

Review of the management of the forest resources of the Mt. Elgon ecosystem

R. Nield, E. Mugo and K. Mwathe

Mt. Elgon integrated conservation and development project

2000

Keywords: forests, forest reserves, forest management, forest rehabilitation, forest products, Non Timber Forest Products, forest harvesting, ecosystems, protected areas, community, Elgon.

Part I

Mt Elgon Integrated Conservation and Development Project (MEICDP) aims to enhance the conservation of biodiversity of Mt Elgon, a dormant volcano straddling the border between Kenya and Uganda. Mt Elgon is the fourth highest mountain in Africa and due to its proximity to the equator, height and antiquity, biodiversity of international significance is found on it.

The Project is implemented by Kenya Wildlife Service and Kenya Forest Department which administer respectively Mt Elgon National Park of some 34 000 ha and the Mt Elgon Forest Reserve of 74 000 ha. Technical and managerial support for the project comes from IUCN - The World Conservation Union, and funding for the first phase of the project is from the Netherlands Government.

Foreword

This study was commissioned by the National Steering Committee of the Mt Elgon Integrated Conservation and Development Project. The project is implemented by the Forest Department and Kenya Wildlife Service. It is financed by the Netherlands Government and technical and managerial support comes from IUCN. Concerns about adverse press reports on the poor management of the forests of Mt Elgon, and other public disquiet about forest management lead the Steering Committee to undertake this action.

The study was conducted by a three member team consisting of Mr Roger Nield, a senior Canadian forestry consultant, together with Mr E. Mugo of the Forest Department and Mr K. Mwathe from Kenya Wildlife Service. The review team consulted broadly in Nairobi before undertaking two weeks of field work around the Mt Elgon ecosystem late September and early October last year and, after a debriefing and consideration of their draft report in Nairobi on October 12th, submitted their report on 14th October 1999.

The report of the review mission was considered, and formally adopted, by the project's National Steering Committee at its meeting on 12th November 1999.

The findings of the review team are deeply disturbing as they cast doubt on the effectiveness of the Forest Department's stewardship of the Mt Elgon ecosystem. A fundamental conclusion of this review is that the forests of Mt Elgon are not being sustainably managed and require a quick intervention to correct the situation.

The team assembled compelling evidence in support of this conclusion, examples of which include:

- There has been unsustainable harvesting of both indigenous and plantation forest on Mt Elgon. Indeed, regulations and procedures for sound management have been flouted.
- The rate of forest plantation harvesting far exceeds the rate of replanting, and the survival rates of seedlings planted in clearfelled areas are low. This is evident from the area under non-resident cultivation.
- Controls on forest harvesting operations authorised by the Forest Department are not properly supervised.
- Extensive loss of forest resources has occurred through excisions, two notable examples being Chebuyk and Kitalale.
- There is neither a management plan for the Mt Elgon forest, nor up to date inventory information on this forest. Without reliable inventory data and a management plan, sustainable forest management of Mt Elgon cannot be achieved.

Much of the evidence gathered by the team suggests there has been a breakdown in transparency and accountability within the Forest Department. To some extent, the Department has been hampered by lack of resources, but notwithstanding this handicap, the team concluded that more could have been accomplished with the scarce resources that were at the disposal of the Department.

As Acting Chief Conservator of Forests, I am determined to restore the trust in the Forest Department, which every Kenyan has a right to expect. However, this will take some time as the review highlights numerous institutional problems, which are prevalent in the Department.

I am confident that with the support of those capable and dedicated officers in the department, the continuation of the government's renewed commitment to accountability and transparency within the civil service, and the understanding of all partners of development, we can turn the situation around. I hope that the lost confidence in Forest Department to aptly manage the resources, on behalf of all Kenyans, will be restored.

Finally, I would like to thank the review team, Kenya Wildlife Service, IUCN and the Netherlands Government for the important contribution they have made to the process of restoring forest management in Kenya on a sustainable footing. In particular I would like to commend Messrs Mugo and Mwathe for their candour and integrity during their participation in the review. Their example demonstrates that basic values necessary for the successful reform of the Forest Department are alive.

G N Gathaara
Chief Conservator
Forest Department
Nairobi

About the Authors

Mr Roger Nield, the team leader, is a Canadian forestry consultant with some thirty years of international experience in forestry and environmental management. He holds degrees in forestry and business administration from the University of British Columbia. He has worked previously in Canada, Peru, Iran, Nepal, Kenya Bhutan, Jamaica and Indonesia in forestry and environmental conservation projects.

In recent years a significant amount of his work has centred on the monitoring of a large CIDA-sponsored environmental conservation project in Jamaica.

Mr Emilio Mugo holds a B. Sc. Degree in Forestry and a Certificate in Community Forestry. He has twelve years experience in forest management, economics, monitoring and evaluation of projects. During his tenure as a Forest Officer, he has been appointed District Forest Officer in Kirinyaga, Nyandarua and Siaya Districts. In recognition of his hard work and dedication he was recently promoted to the rank of Senior Conservator and appointed to the post of Provincial Forest Officer, Central Province. His duties are now primarily to oversee implementation of Forest Policy, management of both indigenous and plantation forests, as well as providing forest extension services in the province.

Mr Kennedy Mwathe holds a B. Sc. Degree in Wildlife Management (Moi University), a Certificate in Biodiversity Measurement and Monitoring (Smithsonian Institute) and he is currently pursuing an M. Sc. in Protected Landscapes Management through Distance Learning.

Mr Mwathe has worked as a Research Scientist in Kenya Wildlife Service for eight years, with wide experience in wildlife/habitat/human interaction studies in Mt Kenya and Shimba Hills forests. He has also worked as a Biodiversity Officer in Meru area and in the Elephant Program Office in Nairobi HQs of KWS. Other work he has been involved in includes; Environmental

Impact Assessment (EIA) studies for projects and post-project impact monitoring, assessment of the effectiveness of wildlife barriers, human/wildlife conflict studies, wildlife-related socio-economic studies, biodiversity research and monitoring using quantitative methods (aerial and ground), vegetation monitoring, wildlife utilisation studies and fire management and monitoring.

Currently Mr Mwathe is assisting in the Kenya Wildlife Service Forest Conservation Program in Nairobi.

SUMMARY OF MAIN CONCLUSIONS AND RECOMMENDATIONS

This summary of conclusions and recommendations is grouped under the two main objectives of the review. It was requested that the recommendations be identified as short or long term and to whom they are primarily directed. After each recommendation are letters or acronyms with the following meanings:

L = Long term;

S = Short term;

MENR = Ministry of Environment and Natural Resources;

PI = Project/IUCN;

D = Donor;

K = KWS;

MOU = KWS/FD Secretariat.

Magnitude of forest destruction and losses incurred through over-exploitation, excision, encroachment, illegal activities and weaknesses in management practices and suggest ways in which these problems should be addressed.

Conclusions

1. The magnitude of forest destruction and losses are difficult to determine with the information currently available. However it is possible to conclude that the destruction and losses are significant and the longer they continue the more difficult it will be to rehabilitate the ecosystem. It is concluded that some of the causes such as excisions and encroachment can be mitigated through short term actions of the FD and other relevant agencies. Others such as poaching will require more time and planning to stop. For example a ban on harvesting indigenous forest products causes prices to rise and in turn causes more poaching.
2. The existence of briefcase saw millers indicates a major breakdown in transparency and accountability in forest management.
3. Correct procedures for harvesting indigenous forests were not followed.
4. It is not known why or how RaiPly presumably received a license to harvest indigenous species, thus circumventing the ban on harvesting in indigenous forests.

5. There are inadequate logistical and infrastructure resources for sustainable management of the Mt Elgon ecosystem.
6. The mechanisms for local community participation in the management of the natural resources of the ecosystem are limited.
7. There is inadequate institutional capacity for the sustainable management of the Mt Elgon ecosystem.
8. Neither a long term nor a short term natural resource management planning system nor a long term management plan is in place for the Mt Elgon ecosystem. In the absence of a long term management plan, forest management cannot be sustainable. The lack of adequate planning and management makes it possible for illegal activities (and undesirable legal activities) to thrive.

Recommendations

1. Forest destruction should be contained by no longer allowing excisions, enforcing the ban on harvesting in indigenous forests, and reducing and reversing encroachment by improved boundary marking and patrols. (S, MENR)
2. Briefcase saw millers should be dealt with by not allowing the sale of an allocation of wood to a third party and any un-used allocations should revert to the government after one year. (S, MENR)
3. Control of over-exploitation will require more time and resources but can be achieved by improved monitoring of the plantations, improved harvesting and planting planning and implementation. Consideration should be given to transferring more of the responsibility for regeneration to the forest industry. (L, MENR)
4. A long term natural resource planning system and a long term plan should be put in place, including participation of the local communities. (L, MOU, MENR, PI)
5. Necessary and basic logistical and infrastructure resources should be provided for the sustainable management of the ecosystems - for example each DFO and Forest Station should have a telephone or radio provided. (S, MENR)

Recommendations to the project, FD, and KWS on short and long term measures required to establish and maintain the integrity and sustainability of the Mt Elgon ecosystem.

Conclusions

1. A management plan for the Mt Elgon ecosystem is seen as a high priority. Given the shortened duration of the project, it is essential that KWS and FD give maximum priority to production of the plan so that as much progress as possible can be achieved while project support is available.

2. Government funding is required for implementing such a long-term ecosystem management plan.
3. Ecosystem Management Committees, comprising FD, KWS, local communities and other stakeholders, should be formed in order to ensure sustainable development of the ecosystem.
4. There remain some unrealistic expectations on the part of KWS and FD as to what the project will or can do. On the other hand it was the opinion of several people that the project does not fully understand the constraints and expectations of KWS and FD for their participation in project-related activities. For example, the project expects FD and KWS in the districts to undertake activities for which they do not have resources. However, according to the project planning documents, the project is to be implemented based on the principle that donor funding of recurring operating costs is not sustainable. Partners should have adequate government funds if they are to be able to pursue their mandates. The project can fund certain capital assets and such things as training.

Recommendations

1. The problems and in most cases the solutions required to establish or at least to make significant progress toward establishing and maintaining the integrity and sustainability of the Mt Elgon ecosystem are well understood. The project preparation and planning documents, the Management Planning Workshop papers, and many other papers and reports demonstrate this. The following are needed:
 - The political will to do something about it;
 - A long term strategic plan showing what will be done, by whom, when, and how;
 - adequate resources to finance and implement the long term plan - if there is no long term budgetary commitment by the government, then there does not seem to be much point in continuing with development of the long term plan;
 - A review of the mandate and organisation of the FD to make it an effective organisation, as was done with KWS. (S, MENR)
2. An interim, tactical plan should be prepared by the KWS/FD and stakeholders, showing what will be done over the next two years, including the preparation of the long term plan. This interim plan, for implementation within the KWS/FD MOU framework, should be completed by the end of March 2000. The interim plan should be the basis for seeking adequate government funding for the long term plan implementation. It would be desirable to have the long term plan completed by 2001, but given the necessity of such things as undertaking inventories and including a truly participatory process, this is not possible. Therefore the interim plan should include initiation of a long term planning process, and preparation of an indicative long term plan

- outline or framework, with a schedule for various activities such as inventories, and estimated government budgets (in broad terms) for both the planning process and the long term plan implementation. The project should assist the KWS/FD MOU Secretariat to prepare this interim plan. (S, MOU, PI)
4. A better and common understanding of the project objectives and the use of project resources by the major stakeholders is needed. The National Project Steering Committee (NPSC) should provide direction or guidelines. (S, NPSC)
 5. The project, KWS, and FD need to establish closer working relations at the field level, to make the KWS and FD MOU operational in the field and to address such issues or misunderstandings as what the project should fund or not fund. This should include a stakeholders' meeting and a policy awareness workshop. (S, MOU, PI)
 6. The KWS and FD should, with project facilitation, establish the Ecosystem Management Committees as soon as possible. (S, MOU, PI)
 7. FD headquarters should assist the districts to establish better implementation of current rules and regulations using available resources. (S, MENR)

TABLE OF CONTENTS

SUMMARY OF MAIN CONCLUSIONS AND RECOMMENDATIONS

ACRONYMS

INTRODUCTION

METHODS

RESULTS

1.0 Review of Existing Arrangements for Harvesting Mt Elgon Forest Reserve

1.1 Forest Harvesting of Indigenous Forests and Plantations on Mt Elgon

1.2 Forest Establishment Methods for Indigenous Forests and Plantations on Mt Elgon

1.3 Control Systems for Forest Harvesting

1.4 Revenues generated.

2.0 Current Practices for Management of the Forests in the Mt Elgon Ecosystem

3.0 Rate of Establishment and Harvesting in Indigenous and Plantation Forests

4.0 Threats to the ecosystem and illegal activities

4.1 Excisions

4.2 Encroachment

4.3 Poaching

4.4 Other Illegal Activities

4.5 Documentation and Actions Taken to Remedy
Illegal Activities

5.0 Community Practices

5.1 Community Practices and Interventions Which
Contribute to or Threaten Sustainable Management
of the Ecosystem

5.2 The State of Relations Between KWS, FD and the
Communities

6.0 Measures Through Which MEICDP Could Assist the
Government, Local Communities and Other Stakeholders to
Improve and Maintain the Integrity and Sustainability of the
Mt Elgon Ecosystem

7.0 Short and Long term Strategies for Sustainable Use of
the Forest Resources

7.1 Short Term Strategies

7.2 Long Term Strategies

ANNEX 1 - REVIEW TEAM ITINERARY

ANNEX 2 - PEOPLE AND GROUPS MET BY THE TEAM

ANNEX 3 - PAPERS REVIEWED

ANNEX 4 - TERMS OF REFERENCE

ACRONYMS

ADC	Agricultural Development Corporation
DC	District Commissioner
DDC	District Development Committee
DFLRC	District Forest Licensing Review Committee
DFO	District Forest Officer
EIA	Environmental Impact Assessment
EMC	Ecosystem Management Committee
FAO	Food and Agricultural Organisation
FD	Forest Department
FDGO	Forest Department General Order
FR	Forest Reserve
IUCN	International Union for Conservation of Nature
KWS	Kenya Wildlife Service
MEICDP	Mt Elgon Integrated Conservation and Development Project
MOU	Memorandum of Understanding
NP	National Park

NPSC	National Project Steering Committee
NRC	Non-residential Cultivation
NTFP	Non-Timber Forest Products
PPCSCA	Permanent Presidential Commission on Soil Conservation and Afforestation
PRA	Participatory Rural Appraisal
TN	Trans-Nzoia District

REVIEW OF THE MANAGEMENT OF THE FOREST RESOURCES OF THE MT ELGON ECOSYSTEM

INTRODUCTION

The Mt Elgon Integrated Conservation and Development Project (MEICDP) has been set up by the Kenya Forest Department (FD) and the Kenya Wildlife Service (KWS) to promote the conservation of biodiversity of the Mt Elgon ecosystem, while contributing to the livelihoods of adjacent communities. IUCN provides technical and managerial support to the project, which is funded by the Dutch government. In the National Project Steering Committee (NPSC) meeting held on 23 June 1999, chaired by the Permanent Secretary of the Ministry of Natural Resources, concerns were expressed with respect to allegations in the press about poor management of the Mt Elgon forests.

The NPSC recommended that the MEICDP fund "a study to obtain a precise view of the situation in the area and to investigate the allegations that have appeared in the local print media." A team consisting Mr. R. Nield, Team Leader, an independent consultant from Canada, assisted by Mr. E. Mugo, Forest Department, and Mr. K. Mwathe, Kenya Wildlife Service, was formed to carry out this review. The responsibility for the team's report and its conclusions and recommendations rests entirely with the Team Leader. The team spent three days in Nairobi collecting available data and interviewing people and twelve days in Mt Elgon and Trans-Nzoia Districts interviewing people, visiting specific sites in the field, and collecting information.

METHODS

The independent consultant arrived and met with the other team members, IUCN, FD, and KWS on 22 September. The team then collected data and interviewed people in Nairobi from 23 to 25 September and then traveled to Kitale. From the 26 of September to the 5 of October the team conducted interviews covering the entire TOR tasks with as many as possible of the people and institutions involved with management and use of the Mt Elgon ecosystem. A list of all those interviewed is included in this report. The process included

field trips to specific sites for interviews and to see what was happening on the ground. On the 6th of October the team prepared an early draft report for review by the Trans-Nzoia DFO, the MEICDP project manager and technical advisor, and by the team itself. A revised early draft was sent to Nairobi on 7th October so that the NPSC members would have it to review over the long weekend of the 9th to 10th of October. The team left Kitale for Nairobi on the 9th of October. Report preparation, including revision based on review comments, continued up to the 13th of October.

RESULTS

1.0 Review of Existing Arrangements for Harvesting Mt Elgon Forest Reserve

1.1 Forest Harvesting of Indigenous Forests and Plantations on Mt Elgon

Legal forest harvesting in the two districts of Trans Nzoia and Mt Elgon, which together cover the Forest Reserves and National Park on Mt Elgon, consists of commercial clearfelling in plantations, some limited thinning in the plantations, and extraction of firewood under license.

The Mt Elgon Forest Reserve (FR) consists of: a protective zone which is under indigenous forests, and a productive zone, on which industrial forest plantations have been developed.

Harvesting of forest products from the FR takes place in the following forms:

Clearfelling of Plantations

The areas in Trans-Nzoia (TN) and Mt Elgon districts under industrial plantations fall under three main working circles:

- pulpwood
- sawn-wood
- eucalyptus pole and fuelwood.

Each of these circles has a defined rotation period at which the final crop will be harvested. The rotation period for pulpwood is 18 to 20 years; for sawnwood 28 to 30 years, and for poles and fuelwood 10 to 15 years.

Clearfelling of pulpwood in the two districts is done by Pan African Paper Mills (PPM) which is the only pulp and paper mill in the region. Harvesting of sawn wood is done by various sawmills scattered in the two districts with only Elgeyo Sawmills and Rai Plywood (RaiPly) coming from outside the two districts (Keiyo and Uasin Gishu districts respectively). Harvesting of fuelwood is done by various contractors and private people licensed to carry out harvesting of poles and fuelwood from the ecosystem.

Thinning of Plantations

Apart from pulpwood plantations, which do not undergo thinning operations, other plantations are subjected to various thinning schedules to attain defined management objectives at clearfell age. The thinning objective is to produce large diameter logs at clearfell. The thinning schedule is determined by species, age, and/or top height. Depending on the size and quality of the wood being removed in a thinning operation, the wood may be sold (commercial thinning) or be cut and left in the forest (silvicultural thinning). The commercial thinnings therefore contribute to the total volume of wood harvested from the FR.

Collection of Firewood

This takes place both in the plantations (productive zone) and in the indigenous forest (protection zone). The branches and tops from both clearfelling and thinning operations provide material for firewood and withies. These are then extracted by commercial firewood licensees. The monthly fuelwood license (MFL) holders are allowed to collect dead and fallen wood from indigenous forests as firewood mainly for subsistence use. Firewood collection is not allowed in the national park.

Harvesting of Non-timber Forest Products (NTFP)

Various non-timber forest products are illegally harvested from the FR. These include medicinal materials (herbs, bark, fruits, roots, etc.), thatching grass, moss, honey, forest soils, water, and game meat. The harvesting of these products varies from area to area within the FR. By their nature, most of these items are collected by the local communities who do not seek authority to extract them from the FR managers.

Poles and Bamboo

The FR borders both small scale and in some cases large scale, private farms and government ADC farms. These farms (especially the small holder ones) need materials for construction of dwellings (both for human and animals) and for fencing. This results in illegal harvesting of poles and posts of mainly indigenous species and bamboo - largely at a subsistence level.

1.2 Forest Establishment Methods for Indigenous Forests and Plantations on Mt Elgon

Forest establishment and regeneration take place both in the productive and the protection zones. However emphasis is on the productive zone in an effort to balance clearfelling with regeneration.

Forest Establishment in Plantations

Replanting of clear felled areas through non-residential cultivation (NRC) is the main method in use for establishing plantations. Through NRC, the communities adjacent to forests are allocated plots (through local plot allocation committees involving administration and local opinion leaders) in clear felled areas to grow food crops. They prepare the land to grow their food crops and also protect the plots against wildlife. The FD provides seedlings to be planted either by the farmers themselves or through paid labour in the cleared area. The farmers are allowed to occupy the plots until the canopy closes or a maximum of three years, whichever comes first. Provision of seedlings and labour is achieved through government support as well as contributions from the forest industries such as PPM, RaiPly and Elgeyo Sawmills. The onus for plantation management and maintenance is squarely on the FD.

The system needs to be well managed so that the farmers know that there will be another plot to move to when the time comes to move on. Otherwise there is an incentive to ensure poor regeneration on the current plot. The NRC could be a very significant part of forest management in Mt Elgon. The people are pleased with the system because they get land for NRC that has not been over worked and is still fertile, therefore offering better yields. There is a risk that cultivators who do not own farmland will be more inclined to try to stay permanently on the plots. In some areas there is a problem with animals such as elephants and buffalo threatening the people and their crops.

A potential problem raised with NRC is that local leaders could subvert it by "fighting" for the rights of the people, and encouraging them to stay. However it is better to have the local leaders working within the system than outside it.

Forest Establishment in Indigenous Forests

Forest establishment in indigenous forests is achieved in three ways (some data apparently exist on the extent of these activities but the team did not have time to locate and collect it):

a) Enrichment Planting

This involves a deliberate effort to promote certain species. Seedlings of the species in question are planted in designated areas within the ecosystem to stimulate its regeneration either in strips or clusters.

b) Rehabilitation of Degraded Areas

This involves replanting and protection of areas that have been degraded either through overuse of the resource, soil erosion, human settlement, etc. The planting combines various species suitable to the area and which may also have

some economic, biodiversity and social-cultural values. Protection is aimed at stimulating the healing process and mitigating the factors or processes that caused the degradation in the first place.

c) Nurturing and/or Closure

Nurture and/or closure of areas is done to stimulate natural regeneration of the ecosystem. This is achieved through closing a portion of the forest for a period of time and excluding it from any extractive or consumptive use. While the importance of this practice is generally accepted by officers in the field, little seems to take place.

1.3 Control Systems for Forest Harvesting

Licences

To operate in the forest a licence is required. There are two types of licences, a General Forest Licence (GFL) and the MFL (for subsistence fuelwood collection). To obtain a GFL, an applicant applies to the District Forest Licence Review Committee (DFLRC). A form (standard across Kenya) is filled out and reviewed by the DFLRC. The licence allows operation in all stations within the district. The DFLRC sends the application with recommendations to the Provincial Forest Licence Review Committee. It is then sent on with recommendations to the National Forest Licence Review Committee. A list of approved licensees is then sent to DFOs. After the list is out a candidate who has not received a licence can "appeal" by applying to the DFLRC again and virtually starting the process all over.

The District Forest Licence Review Committee usually includes the DC, Agriculture, Environment, Health, and Water Departments, KWS and the Clerk to the County Council. In Trans-Nzoia District KWS, for various unknown reasons, has not participated in these meetings to date. The FD usually serves as the secretariat. It is proposed in TN to include political parties on the DFLRC. The decisions are based mostly on technical matters, capability to harvest and process, past history, etc.

The functions of the DFLRC include getting the opinions and input of a broad cross-section of the community, and taking the weight off of the FD - so that the FD doesn't carry the responsibility alone.

After obtaining a licence the licensee applies to the forester at a station for an allocation of timber from the plantations. The station forester reviews the application and sends it with his recommendations to DFO who reviews the application and in turn sends it with recommendations to the FD headquarters for approval.

It is possible to have a licence and not receive approval to cut anything.

Plantation Inventories

The wood in the plantations is sold to companies based on a pre-harvest inventory, measuring all of the trees. The company is supposed to pay for the merchantable volume before harvesting begins. Plantation sales inventories are done regularly, on demand.

Indigenous Forest Inventories

To the knowledge of the team, comprehensive indigenous forest inventories have not been carried out in either district since work done by the FAO in the late 1960s.

Wood Allocation, Payment, and Marking

The station forester may allocate wood to several small-scale millers in the same plantation. The areas they are each to cut are marked out for them and the forest guards are supposed to make sure each operates in the correct area.

Once the allocation is made the miller pays for the wood based on the volumes allocated and the set rates for the wood as per the current Forest Department General Order (FDGO). Once the payments have been made the miller then cuts and loads the wood onto trucks. All of this is done under the supervision of forest guards. The objective and usual practice is to have the wood stamped with the revenue hammer before it leaves the beat. All of this is the responsibility of the forester.

The hammer marks are to prevent illegal extraction of wood from a plantation. If all approved wood on trucks on the highways is stamped, then only illegal wood (or wood from a private wood lot, which should have a letter describing its origin and approval to move it from the FD) will be on the highway. It is an offence to have unmarked wood on the highway.

It is also important to keep track of the amounts that have left the station because it is common for the millers to pay for only part of the wood. Removal must stop once the amount paid for has been taken. The forester usually waits until he has a copy of the paid invoice showing how much has been paid and how much per average tree. He can then calculate how many trees the miller can take based on that payment. A register is supposed to be kept of all wood paid for and removed from plantations.

There have been cases in other districts where counterfeit revenue hammers have been used. One way to establish what is happening is to change the

hammer without letting anyone know and then check subsequent trucks to see which hammer has been used. The old hammer mark will be on stolen wood.

The team checked five truckloads of wood on the highway for stamped logs. Only one of the five truckloads had stamped logs, and this one was stamped in the presence of the team after the team had expressed an interest in the log stamping process. The team concluded that it may have been stamped only because of the team's interest in the stamping process. This indicates that the guidelines and procedures are not being followed. With such laxity, it would be easy for stolen wood to get through the system.

Road Planning, Construction, Use, and Maintenance

Good access makes management of forest operations much easier (it also makes the forest more easily accessible to poachers so increased access must go hand-in-hand with increased patrols). There are no forest management plans and road planning, construction and maintenance is inadequate. It is usually left up to the company harvesting the forest, who will put in the least cost road, regardless of immediate and future maintenance and environmental costs associated with poor road design, construction and maintenance. This is unfortunate because most of the negative environmental impacts of logging on soils and water quality are caused by poor road design, construction, and maintenance.

Briefcase Saw Millers

The June 1999 draft Permanent Presidential Commission on Soil Conservation and Afforestation (PPCSCA) "Reconnaissance Survey of Forest Blocks in the West and East of the Rift Valley" reports that "briefcase" saw millers are a problem in the Mau forests. This phenomenon was explored for the Mt Elgon FR both in Mt Elgon as well as Trans-Nzoia districts. This involves people without a sawmill or saw milling machinery and with good political connections who obtain licenses to operate in the forest without necessarily going through laid down licensing procedures from the grass roots District Forest License Review Committee (DFLRC) to the National Forest Licensing Committee. They then obtain felling rights for certain materials (plantations) which they keep for speculation. They then resell their cutting rights to a legitimate or illegitimate saw miller. Some briefcase saw millers have apparently made money by selling their allocation to a company, and agreeing to pay the royalty due, but then not paying the royalty.

It is difficult to know when an allocation has been obtained and then sold by a briefcase saw miller. The allocation of the plantations is done in two ways:

- where the authority to harvest a specific plantation is given to the DFO who in turn allocates it to saw mills in the district; and

- where a plantation is specifically allocated to an individual or a company or saw miller.

A briefcase saw miller can be extremely difficult to identify in the first method, where the DFO does the allocation and the briefcase saw miller's name may not be on any documents. A briefcase saw miller can be more easily identified in the second method of allocation if a written order has been given to the DFO. However the order may be by voice. There is a possibility also of the briefcase saw miller having a plantation allocated to him using the name of another licensee.

Based on discussions with the DC and the DFO, Mt Elgon District apparently has not had cases of briefcase saw millers. This was attributed to the difficulties associated with forest exploitation in the district. The weather and the infrastructure (mainly the roads) have kept prospective saw millers from venturing into the district. There is therefore no market for the cutting rights of a briefcase saw miller.

Trans-Nzoia has had cases of briefcase saw millers and local officials have made attempts to manage them. The briefcase saw millers are mainly interested in the exotic plantations which are easy to dispose of to those without a saw milling license. The district has attempted to manage the briefcase saw millers through:

- insisting that they formalize their licenses by applying through the DFLRC;
- in cases where they have gone ahead to harvest materials allocated to them, to curtail defaulting by ensuring that full payment is made before commencement of operations.

Based on the information the team was able to collect, and according to the FD, Trans-Nzoia has had only one briefcase saw miller who managed to go all the way to harvest the materials that were allocated to him.

The briefcase saw millers threaten the forest industry in the following ways:

- Destabilizing the licensing process for allocating wood by not following the laid down procedures;
- Distorting resource (wood) allocation and therefore undermining the planning process - they are not included and provided for in the felling and planting plans;
- They do not have a long term commitment to the industry and therefore do not contribute to the long term development and sustainability of the industry, for example in supporting infrastructure development (such as roads) and assisting with forest regeneration, etc.

- Using their influential connections, they may be affecting resource valuation to enable them to profit. Otherwise it is difficult to understand how they can make money in the process by selling only their cutting rights

Exploitation of Indigenous Forests by RaiPly in Mt Elgon District

RaiPly is one of the large-scale sawmills operating in Western and Rift Valley Provinces. The sawmill is situated in Eldoret. The firm sources its materials from a number of districts, including Uasin Gishu, Nandi, Kericho, Mt Elgon, and Trans-Nzoia. Records indicate that it operates on both exotics and indigenous tree species.

Within the Mt Elgon ecosystem, RaiPly has only been harvesting indigenous species in Mt Elgon District. The operations on indigenous species were confined to Kaberwa Forest Station. RaiPly's preferred indigenous species has been Elgon teak (*Olea capensis* - was *Olea welwitschi*) mainly for peeler logs to make plywood and veneer. Other species they have harvested from the indigenous forests included *Prunus africanum* and Muna (*Aningeria adolfi-friederic*), all valued species for veneer making.

The operations of RaiPly in the indigenous forests of Mt Elgon District resulted in conflicts mainly with the Forest Department, Mt Elgon County Council, KWS, conservationists, and the local community. These conflicts culminated with the County Council impounding RaiPly's trucks in mid 1999. Although the trucks were later released, RaiPly has taken the County Council to court, accusing the Council of unlawfully impounding the trucks. The case is still pending in court.

The government imposed a ban in 1986 on all commercial exploitation of indigenous timber from government forests. This ban is still in force. However, in spite of the ban, records available indicate that RaiPly has been harvesting indigenous wood from Mt Elgon District from 1994 to 1998 as shown in Table 1.

Using the volume figures in Table 1, a conservative estimate of the number of trees harvested was made by assuming a figure of 2 cubic meters of wood per tree harvested. It should be noted that this harvesting was done despite a ban on commercial logging of indigenous trees.

Table 1: Indigenous Species (Mainly Elgon Teak) Harvested by RaiPly in Mt Elgon District

Year	Cubic Meters	Royalty Paid	Estimated Number of Trees
1994	220.4	724,396	110

1995	492.1	1,813,059	246
1996	299.9	1,104,977	150
1997	322.4	1,695,925	161
1998	192.7	1,115,205	96
Total	1,527.6	6,453,562	763

Source (for volumes and royalties): D. Too, 1999

Elgon teak in Mt Elgon District appears to grow in patches or clusters. The team visited the sites where RaiPly logged the teak. It is instructive to note that whenever stumps from RaiPly's operations were found, they occurred in clusters and most often, there were no other teak trees standing within the vicinity. This indicates two things:

- the harvesting method applied was not selective felling of the species; and
- the regeneration potential of the species was essentially wiped out in the logged areas because the seed sources were all removed; because the harvesting method stimulated under growth regeneration which would smother any teak saplings in the area; and because the sites were opened up more than desirable for the shade-tolerant teak.

Another significant aspect of the situation was the apparent control held by RaiPly over the resource managers on the ground. Despite everyone, including the Provincial Administration, being aware of the ban on harvesting indigenous species, the company operated unhindered for at least six years, from 1994 to 1999. Inquiries by the team to both the Provincial and Forest administration in the District left much to be desired, for example:

- there was nothing on record to show exactly when the operations started and on what authority;
- The company had at no time applied to the District Forest Licensing Review Committee (DFLRC) to operate in the district;
- a visit to the forest showed that the firm appeared to be harvesting any merchantable trees that were convenient and no selection felling guidelines were applied;
- inspection of indigenous tree stumps, including stumps from 1998, did not reveal any selection hammer marks on them as regulations require - this indicates that either, selection was not done by the FD, or supervision was lax, resulting effectively in no selection;
- although Mt Elgon District has been in existence since 1993, no DFLRC meeting has ever been convened to review forest licensing in the district;

- a quick reconnaissance of the forest revealed that apart from teak, RaiPly also harvested *Prunus* and *Aningeria* spp. - it is unclear how they got the authority to harvest these species.

The conflict between RaiPly and the County Council culminated in the impoundment of RaiPly trucks by the Council in June 1999. As noted above, the case is pending in court. The conflict is based on:

- the concern by the County Council that the operations of RaiPly were damaging the environment. This was exacerbated by RaiPly operating on a part of the forest adjacent to a dam that the council has plans for supplying water to Kapsokwony town - the district headquarters. *Prunus* at least was logged from this site late in 1998
- the refusal by RaiPly to pay Ksh400 per truckload to the County Council as transit tax. In fact the council has proposed to raise the tax to 10% of the value of the truckload, to be paid over and above the royalty assessed;
- damage to the roads by RaiPly and lack of contribution by RaiPly toward the maintenance of the County Council roads through which the forest is accessed.

The local community showed disapproval of exclusive rights RaiPly had to exploit the indigenous forest resources. They disapproved because:

- despite exploiting their natural resources, RaiPly was not contributing anything toward the development of the communities adjacent to the forest, who have themselves been conserving the forests;
- the large logging trucks and equipment used for logging destroying community roads, with no provision for rehabilitating them;
- the belief that logging operations were causing soil erosion inside the forest and on farms adjacent to the forest;
- the general feeling that an outsider was adversely affecting their environment and had hugely benefited from it.

It should be noted that the views of RaiPly were sought but a meeting was not possible.

Conclusions

1. The existence of briefcase saw millers indicates a major breakdown in transparency and accountability in forest management.
2. Correct procedures for harvesting indigenous forests were not followed.
3. It is not known why or how RaiPly presumably received a license to harvest indigenous species.
4. The chain of command in the FD is not working effectively.
5. Records are not kept as required at some station offices and DFO offices.

6. The systems that are in place for managing the forest are not being properly implemented. Much more could be done with the current resources. For example, better patrols by the station foresters to control illegal activities such as poaching. If vehicles are not available and/or roads are bad, patrol as much as possible by foot.
7. The DFLRC is not in place in Mt Elgon District.
8. Adequate inventories have not been carried out for indigenous forests or NTFP.
9. More funding will be required for inventories.
10. The proper procedures for allocating, scaling, and marking have not been followed rigorously. This undermines the process.
11. The infrastructure, such as the road systems are not well designed and maintained.

Recommendations

1. The FD should make it clear that briefcase saw millers will not be tolerated. It should make it impossible for them to operate by not allowing the sale of an allocation of wood to a third party, with un-used allocations reverting to the government after one year. (S, MENR)
2. Forest resource inventories need to be carried out to establish the amount and condition of all resources, including Elgon Teak. (S, MENR, MOU, PI)
3. Mt Elgon District should institutionalise DFLRC meetings as soon as possible, if only to review the current situation and plan for next year's licensing process. (S, MENR)
4. FD headquarters should assist the districts to establish better implementation of current rules and regulations. (S, MENR)
5. The stakeholders should prepare an integrated and complete long term forest resource management plan. (S, MOU)
6. Briefcase saw millers should be dealt with by not allowing the sale of an allocation of wood to a third party, and any un-used allocations should revert to the government after one year. (S, MENR)

1.4 Revenues generated

The revenue information available is in the following tables

Table 2: Plantation Forest Volumes and Revenues

Trans-Nzoia			Mt Elgon		
Year	Cubic Meters	Royalties Paid	Year	Cubic Meters	Royalties Paid
1994	97,265.9	25,078,972	1994	1,110.1	287,884

1995	40,945.1	11,680,006	1995	274.0	80,900
1996	72,506.1	18,341,323	1996	204.1	52,035
1997	31,468.5	9,489,411	1997	110.4	33,080
1998	7,867.1	2,520,260	1998	149.1	48,702

Source: D. Too, 1999

Table 3: Indigenous Forest Volumes and Revenues

Trans-Nzoia			Mt Elgon		
Year	Cubic Meters	Royalties Paid	Year	Cubic Meters	Royalties Paid
1994	No indigenous harvesting in TN		1994	220.4	724,396
1995			1995	492.1	1,813,059
1996			1996	299.9	1,104,977
1997			1997	322.4	1,695,925
1998			1998	192.7	1,115,206

Source: D. Too, 1999

The station collects payments for all wood. Every station is supposed to prepare annual reports showing the areas and volumes of wood removed and the revenues. Valuation for indigenous species is based on ground scales at the stump.

According to the KWS/FD MOU there are opportunities for joint generation of revenue, mainly from tourism. However, this has not been possible for the Mt Elgon Ecosystem. A joint MOU account for the ecosystem has not been established. Methods of generating revenue also need to be developed.

Conclusions

1. The ecosystem has potential for generating revenue, from plantations and from tourism from the NP and the FR, but better infrastructure (for example roads) is needed.

Recommendation

1. The tourism potential of the FR needs to be identified and developed as part of the long term plan.

Part II

2.0 Current Practices for Management of the Forests in the Mt Elgon Ecosystem

Description of the Forests

The Mt Elgon Forest Reserve was gazetted under legal notice 44/1932. There is no approved management plan for the ecosystem from the records available, either current or in the past. The Forest Reserve covers the areas shown in Table 4.

Table 4: Areas of Forest Reserve and National Park in the Mt Elgon Ecosystem

Mt Elgon Ecosystem	Hectares
National Park	34,116
Forest Reserve	73,705
Total	107,821

Source: MEICDP, 1999

According to the FD, in Trans-Nzoia the plantations in the ecosystem are comprised mainly of pine, cypress, and eucalypts. Forest vegetation types found in the ecosystem include:

Montane forests	2000 - 3500 m asl
Bamboo forest	3500 - 4000 m asl
Moorland	3400 - 4500 m asl
Grassland	scattered

Trees threatened by economic utilization in the ecosystem include:

<i>Olea capensis</i>	Elgon Teak
<i>Prunus africanum</i>	Muiri
<i>Aningeria adolfi-friederici</i>	Muna
<i>Podocarpus spp</i>	
<i>Juniperus procera</i>	East African pencil cedar
<i>Hagenia abyssinica</i>	Rose wood

The ecosystem provides the following benefits:

- Subsistence needs in the form of fuelwood, fodder, fruits, nuts, medicines, building materials, etc.
- Environmental services including soil and water conservation, climate amelioration, recreation, and acting as a carbon dioxide sink.
- Industrial use in supporting the various forest industries including pulp and paper, plywood, timber, transmission poles,, etc.
- Economic value, for example in employment creation.
- Education and research use.

Current Management Practices

a) Legal and Policy Implementation

The forest policy is contained in Sessional Paper no. 1 of 1968. The revised draft policy document is also available. The legal mandate of the FD is given in the Forest Act (Chap 385) of the Laws of Kenya, with its various amendments. The Act is currently undergoing a review. The NP is governed by the Wildlife Policy: Sessional Paper No. 2 of 1975. The Wildlife Act (Chap 376) is the legal framework through which the NP is administered.

b) Protection and Conservation of the FR

FR protection is against fires, diseases, and wild animals. Conservation of biodiversity, both fauna and flora, is also being undertaken.

Licensing for exploitation of forest products is described in Section 1.3 above.

d) Management Planning

Management planning is achieved through: preparation of annual work programs covering various activities within the forest stations; harvesting plans, including felling plan preparation and implementation; revenue forecasting and collection; and resource valuation. Silvicultural practices in the plantations consist almost entirely of clear cutting with artificial regeneration through the NRC system. In the indigenous forests there is currently a ban on harvesting. In the past the most common system applied was the selection system. The forests are zoned into protective and productive zones.

Conclusions

1. Up-dated forest maps are required.
2. Forest resource inventories are required

3. An interim management plan, a long term management plan, five year plans, and annual plans are required.
4. Indigenous forest management guidelines are required for field use.

Recommendations

1. Prepare up-to-date forest maps. (S, MOU, PI)
2. Undertake forest resources inventories. (S, MOU, PI)
3. Prepare an interim management plan, a long term management plan, five year plans, and annual plans. (S, MOU, PI)
4. Prepare indigenous forest management guidelines for the ecosystem. (S, MENR)

3.0 Rate of Establishment and Harvesting in Indigenous and Plantation Forests

In Mt Elgon and TN the rate of forest plantation establishment, in terms of areas planted, has increased in the last three years since the NRC system was brought into use in 1996. However it is apparent that the rate of plantation harvesting still exceeds the rate of establishment. Although Table 5 shows that the rate of planting is much higher than the harvesting, the figures do not indicate which plantations have been successfully established. Observations in the field reveal that many newly planted areas require outright replanting or heavy beating up.

Establishment and harvesting in the indigenous forest in the FR are difficult to compare. Most of the harvesting from indigenous forest is illegal and therefore not documented. The situation with RaiPly is not clear. Harvesting in the indigenous forests is clearly banned and Mt Elgon represents the kind of situation where such a ban is needed. On the other hand, RaiPly has been operating openly and has been paying for the wood, so it is assumed that in some way the RaiPly harvesting of indigenous species in Mt Elgon has been legalized. In any case, given the uncontrolled extraction, the lack of planned regeneration, and the slow growth rate of indigenous species within the ecosystem, it is concluded that the resource is being over-exploited. The methods of harvesting being employed by both RaiPly and the poachers are not conducive to natural regeneration of the affected species and the ecosystem in general. The only forest stands in good condition, away from the forest boundary, are also under threat.

The plantation stands are also not in optimal condition. Management guidelines are not being strictly implemented. Cases of both delayed thinning and pruning are prevalent. The stand densities are low.

Table 5: Areas harvested and planted.

Trans Nzoia			Mt Elgon		
Year	Hectares Harvested	Hectares Planted	Year	Hectares Harvested (Thinnings)	Hectares Planted
1990	161.5	212.3	1990		47
1991			1991		10
1992	198.6	256.0	1992		
1993	255.0		1993		55
1994	312.0	281.1	1994	50	
1995	240.1		1995	25	55
1996	275.4	235.4	1996	20	
1997	232.3		1997	15	
1998	202.6	528.6.	1998	10	150

Sources: D. Too, 1999; Forest Station, Kaberua.

Conclusions

1. Record keeping for harvesting and regeneration is inadequate.
2. Based on the information available, harvesting exceeds regeneration.
3. Rudimentary (often based on inadequate data) annual plans are prepared for harvesting and regeneration.
4. There are no realistic long term harvesting and regeneration plans in place.

Recommendations

1. The FD must ensure reliable records on harvesting and regeneration are kept. (S, MENR)
2. The FD needs to ensure that regeneration keeps pace with harvesting. (S, MENR)
3. Realistic and adequate annual plans must be prepared. (S, MENR)
4. Realistic long term harvesting and regeneration plans must be prepared. (S, MENR)
5. NRC guidelines should be prepared to assist NRC committees manage the programs. (S, MENR)

6. NRC procedures that are in place need to be followed rigorously. (S, MENR)
7. Given the limited amount of FD money available for planting it is advisable to concentrate operations more - the money is often too thinly spread, for example by maintaining a tree nursery in every forest station. (S, MENR)

4.0 Threats to the ecosystem and illegal activities

4.1 Excisions

According to the Reconnaissance Survey of Forest Blocks in the West and Rift Valley (by the PPCSCA), existing or proposed excisions in the Mt Elgon ecosystem include 3686 ha in Chepyuk (since estimated to have expanded to approximately 8700 ha), 40.3 ha for the construction of district headquarters at Kapsokwony (Kaberwa Station), 56.5 ha at Suam for a commercial trading center at the border, and 2004 ha at Kitalale.

Excisions may not necessarily be illegal but they often cause numerous problems. Often the FD officers learn about them after action has taken place on the ground by other parties. In some cases FD officers have removed what to them are unauthorized surveyors only to find them back again with guards. There appear to be no guidelines on how the officers are to respond to de facto excisions before they are legalized.

The team was informed that excisions are often initiated through the Office of the President or through other high level political processes and are therefore difficult for the district officials to deal with. There is usually no input from the District Development Committees or local communities.

There is a government directive that there will be no more excisions until further notice. This directive should be enforced.

Kitalale

Kitalale was a well established plantation forest covering 2004 ha. The excision is a good example of the weakness in the forest land tenure system. In spite of the fact that the GOK put in the plantations at a large expense (using loans from the World Bank which will have to be repaid) this area was excised from the forest several years ago. As far as the team knows, there was no review by the District Environmental Committee. Neither a financial nor economic cost-benefit study was done, to show the costs and benefits of removing a potentially productive investment which would have provided materials and jobs in an area where both are needed, and replacing it with private farms. It was reported that some of the people now settled at Kitalale are not squatters

or other needy people but rich and politically well-connected people. These are said to include administrators, army officers, and politicians.

Chepyuk

In Mt Elgon District the Chepyuk excision is probably a good lesson on how not to do things. Boundaries for the initial 3686 ha were not marked on the ground in advance and not adequately patrolled. The excision area has not yet been degazetted from the FR. As the population increased people moved in and cleared more land. From recent aerial photography the MEICDP has made rough initial estimates, which have been substantiated by the team, showing that the original area intended for settlement has been expanded by encroachment from the 3686 ha to approximately 8700 ha. If there is to be another such exercise it needs to be planned and managed much better.

The Chepyuk situation is confusing and the team did not have the time to go into it in detail. It appears that the provincial and FD administration in Mt Elgon District do not have a clear picture of the problem either. A register of surveyed areas for Chepyuk was not available. It was not clear what was mapped, or who gave authority for any mapping. The options on what to do are de-gazette from forest use the entire area that has been occupied or de-gazette only the original excision. This decision is almost entirely a political one.

Chiptoro

The Chiptoro area was noted as another problem but the team was not able to learn more.

Suam

When the team inquired about Suam, it was explained that this was a legitimate operation to do with providing commercial trading facilities at the border, an already approved excision, and that it was all clear, well documented, and above board.

4.2 Encroachment

Lack of clear boundaries is one of the most significant reasons that encroachment takes place at the scale it does. Inadequate patrolling also encourages encroachment.

The problem exists in both Mt Elgon and Tran-Nzoia, but the extent is not known. As far as loss of area is concerned, encroachment is a serious but

relatively slow long term process except for situations such as Chepyuk. It is entirely possible for another "Chepyuk" to occur.

4.3 Poaching

Poaching occurs in all forests, both FR and NP, for both animals and other forest products. It is both a commercial and a subsistence activity. However poaching is far more extensive in the FR than in the NP, due both to proximity of the FR to the people and to more rigorous patrols in the NP. Poaching for poles and timber is the most serious problem.

The magnitude is not known. The FD keeps records of poachers apprehended but these probably represent only a small part of the actual poaching taking place because the patrols are inadequate and not every one is actually arrested because of lack of transport and holding facilities.

Although poaching may appear to be a relatively minor activity, it may in fact be one of the more serious threats to biodiversity and sustainable development. It is understood that on the Ugandan side of Mt Elgon, some species have almost disappeared as a consequence of poaching. Without adequate data it is impossible to know how poaching is actually affecting biodiversity. One of the problems with poaching is that although the actual amounts taken may be sustainable, the form may not be, for example if teak poaching always concentrated on young immature trees.

4.4 Other Illegal Activities

These include charcoal production, honey gathering (both of which often cause forest fires), and other forest products, illegal grazing, etc.

4.5 Documentation and Actions Taken to Remedy Illegal Activities

Documentation

KWS documents the illegal activities occurring in the NPs. However most of the illegal activities of concern occur in the FR. Here, based on the experience of the team, the documentation is poor. This is part of the broader issue of the fact that the FD, for various reasons (lack of funds and equipment, lack of adequately trained staff, etc.), is not managing the forests as well as it should. The foresters are not making adequate patrols because of poor access (poor roads and few vehicles).

When Mt Elgon District was created in 1993 the FD did not receive some information from Bungoma District. The DFO had very little information on file.

There are records of offences occurring in the districts. However, as far as the major illegal activities that the team was interested in, there was insufficient time to locate and review any documentation.

The forester in Saboti has recently been suspended for illegal activities, involving the NRC system. He allowed permanent structures to be built and opened up large areas of forest. He circumvented the committee system of allocating NRC land. The structures were removed once and he allowed them to be rebuilt. The issue is in the office of the PS.

Actions Taken to Remedy Illegal Activities

In the NP, people engaged in illegal activities are arrested and prosecuted. This may include the use of firearms against people who are armed.

In the FR the FD to the best of its abilities, given it is limited resources, arrests and prosecutes. Illegally obtained materials and any equipment used are impounded.

Conclusions

1. Excisions are a serious problem.
2. Forest boundaries are not clearly marked and patrolled.
3. The FR is under serious threat by poachers and other illegal activities.
4. Sustainable management of the ecosystem is constrained by lack of adequate infrastructure and resources.

Recommendations

1. The current ban on the allocation of public land (which includes forest excisions) should remain in place and be strictly enforced. The current government circular and directive from the Head of State putting on hold any further public land allocations should be adhered to. In future the process should be reviewed and improved to include such things as EIAs. (S, MENR)
2. The FR boundaries need to be clearly surveyed, marked and patrolled. (MENR, MOU, PI)
3. FD personnel require better resources to address the threat by poachers and other illegal activities. (S, MENR)
4. The longer term approach will be to educate local communities to better understand and manage the resources. The local communities need to be able to play a meaningful role in managing the resources. (L, MOU)

5.0 Community Practices

5.1 Community Practices and Interventions Which Contribute to or Threaten Sustainable Management of the Ecosystem

Non-residential Cultivation

Many of the local people bordering the Mt Elgon ecosystem are interested in taking part in the NRC program. The system allows farmers to cultivate specified plots in clearfelled industrial plantations. They tend their crops while nurturing the tree seedlings. The farmers sign agreements with the FD, which specifies that the farmers have to move out after three years or when the canopy closes. By getting involved in NRC, the farmers are assisting the FD to establish the plantations and to contributing to sustainable management of the forests. Management of NRC should be made more effective in order to allow the local people to continue to participate in replanting plantations. The people also need to be able to see future benefits from their contributions.

On-farm Tree Planting

Most of the farmers in Mt Elgon and Trans-Nzoia districts grow maize as their cash crop. A high percentage of the farm is often occupied by maize, leaving little space for agroforestry. However, there are still farm trees, particularly along the borders. Some farmers have made a deliberate effort to establish woodlots on their farms. If this activity is encouraged, fewer farmers will depend on the resources of Mt Elgon ecosystem, particularly for wood. MEICDP should assist the local people to practice more agroforestry in order to relieve the pressure on the ecosystem.

Forest Fires

The people who live around the borders of the Mt Elgon ecosystem are traditionally honey gatherers. They do this by placing beehives, usually without a permit, in the forest to attract honey bees. During honey harvesting fire smoking is used to keep the bees away to allow for extraction. Unfortunately the fire sometimes gets out of control, setting large sections of the forest on fire, particularly during the dry periods. In some areas the local people assist with putting out forest fires.

Poaching

One of the activities undertaken by local people within the ecosystem is hunting and forest products removal. According to a recent Participatory Rural Appraisal of one of the communities bordering the ecosystem, poaching is carried out by all members of the local community to meet their needs for food and energy. According to the Wildlife Act hunting and the removal of forest products from NPs, even at the subsistence level, are illegal. According to the Forest Act, removal is allowed if licensed. Poaching works against the

conservation objectives of the NP and FR. As an unmanaged activity poaching is unsustainable.

Conclusions

1. The NRC system is contributing significantly to forest plantation establishment.
2. There is insufficient agroforestry and on-farm tree planting in the two districts.
3. Forest fires are a serious problem.
4. Unmanaged extraction, such as poaching, is unsustainable.

Recommendations

1. The NRC system should continue to be used and improvements documented and shared among users. (S, MENR)
2. Agroforestry and on-farm tree planting should be promoted. (S, MOU, PI)
3. The local people should be sensitized and facilitated to use modern bee-keeping methods such as using the Top Bar hive, which are more productive, certain and removes a risky operation from the forests. (S, MOU, PI)
4. The local communities should be assisted to establish alternative income generation activities such as poultry, fish farming, and restocking of livestock herds. (S, MOU, PI)

5.2 The State of Relations between KWS, FD and the Communities

KWS and FD

The views of the people on the ground vary, with some saying that relations are good while others say that the relationships are rather lukewarm. Further questioning of those who said the relation was good revealed that the level of collaboration between the FD and KWS is limited to occasional joint patrols by rangers and forest guards.

With respect to the KWS/FD MOU between the two organisations, it was clear that most of the officers on the ground are only aware of it but do not have copies of the MOU document. While they understand that the two agencies are supposed to be working together the mechanisms to do this have never been spelled out. The MEICDP project noted that at its recent management planning workshop there was frank admission that the MOU does not function as well as it should in the field. This needs to be resolved if the MOU is to play a useful role in improving management of the ecosystems.

KWS, FD, and the Community

Based on the results of one PRA conducted on the Trans-Nzoia side of Mt Elgon ecosystem the FD has more interaction with the community than KWS, probably because of the forest user rights that a community has. They have access to NRC, grazing, and fuelwood collection, among others, in the FR.

On the Mt Elgon side, KWS is reported to have a greater influence on the community than the FD. This is primarily because of the construction of several classrooms by KWS through its Partnership Program, at Kaberwa Primary School.

Community and Others

The relationship between the local people and other actors in the ecosystem varies. Of interest is the relationship with the forest industry. In Mt Elgon District the relationship between the local people and RaiPly is not good. Even before the company was locked out of the area by the local authorities (the County Council), the local people had attempted to drive RaiPly away by placing road blocks on the track where they were transporting Elgon Teak logs. The problem was that RaiPly was damaging the roads, causing environmental damage while logging, and acting in total disregard of local considerations. The local communities wonder why RaiPly should be able to harvest what they had conserved but were not allowed to use. The local council also wanted RaiPly to pay a log cess, but RaiPly refused.

The relationship between local people and other forest companies is better. In particular, PPM has won the support of local people and their leaders in their areas of operations by making efforts to maintain the roads as much as possible. They also responded to requests to grade roads outside their areas of operation.

Conclusions

1. The KWS and FD MOU needs to establish a better working relationship.
2. The involvement of the local communities in management of the ecosystem is inadequate.
3. There are both good and bad relationships between the local communities and forest companies.

Recommendations

1. The KWS/FD MOU should be made operational at the district level. The MOU Secretariat should explain the objectives of the MOU and lay down the mechanisms and means of implementation. (S, MOU)
2. The FD and KWS should gazette one another's officers as honorary wardens or honorary foresters respectively. This would greatly assist the

- officers of the two organizations to effectively implement the MOU. (S, MOU, MENR, KWS)
3. KWS and the FD should work more closely toward involving the local communities in the management of the natural resources. (S, MOU)
 4. Forest companies in the area should work toward improving relationships with the people by assisting where possible with local development, for example improving maintenance of the roads. (MOU)

6.0 Measures Through Which MEICDP Could Assist the Government, Local Communities and Other Stakeholders to Improve and Maintain the Integrity and Sustainability of the Mt Elgon Ecosystem

Based on interviews in the districts, the team has concluded that either there are, or a significant number of people believe there are, unrealistic expectations by KWS and FD as to what the project will or can do. Similarly, a number of people believe that the project does not fully understand the constraints and expectations of KWS and FD for their participation in project related activities. Part of the problem revolves around the question of how much donor projects should provide support to on-going government running costs. It is generally accepted by development agencies and governments alike that donor support should be as much as possible applied to necessary capital investments or to such things as training and capacity development. Donor support of normal government operating costs is not sustainable.

The FD does need support to operate. The project can provide logistical support for project related activities such as the development of the management plan. But not for other much needed FD normal operational requirements. It is a difficult situation, but the FD is probably in its present situation at least in part because of past reliance on donor support. Therefore the project does not provide some of the things expected of it and is viewed as not understanding the situation. It might help if this part of the problem was more explicitly discussed by the NPSC and appropriate directions or guidelines given to KWS, FD, and the project.

The other main part of the problem is the previously discussed fact that the KWS/FD MOU is not functional in the field. If the KWS/FD MOU was operating in the field, so that the project had a formal well-focused group to work with, such as the proposed Collaborative Management Committee (and/or an Ecosystem Management Team as used by KWS/FD elsewhere), most of the misunderstandings could probably be cleared away or at least worked around. The project and the KWS/FD Ecosystem Management Team or Committee would have a common objective, preparation of a long term management plan for the Mt Elgon ecosystem, so they should have an incentive to work together.

An interim plan should be prepared by the KWS/FD and stakeholders, showing what will be done over the next two years, including preparation of the long

term plan. This interim plan, for implementation within the KWS/FD MOU framework, should be completed by the end of March 2000. It should be the basis for seeking adequate government funding for the long term management plan implementation.

Conclusions

1. A management plan for the Mt Elgon ecosystem is seen as a high priority. Given the relatively short time left for the project, KWS and FD should give a high priority to focusing on production of the long term management plan in order to make maximum use of the support currently available from the project.
2. A Collaborative Ecosystem Management Committee or Management Team, comprising FD, KWS, local communities and other stakeholders, is essential for ensuring sustainable development of the ecosystem.
3. Adequate government funding is required for implementation of a long term ecosystem management plan.

Recommendations

1. A better and common understanding of the project objectives and the use of project resources by the major stakeholders is needed. The NPSC should provide direction or guidelines. (NPSC)
2. To get the necessary planning underway, and to enhance working relationships, the KWS and FD should, with project facilitation, establish the Ecosystem Management Team or Collaborative Committee as soon as possible. (S, MOU)
3. An interim, tactical plan should be prepared by the KWS/FD and stakeholders, showing what will be done over the next two years, including the preparation of the long term plan. This interim plan, for implementation within the KWS/FD MOU framework, should be completed by the end of March 2000. The interim plan should be the basis for seeking adequate government funding for the long term plan implementation. It would be desirable to have the long term plan completed by 2001, but given the necessity of such things as undertaking inventories and including a truly participatory process, this is not possible. Therefore the interim plan should include initiation of a long term planning process, and preparation of an indicative long term plan outline or framework, with a schedule for various activities such as inventories, and estimated government budgets (in broad terms) for both the planning process and the long term plan implementation. The project should assist the KWS/FD MOU Secretariat to prepare this interim plan. (S, MOU, PI)
4. rim plan. (S, MOU, PI)

7.0 Short and Long term Strategies for Sustainable Use of the Forest Resources

7.1 Short Term Strategies

Provide improved basic management tools, such as air-photos, light tables, maps, inventories, and plans.

1. Improved facilities for the FD, for example all DFOs and Stations should have telephones and radios.
2. Improved boundary marking and patrolling.
3. Improved road maintenance.
4. Increased participation by the people and communities in forest planning and use.
5. Improved, planned, and controlled access by the people into the FR for forest resources to replace the current poaching.
6. Continue to enforce the ban on harvesting trees in the indigenous forests.
7. Continue to ban excisions from forest land without improved procedures to prevent abuse of the process.
8. Prepare a long term management plan.

Items one to four require more money for the FD in the districts.

7.2 Long Term Strategies

1. Ensure that more revenues are returned to or remain in the districts and communities for effective ecosystem management by FD, KWS, and the communities.
2. Implement the long term management plan.
3. Review policies with respect to forest land tenure - with the objective of more control or "ownership" of local forests by the communities or user groups.
4. Resolve the people and animal conflict issue.
5. Increase the security in the ecosystem.

ANNEX 1 - REVIEW TEAM ITINERARY

22 Sept. 1999	Team leader arrived from Canada, the team met with IUCN, followed by a team planning meeting
23 Sept.	Team met with Mr. K. Rade at the Netherlands Embassy. To the FD headquarters at Karura. Met Mr. Kabugi, Survey Division staff, and Planning and Licensing and Marketing staff . Met with Dr. Mutanga of the National Museum of Kenya.
24 Sept.	Met with IUCN Regional Representative and staff. Attended Kenya Forests Working Group meeting at AWLS offices. Met with Mr. G. Gathaara, KWS Forest Conservation Coordinator.
25 Sept.	Reviewed documents received collected at the above meetings. Continued document review and travel by air to Eldoret and

26 Sept. Sunday	road to Kitale. To the MEICDP offices and met with the project team.
27 Sept.	To the Mt Elgon NP to meet with the KWS Assistant Director.
28 Sept.	Drove through part of the NP. Visited the Kiptogot Forest Station.
29 Sept.	To the DFO Office, Trans-Nzoia to meet with the Assistant DFO. Compiled notes from meetings to date.
30 Sept.	To Kapsokwony in Mt Elgon District, Project Office (Zip), DC DFO, Nancy Kelelyo, KWS, and Foresters from ??? Forest Stations.
1 October	To the DFO Office, Trans-Nzoia to meet the DFO. Met Mr. Ndiro of PPM. To KWS in Kitale, met with Mr. Ndetei of NP. Visited RaiPly logging sites in Mt Elgon, at Labaa and Kapsokisyo.
2 Oct.	Compiling interview notes for the report.
3 Oct. (Sunday)	Visited Kaboywa and Saboti Forest Stations.
4 Oct.	Report preparation in Kitale.
5 Oct.	Met with Elgeyo Sawmills. Report preparation, hard copy draft for team review and draft to the project office for review.
6 Oct.	Team comments and project comments incorporated into report.
7 Oct.	Hardcopy of early draft (main body only) sent to Nairobi.
8 Oct.	Report preparation, more feedback from the project. Traveled by road to Eldoret and then by air to Nairobi.
9 Oct.	Report preparation. Incorporating further notes from team members. Editing.
10 Oct. (Sunday)	

11 Oct.	Report preparation and team review.
12 Oct.	Report preparation and debriefing.
13 Oct.	Final Report preparation.
14 Oct.	Consultant leaves Nairobi

ANNEX 2 - PEOPLE AND GROUPS MET BY THE TEAM

Mr. Hewson Kabugi, MOU Coordinator, FD
 Mr. K. Rade, Deputy Head of Mission, Royal Netherlands Embassy
 Mr. S. Mutimba, Royal Netherlands Embassy
 Mr. Gideon Gathaara, MOU Coordinator, KWS
 Dr. Eldad Tukahirwa, IUCN Regional Representative, East Africa
 Mr. Edmond Barrow, Program Coordinator, Forest Conservation (IUCN)
 Mr. Humphrey Kisioh, IUCN
 Mr. John Wanyiri, Industrial Plantations Section, FD HQ
 Mr. Anthony Kinyanjui, Licensing and Marketing Section, FD HQ
 Mr. Charles Kimotori, Head of Survey Section, FD HQ
 Kenya Forestry Working Group
 Mr. Kepha Mwaura, Database Officer, FD HQ
 Mr. F. D. Kungu, Cartographer, FD HQ
 Mr. Musa Enyola, Project Manager, MEICDP, Kitale
 Mr. Gerry Neville, Chief Technical Advisor, MEICDP
 Mr. Edin Kalla, Assistant Director, KWS, Mt Elgon National Park
 Dr. Joseph Mutangah, Plant Conservation Program Coordinator, NMK
 Mr. A. K. Musyoka, Assistant District Forest Officer, Trans-Nzoia District
 Mr. Francis Rotich, Assistant Forester, Kiptogot Forest Station, Trans-Nzoia
 Mr. D. K. Too, District Forester, Trans-Nzoia District
 Ms. Zip Mugonyi, District Program Coordinator, MEICDP, Mt Elgon District
 Mr. Vitalis Osodo, Forestry Extension Officer, Kaptama, Mt Elgon District
 Mr. K. Shivogo, District Commissioner, Mt Elgon District
 Mr. J. M. Omare, District Forest Officer, Mt Elgon District
 Mr. James Chesebe, Representative, Mt Elgon County Council
 Mr. Dismus Ogolla, Forester, Kaboywa Forest Station, Mt Elgon Forest District
 Mr. Emmanuel Nyariso, Forester, Kaberwa Forest Station, Mt Elgon
 Ms. Nancy Kelelyo, KWS Partnership Officer, Kaberwa Station
 Mr. R. Letinialu, District Officer 1, Trans-Nzoia District
 Mr. R. Ndetei, KWS Regional Biodiversity Coordinator, Mt Elgon
 Mr. P. Diro, Forest Manager, PPM, Kaptagat
 Mr. N. Ahonya, Representative, PPM, Saboti Centre
 Mr. Moses Chesary, Local Opinion Leader, Kapsokisyo, Mt Elgon District
 Mr. Mohammed Masai, Forest Assistant, Kaberwa Forest Stat., Mt Elgon District
 Mr. D. Wirk, Manager, Elgeyo Sawmills

ANNEX 3 - PAPERS REVIEWED

Diro, P.A. (1999). Role of Panpaper in Sustainable Forest Management in Kenya. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Enyola, M. K. L. (1999). The Way Ahead - The Process and Timetable for Developing an Integrated Natural Resources Management Plan for Mt Elgon. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Forest Department. (1996) Work Plan for Silvicultural Backlogs.

Forest Department. (1999) Draft Forest Bill.

Forest Management Plan for Bungoma Forest District for the Period 1989 - 2000 (1993?).

Irigia, B. K., S. Manegene, and P. Kahumbu (1999). Management Planning Procedures and the Policy Framework for Natural Resources Management Planning in Kenya Wildlife Service. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

IUCN (1996). Forest Cover and Forest Reserves in Kenya: Policy and Practice.

Kabugi, H. M. and G. N. Gathaara, (1999). Joint Management of Natural Resources. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Kahuki, C.D. (1999). Economic Value and Potentials of Indigenous and Plantation Forests of Mt Elgon. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Kenya Wildlife Service and the Forest Department (1991). MOU for the Joint Management of Selected Forests.

Kimondo, J. M. (1999). The role of different institutions in the management of Mt Elgon Forest. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Kisioh, H. K. (1999). Integrated Natural Resource Management Planning: Issues and Processes. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Ministry of Environment and Natural Resources Forest Department (1996). Re-organisation of Management of Industrial Plantations and Restructuring Options for the Forestry Department.

Memorandum of Project Implementation Agreement (MoPIA) between the Forestry Department and the Kenya Wildlife Service (1999).

Minutes of Mt Elgon Ecosystem Management and Conservation Consultative meeting held between Uganda and Kenya on 3rd August 1993 at Mt Elgon Lodge (Kitale).

Mount Elgon Integrated Conservation and Development Project (1998). Annual Report.

Mount Elgon Integrated Conservation and Development Project (1998). 1999 Annual Work Plan.

Mount Elgon Integrated Conservation and Development Project (1997). Formulation Document.

Mount Elgon Integrated Conservation and Development Project (1999). Report on the Participatory Rural Appraisal.

Mount Elgon Integrated Conservation and Development Project (1999). Plan of Operations.

Mugo, E. N. (1999). Management Planning Procedures and Policy Framework for Natural Resources Management Planning in the Forest Department (Opportunities and Constraints). Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Ndetei, R. (1999). Conservation and management issues in Mt Elgon National Park. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Njuguna, P., M. Mbegera, and D. Mbithi (1999). Reconnaissance Survey of Forest Blocks in the West and East of the Rift Valley .Permanent Presidential Commission on Soil Conservation and Afforestation (1999).

Nurse, M. C. and S.R. Edwards (1999). Strategies for the Sustainable Conservation of Forests Under Threat From Their Adjacent Communities. KIFCON.

Oglethorpe, J. (1992). The Development of Tourism in Natural Forests in Kenya. KIFCON.

Ongugo, P. O. and J. W. Njuguna (1999). Institutions and Natural Resources Management Conflicts: the Case of Mt Elgon forest User Groups. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Too, D. K. (1999). Resources and Current Management Practices in Forest Reserves on Mt Elgon. Paper presented at the MEICDP Workshop on Integrated Natural Resources Management Planning.

Wily, Dr. L (1993). Mount Elgon Conservation and Development Project Advisory Report. KIFCON.

Wass, P. (1995). Kenya's Indigenous Forests Status, Management and Conservation. IUCN Forest Conservation Program.

ANNEX 4 - TERMS OF REFERENCE

Terms of Reference

Team Leader for a

Review of Management of the Forest Resources of Mt Elgon (Kenya)

A. Background

Mt Elgon straddles the border between Kenya and Uganda. The Kenyan side of the mountain is covered by two Forest Reserves (73,000ha) which are administered by KFD (Kenya Forest Department) and Mt Elgon National Park (34,000ha) administered by Kenya Wildlife Service (KWS).

The Mt Elgon Integrated Conservation and Development Project (MEICDP) has been set up by KFD and KWS to promote the conservation of biodiversity of the Mt Elgon ecosystem, while contributing to the livelihoods of adjacent communities. IUCN provides technical and managerial support to the project, which is funded by the Dutch government.

In the last National Project Steering Committee (NPSC) meeting held in Nairobi on Wednesday 23rd June 1999, concerns were expressed about very adverse allegations in the print media regarding the state and exploitation of Mt. Elgon Forest. Considering that MEICDP is funded to, inter alia, ensure that:

"... the benefits and intrinsic values of the Mt. Elgon ecosystem are conserved for present and future generations of the local and global community",

it is vital that these public concerns are addressed.

The Government of Kenya (GoK), by setting up this project, has demonstrated its commitment to the conservation of this critical ecosystem. It is in this

regard that the NPSC recommended that the MEICDP provides funding for a field study to obtain a precise view of the situation in this area and to investigate the allegations that have appeared in the local print media.

The final report of the study will be submitted to the next NPSC. On the basis of the recommendations in the report, the NPSC will decide on the next course of action.

B. Goal and Objectives of the Study

The overall objective of this short-term study is to assist the NPSC obtain a clear and up to date understanding of the state of management of the Mt. Elgon ecosystem.

On the basis of the information provided by the study, the NPSC will be better placed to provide policy guidance for project execution and the project will have a better basis for promoting sustainable management of the Mt Elgon ecosystem.

1. Establish the magnitude of forest destruction and losses incurred through over-exploitation, excision, encroachment, illegal activities and weaknesses in management practices and suggest ways in which these problems should be addressed.
2. Provide recommendations to the project, KFD and KWS on short and long term measures required to establish and maintain the integrity and sustainability of the Mt Elgon ecosystem.

C. The Study Team and the Task

The Team Leader is expected to produce a full report, with input from the rest of the team members, of the findings of the study and to give a clear view on how the management of the forest reserves contributes to the sustainable management of the Mt Elgon Ecosystem. The report will help establish the correct position about the present state of the forest reserves, the systems employed for their management, the level of destruction or loss, and give recommendations on how these problems could be addressed.

The Team

The Team will consist of:

The Team Leader.

A professional of the Forest Department, specialist in forest harvesting and management.

A professional of the Kenya Wildlife Service, specialist in biodiversity and ecosystem management.

Responsibility for the report rests with the Team Leader who will solicit input from the rest of the team members.

The Task

The Team will:

1. Review KFD's existing arrangements for commercial harvesting in the forest reserves of Mt Elgon. The review will cover both the indigenous forests and the plantations administered by KFD on Mt Elgon and will address forest establishment and harvesting methods, control systems employed for forest harvesting and the revenues generated. From the findings, the Team will recommend short and long term strategies for the sustainable use of the forest resources.
2. Review available documentation and current field practices management of forests in the Mount Elgon ecosystem.
3. Review the rate of forest establishment / regeneration vis-a-vis the rate of harvesting and determine whether they are compatible with sustainable forest management. This should address both plantation and indigenous forests.
4. Through records kept by KFD and from other sources that may be available to the mission, evaluate the extent to which any illegal activities going on in the ecosystem have been documented and what action(s) have been taken to remedy them.
5. Assess how community practices and interventions contribute to or threaten the sustainable management of the forests and ecosystem in general, the flow of costs and benefits to them, the state of relations with management authorities, and assess whatever scope that there may be for improving them.
6. In light of the Team's observations and findings, propose measures through which the project could assist the government, local communities and other stakeholders to improve and maintain the integrity and sustainability of the Mount Elgon ecosystem.

D. Study Period

It is proposed that the assignment be undertaken in twenty (20) working days, from which it is expected that at least fifteen (15) would be allocated to field work.

The team will develop and present to the principal project partners a work program at the commencement of the study.

E. Expected Output

The Team Leader with the assistance of other members of the team, will produce a comprehensive report, to be submitted to the National Project Steering Committee through the MoU Secretariat in Nairobi.

The report, which will be in Word, will address each of the issues specified in the ToRs. It should also clearly set out recommended actions that should be taken and by whom, to improve the effectiveness and efficiency of management of the forest resources.

Towards the end of the study there will be a debriefing held with the principal project partners in Nairobi. The purpose of the briefing will be to keep the members informed about preliminary findings of the study, and to allow them time to review the report and respond to any pertinent issues arising from these findings before the presentation to the Steering Committee.

A draft report will be presented to the principal project partners in the final week of the study. This draft will be the basis for the debriefing. The team will then provide comments that will be incorporated in the production of the final report.

F. Assistance to the Team

The principal project partners will avail themselves for discussions with the team. While in Nairobi, the MoU Secretariat and IUCN will assist the Team.

Relevant documentation to support the study will be prepared by MOU Secretariat and IUCN before the study commences.

During the review team's visit to the project area, the project will facilitate meetings with stakeholders and be generally available as required for discussions and the supply of information. Full access will be provided to the project's documents and information sources.