village for the next ten years, together with the suggestions of the participants. We also took into consideration the three presentations at the beginning and the vision drawn up by the participants. We took an issue, the participants suggested activities which would help to deal with the issue, then we decided who would be able to provide help and what inputs would be needed. The action plan was as follows:

Kizi Action Plan

Issue	Activity	Who	Inputs
Forests/village forest land and trees	Set up or join tree propagating and planting groups Look after the forest/village forest land by making a sustainable use plan Provide education for the village environmental committee about their roles and responsibilities	Village people District council Village government TFCG VEC	Training materials Facilitators Nursery equipment Tree seeds
Agriculture	Get training about improved agricultural techniques Seek alternative cash crops which suit Kizi's climate Use modern improved seeds Seek a way to build an intake	Village government District council Village people TFCG	Training materials Facilitators Examples of crops Seeds
Economy	Access education on how to increase income Think up small income generating projects like beekeeping, small animals Join saccos Look for local markets	TFCG Village government District council Village people	Examples of projects Facilitators Capital
Governance	Education on good governance for village government and the community Hold regular public meetings	TFCG Village government District council Village people	Training materials Facilitators

After finishing the action plan, the project manager promised that he would bring it back soon and present it to the whole village at a public meeting. The acting village chairman then thanked everyone who had attended and closed the meeting.