

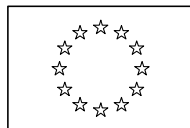
# **ADMINISTRATIVE REPORT 40**

## **EAST USAMBARA CONSERVATION AREA MANAGEMENT PROGRAMME**

### **COMPLETION REPORT OF THE PHASE III (1999-2002)**

**Ministry of Natural Resources and Tourism, Tanzania  
Forestry and Beekeeping Division**

**Ministry for Foreign Affairs, Finland  
Indufor/Metsähallitus Group**



**EUROPEAN UNION  
DELEGATION OF THE EUROPEAN COMMISSION  
IN THE UNITED REPUBLIC OF TANZANIA**

**Tanga  
December 2002**

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## FOREWORD

At the end of 2002 the East Usambara Conservation Area Management Programme (EUCAMP) completes a long-lasting forestry and nature conservation development co-operation between the Governments of Tanzania and Finland, and the European Union. The co-operation in the East Usambara Mountains started already in the late 1970s, first as development of forest management, harvesting and saw milling industries. In the mid 1980s the objective was geared towards catchment forestry and nature conservation. The East Usambara Catchment Forest Project (EUCFP) started in 1991. The importance of community participation in the East Usambara natural resources management affected the formulation of the second phase of EUCFP (1995-1998), and especially the third (last) phase (1999-2002).

For its final Phase two Projects: EUCFP and the parallel East Usambara Conservation and Agricultural Development Project (EUCADP) were joined to form the East Usambara Conservation Area Management Programme. EUCADP was a European Union funded Project. During 1987 – 1996 it was implemented jointly by the Government of Tanzania and the IUCN (International Union for Conservation of Nature and Natural Resources).

The planning of the third phase of EUCAMP, i.e. joining EUCFP and EUCADP towards a common objective, was a lengthy but thorough participatory process. It was carried out partly on a staff-training basis during 1998. A EUCAMP Programme planning team was formulated, comprising the staff members from the Tanga Catchment Forest Office, from Amani Botanical Garden and from the Kwamkoro, Sigi, Longuza, Maramba and Kilangangua forest stations. The planning team formulated the Programme's purpose, objectives and activities and prepared the corresponding Project Document in late 1998.

For the implementation of the Programme, the same planning team was transformed in the beginning of 1999 into the EUCAMP management team. Most of the original team members have participated in the Project management throughout the entire third phase. Finally, the same EUCAMP management team has analyzed the status of implementation at the end of the year 2002. Based on that analysis, the management team has prepared the completion report.

The completion report is based on the format indicated in the 'Guidelines for Programme Design, Monitoring and Evaluation' published by the Department of International Development Co-operation of the Ministry for Foreign Affairs of Finland in 1998. The main output contents of this report have also been published in the standard EUCAMP annual reports of 1999 / 2000, 2000 / 2001 and 2001 / 2002.

We wish to thank all the EUCAMP management team members who have with high devotion and ownership participated in and contributed to the implementation of all the Project cycle elements of the East Usambara Conservation Area Management Programme. You have brought the Programme into its successful, planned completion at the end of 2002.

**Lema Mathias**  
Programme Manager and  
Chairman of the EUCAMP  
Management Team

**Veli Pohjonen**  
EUCAMP Chief Technical Adviser

## ACRONYMS

ANR	Amani Nature Reserve
ABG	Amani Botanical Garden
BOZONET	Botany and Zoology Network
CBFM	Community Based Forest Management
CTP	Cultural Tourism Programme
DFoB	Director of Forestry and Beekeeping Division
EC	European Commission
EU	European Union
EUCAMP	East Usambara Conservation Area Management Programme
EUCADP	East Usambara Conservation and Agriculture Development Project
EUCFP	East Usambara Catchment Forest Project
EUR	Euro
FBD	Forestry and Beekeeping Division
FR(s)	Forest Reserve(s)
GOF	Government of Finland
GOT	Government of Tanzania
IBC	International Business Combine
ITC	International Training Centre
IUCN	International Union for Conservation of Nature
JFM	Joint Forest Management
MAB	Man and Biosphere Reserve
MOU	Memorandum of Understanding
NGO	Non-Governmental Organization
NFP	National Forestry Programme
NIMR	National Institute for Medical Research
PRA	Participatory Rural Appraisal
SABONET	Southern Africa Botanical Garden Network
SIT	School of International Training
SNV	Scheld Netherlands Volunteers
TBA	Tropical Biology Association
ToT	Training of Trainers
TRCFO	Tanga Regional Catchment Forest Office
TSh	Tanzanian Shilling
TTB	Tanzania Tourist Board
UDSM	University of Dar-Es-Salaam
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
UK	United Kingdom
VCDC	Village Conservation and Development Committee
VFM	Village Forest Management
VFR	Village Forest Reserve
WWF	World Wide Fund

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## **1. EXECUTIVE SUMMARY**

### **Programme design**

Government of Finland has supported forest activities in Tanzania since 1978. In 1991, GoF began to support East Usambara Catchment Forest Project (EUCFP) with the focus of managing the Amani forests for Nature Conservation purposes and to improve the management of other Catchment forests in the East Usambaras. Phase I and II of EUCFP took place during 1991 – 1994, and 1995 – 1998 respectively. European Union assisted East Usambara Conservation and Agricultural Development project (EUCADP) worked with local communities in the Amani area to reduce local reliance on forests by providing agricultural development assistance. EUCADP was due to terminate in 1998 but as all allocated funds had not been the GoT requested an extension of support. The two projects, EUCFP and EUCADP formed the East Usambara Conservation Area Management Programme (EUCAMP) for 1999 - 2002. The main focus of EUCAMP has been to work in collaboration with local communities and other stakeholders to put into place management systems to sustain conservation of biological diversity and catchment values of the East Usambaran mountain forests.

### **Programme Design**

The implementation of the project was designed to be compatible with priority Tanzanian policy goals as well as to support Tanzania's national obligations under the convention of biological diversity. These policies all stress the need for poverty reduction, conservation of biological diversity and efforts to control deforestation. They are correlated with the goals of the Development Cooperation of Finland and European Union as well. The focal point in the implementation has always been sustained management of natural resources for the benefit of local and global communities.

### **Inputs**

The total EUCAMP budget (1999 – 2002) was EURO 4,168,456. The GoT contributed 7 %, the GoF 53%, and the European Union 40% of the total funding. By the end of November 2002, 85 % of the GoT contribution, 96 % of GoF and 79 % of EU contribution were used, with grand total use of 89 % of the total budget. Local institutions: Forestry and Beekeeping Division, District Councils and local communities adjacent to the forest reserves have had a key role in the implementation of the programme, with technical assistance and support services from the Finnish Forest and Park Service (later Indufor / Metsähallitus Group) and by national as well as international consultants.

### **Activities and Outputs**

The major focus during 1999 – 2002 has been on communities involvement in management of Natural Resources. This encompasses testing and replicating the best management approaches that would then lay a foundation for sustainable forest management. EUCAMP has worked in the following result (output) areas: MaB Reserve, Nature Reserves, Catchment Forest Reserves, Village Forest Reserves, Extension, Research, Monitoring, Ecotourism, Policy, Institutional Support, Amani Botanical Garden and Collaboration.

## **Lessons Learned and Recommendations**

The programme was over ambitious during planning: Many activities were planned but could not be implemented due to time and financial constraints.

- It was expected that donor funding could be decreased while GoT funding increased gradually, so that the programme could continue without external funding at the end of 2002. This happened, but most activities still need support.
- Fund retention scheme as applied to ANR conservation fund could be the way forward to sustainable conservation.
- Establishing Eco-tourism in the Catchment forest reserves could be an alternative income generating source while fostering sustainable forest conservation.
- Realization of tangible benefits could be an impetus for community participation in the management of Natural Resources.
- Handing over of some activities to district councils is a slow process that need long-term capacity building and awareness raising.
- Baseline information on biodiversity is crucial for zonation and management planning of forest reserves.
- The change from old land law to new land law has had significant increase of expected land and crop compensations value for Derema proposed forest reserve and ecological corridor.

## **Need for Further Assistance**

1. MAB Reserve: strategic plan MAB reserve management in East Usambara that was developed in early 2002, was not fully implemented due to time and financial constraints. There is a need for further assistance in developing East Usambara Man and Biosphere reserve.
2. Eco-tourism in Catchment forests is a new avenue and is a promising poverty reduction strategy and way forward towards sustainable natural resources management. There is a need for further assistance in Eco-tourism development and marketing in East Usambara.
3. Reduction of forest fragmentation in East Usambaras, for the purposes of biodiversity conservation and improvement of generic resource is important and could not be attained without reserving Derema ecological corridor. Assistance is needed in gazettelement of Derema ecological corridor.
4. Participatory forest management (PFM) is a new practice that has just been addressed along with the new Forest Act 2002. There is need for further support/assistance to develop and operationalize PFM in East Usambaras.

## **2. ASSESSMENT OF THE PROJECT INTERVENTION**

At the end of Phase II assessment was made to see the necessity of the project to continue to Phase III. The analysis revealed that the long-term core problem facing the project area was the “ineffective conservation and utilization of forest resources in the East Usambara.”

### **RELEVANCE:**

#### **Global Interest / International Relevance**

The project is highly relevant internationally due to the conservation of biological diversity of the unique submontane forests. Conservation of biological diversity and sustained management of natural forests ecosystems for multiple uses are emphasized in the Forestry Policy in Tanzania. Thus the project is in line with both, Tanzania’s conservation priorities, and the environmental goals of Finland’s development co-operation in the 1990s. Establishment of the Amani Nature Reserve (ANR) and the East Usambara Man and Biosphere Reserve (MAB) is an accomplishment of the long-term goal of the EUCAMP and is considered a landmark conservation effort to secure the biodiversity, forests and catchment values in the East Usambara Mountains. Indeed, these forests are considered among the most important conservation priorities in the world.

#### **National Relevance**

The conservation of biodiversity and the sustainable management of forest resources are the main issues included in the new Forest Policy and the National Environmental Policy. The East Usambara forests constitute the watershed for the Sigi River, which is the main source of water for Tanga Municipality. Moreover, the establishment of the East Usambara MAB Reserve, and the subsequent stimulation of the tourism industry and other means of revenue generation, may contribute to the national economy and future sustainability of forest conservation. The attempts are still at an early stage but may prove important to the long-term sustainability of the government forestry services operations. The forests not only contribute to the commercial sector both in agriculture and manufacturing industries but also to the national economy through increasing employment opportunities.

#### **Local Relevance**

At the local level the East Usambara forests provide the population with day-to-day basic needs. The forests serve an important function to the local communities through their cultural, social, and economic values. The interaction with, and impact on the forests by the local population, however, requires a stronger emphasis. The project acknowledged the necessity of looking into possibilities of providing alternatives to villagers. To address this, EUCAMP developed strategies to involve the local communities in the protection of the forests by allowing local forest utilization which is compatible with conservation objectives. Only through the participation of local men and women in the management of the environment will the East Usambaras be preserved, and – in the longer term – poverty reduction attained.

#### **Effectiveness**

The effectiveness of each intervention can be observed through the indicators. The East Usambara MAB Reserve was established according to activity schedule. The General Management Plan for the ANR, including the zonation map and the regulation for each zone, was prepared and the ANR became operationalized.

The rate of illegal tree cutting in the forest reserves was highly reduced and this positively influenced the quality and quantity of water discharge and water flow. Five Village Forest Reserves (VFRs) were established and 11 participatory management plans for selected forest reserves were prepared. Farm forestry activities were substantially adopted in thirty pilot villages and, subsequently, these newly acquired skills spread to the neighboring villages as well. In years to come, the pressure on the forest reserves from the pilot villages will be reduced as they will become self-supportive with forest products derived from the trees they planted during the programme period.

The formal and on-job training received by the project staff made them more knowledgeable in modern management of the protected areas. The project has a very strong management team with high confidence in participatory planning and management, with all project activities being planned and managed through this approach. Conservation measures in the forest reserves have improved as all stakeholders, including local communities, were involved in the planning and implementing activities. Forest protection has increased because of peoples' participation and the establishments of beats closer to the forest reserves in the neighboring villages.

The number of the researches conducted in the project area increased, in comparison to Phases I and II. In collaboration with the University of Dar Es Salaam, the Sokoine University of Agriculture & Tropical Biology Association (TBA), the School for International Training (SIT), as well as individual researchers and other interested parties from different universities world wide have conducted research in the project area. Through collaboration with the Meteorological and Hydrological Departments, hydro-met data collection was done and handed over to the National Meteorological Agency. A baseline biodiversity survey was completed on all forest reserves of the East Usambara.

### **Impacts**

The biodiversity conservation in the project area has improved through reduction of uncontrolled harvesting and reduction in the frequency of forest fires. The Tanga urban dwellers have been assured of getting pipe water as long as the East Usambara Forests are properly managed. The local communities have benefited through employment provided by the project. Through the establishment of ANR for biodiversity conservation, research and training, Tanzania has fulfilled some important international obligations in conservation.

### **Compatibility and Sustainability**

The EUCAMP objectives and goals are compatible with major Tanzanian policy goals, as expressed in the 1998 Tanzania Forestry Policy, the Tanzania Forestry Programme (2001 – 2010), the Environmental Policy, the National Strategy for Sustainable Development, and the National Environmental Policy and its Action Plan. EUCAMP also supports Tanzania's national obligations under the Convention on Biological Diversity. These policies all stress the need for poverty reduction, conservation of biological diversity and efforts to control deforestation. It is also highly compatible with the goals of the Finnish Development Co-operation – poverty reduction, protection of the environment and human rights, democracy and governance. Thus, implementation of EUCAMP was in line with both Tanzania's conservation priorities and the environmental goals of Finland's Development Co-operation.

The programme focused on proper and sustainable forest management in the East Usambara area. The scope of operation was widened from concentrated effort in the forest reserves to sustainable management of the reserved forest and their buffer zone area. In this contest

EUCAMP put more effort on land management and the improvement of land productivity in the buffer zone.

Farm forestry activities were introduced and improved in the villages surrounding the forest reserves and conservation extension was improved to ensure local communities are self-supportive in forest and forest products. Such strategy was adopted to reduce pressure on the forest reserves from local communities. Some forests were zoned to cater for local communities and to delineate core areas for total conservation to ensure sustainable utilization and conservation. The establishment of the ANR and the introduction of eco-tourism in the East Usambara area provide alternative use of the forests with less ecological impact and, therefore, more effective and sustainable conservation. Local communities and other stakeholders were involved in the planning and implementation of the project activities. By involving them, protection costs were reduced and it is expected that, through this system, long-term running cost of the project will also be highly reduced. The effort made by the GOT to introduce a retention scheme and to establish the ANR Conservation Fund greatly improved the financial capacity of the project activities. The effort made by the project raised awareness of the local communities to understand their crucial roles in conservation. Finally, the established village environmental committee was extremely important for the future sustainable management of East Usambara forests.

### **3. SIGNIFICANT CHANGES IN THE PROJECT ENVIRONMENT**

During the EUCAMP implementation period the GOT adopted policies to liberalize the economy, increase the role of the private sector, and to decentralize many government functions to local authorities and communities. Steps were taken to improve tax collection and delivery of services. The number of civil service employees was reduced to improve the salaries and working conditions for remaining staff. Some government departments were reorganized as “executive agencies,” giving them greater autonomy in employment policies and management of revenues. The forest division was earmarked to be a “Tanzania Forest Service Agency.” The GOT updated many of its sectoral policies: The Environmental Policy, the National Strategy for Sustainable Development, and the National Environmental Action Plan are in place. These policies all stress the need for poverty reduction, conservation of biological diversity as well as the efforts to control deforestation.

In 1998, a revised Forest Policy replaced the Forest Policy adopted by the colonial government in 1953. The new Forest Policy states that the GOT should manage forests of national interest, including areas of high biodiversity value, nature reserves and mangroves. The Forest Policy allows for the establishment of forest reserves to be managed by local government, villages, and private owners. It stipulates that the private sector should be involved in conservation issues, particularly in the management of utilization forests and conservation forests. The Forest Policy encourages people’s participation in forest conservation. It also stipulates that local authorities should establish and manage forest plantations, including agroforestry activities. Local authorities are considered as tools for managing conservation areas of national interest. The new forest legislation was enacted in 2001 and by the end of the Programme time it was yet to be in force pending guideline and regulation.

#### **LESSONS LEARNED**

The implementation of the programme short-term immediate objectives has played a significant role in solving the long-term objective. The approaches used by the project were simple, adaptable and replicable. It was noted, however, that for the effective implementation of the programme objectives and the testing of the management models established, much more time is required.

One of the objectives of EUCAMP was to have the East Usambaras be legally gazetted as a MAB Reserve and to test its management systems. It was noted that the introduction of new ideas requires adequate time to involve people and to adopt the innovation. The East Usambara MAB Reserve has not been operationalized and the ANR is still mainly set up for the conservation of ecological processes, training and water catchment. The archeological features are less attractive and thus hinder the promoting of Eco-tourism in the area. As such, sustainable funding mechanism for the ANR remains to be explored and it will take a number of years for the ANR to become self-sustainable.

Establishing the ANR has played a great role in the reformation of the National Forest Policy. Basing on the procedures of the gazettement of ANR, other nature reserves may be established in Tanzania. The gazettement of ANR has also changed the conservation status of the reserve, which lead to international recognition and thus positively influenced the number of visitors to the area, including conservationists, researchers and tourists.

During the programme implementation, much emphasis was directed to forest patrol and protection activities. The activities were applied through collaboration with local communities. Extension knowledge on the importance of conserving catchment forests that would benefit the present and future generations was emphasized to the villagers. Through participatory management with the local communities, much success is now realized in the forest: Local people feel that the forests are for them, but need to be maintained. Through this perception forest illegalities were greatly reduced in comparison with earlier phases (I & I) of the project.

Much effort was done to conduct biodiversity work in the catchment forests and all the valuable forests were surveyed. Biodiversity surveys provide relevant information for management plans for particular forests, including zonation. On the other hand, they shed light on the biological diversity status of a particular forest, such as the level of endemism and rare species.

Through enlargement and establishment of new forest reserves, the catchment forests area increased. For the sustainable utilization of forest resources, the importance of having the Joint Forest Management plans with local communities adjacent to each forest reserve was seen as very important and realistic. The effort to gazette the Derema Ecological Corridor was not successful during the project lifetime, as a new land law affected the compensation budget set aside in the programme. It was leaned that the feasibility study on the real values of Derema crops was not adequately done.

The farmer-to-farmer extension approach has significantly increased the awareness on conservation and farm forestry to many villagers in the pilot villages as well as in non-pilot villages through learning from each other. This lead to a high demand of inputs and therefore a shortage of resources allocation even in the pilot villages, and, to a greater extent, to non-pilot villages that were ready to undertake conservation activities but were not included in the plan and budget. This is a challenge to the project in the future.

Empowerment of villagers in decision making and conservation made the implementation of the activities more acceptable. The involvement of local communities in the planning process for EUCAMP and during the implementation of activities, such as the establishment of VFRs (Mpanga, Handei, Mfundia, Kizee, and Kizingata) was more realistic, sustainable and devoid of unnecessary conflicts and crop compensation, at the same time saving the forests that were not under protection.

Training of staff and local community is considered as the incentive and backbone of capacity building. Long-term training, however, needs to be planned carefully so that it does not hamper the project implementation. The including of villagers in the decision making process increased efficiency and reduced the workload to the project, although unplanned activities and ad hoc visits interfered with the work plan as well as the project budget.

There is a need to intensify the use and dissemination of available information on and within the project as well as to introduce and provide logistical support to researchers working on priority research topics.

## 4. PROGRAMME BACKGROUND

The GOT in its sectoral reform program updated many of its sectoral policies. The national forestry policy and National Forestry Programme (NFP) both stress the need for conservation of biological diversity, deforestation control and poverty reduction. The forest policy states that the GOT should manage forests of national interest including areas of high biological value, nature reserves and mangroves. The forest policy allows for the establishment of forest reserves to be managed by local governments, villages and private owners. It encourages people's participation in forest conservation.

The Tanzania NFP, as an overall long-term programme for the forest sector, cited the forests of the Eastern Arc Mountains as a top national priority for the conservation of biological diversity. The East Usambara Mountains form one of the 13 forested mountain blocks that make up the Eastern Arc Mountains. These forests are globally valuable for their rare and endemic species. The Eastern Arc and coastal forests in Tanzania are considered to be among the top 25 **Biological Diversity Hotspots in the World** (the richest and most threatened reservoirs of plant and animal life on Earth – Conservation International). Within the Eastern Arc, the East Usambaras are recognized as the most important site for biological diversity.

Of the 130,000 ha that comprise the East Usambara Mountains, forest originally covered approximately 100,000 ha. An analysis of aerial photographs shows decrease of some 50% between 1954 and 1976 in the vicinity of Amani. This is attributable to intensive forest exploitation through commercial logging from the 1950s until 1986. The use of heavy machines, such as bulldozers and caterpillars, by large scale loggers, sawmills and pit sawyers in the 1980s resulted in soil compacting, soil erosion and increased gaps in the forest. The clearing of land for large and small scale agriculture, as well as forest harvesting, also accounted for the loss of original forest cover.

The GOF has supported forest activities in Tanzania since 1978. With assistance from Finland and other donors, the GOT prepared the Tanzanian NFP, which identified the need for a national programme in forest conservation and highlighted the East Usambaras as a top priority site. Consequently, two complimentary follow up projects were designed. The East Usambara Catchment Forest Project (EUCFP) was developed to assist the GOT in managing the Amani forests for nature conservation purposes and to improve the management of other catchment forests and tea plantations in the East Usambaras. The EUCFP focused on the national forest reserves. Phases I and II were implemented with technical assistance and support services from the Finnish Forest and Park Services. Another project, the East Usambara Conservation and Agriculture Development Project (EUCADP) worked with local communities in the Amani area to reduce local reliance on forests by providing agricultural development assistance. The EUCADP was due to terminate in 1998 but as all allocated financial assistance had not been spent, the GOT requested an extension of support.

These two projects, EUCFP and EUCADP formed the East Usambara Conservation Area Management Programme (EUCAMP). The EUCFP Phase III was financed by the GOF and GOT for four years between 1999 – 2002. The long-term objective of EUCAMP is the contribution to global and Tanzanian efforts to conserve biodiversity in harmony with the accounting for the needs of local people. The project purpose of the EUCFP was the effective conservation of forests in the East Usambaras for preservation of biological diversity and

promotion of sustainable catchment forestry and land use management for the benefit of local and global communities.

In order to reach its purpose, EUCAMP formulated 13 results planned to be achieved by the end of December 2002. The results dealt with the MAB Reserve, nature reserves, catchment forest reserves, Village Forest Reserves, farm forestry, extension, research, monitoring, eco-tourism, policy, institutional support, the Amani Botanical Garden (ABG), and collaboration. These results were fused to five in the last work plan, as had been recommended by both the steering committee and the mid-term review mission. From these results, activities were formulated – priority being community participation in forest conservation, biodiversity surveys, the establishment of Derema Forest Reserve and Wildlife Corridor, and promotion of eco-tourism in the East Usambara Mountains.

## **5. PROGRAMME DESIGN**

EUCAMP was designed on the basis of several major assumptions: (1) it was assumed that the potential partners – local communities, the private sector, NGOs, and other government agencies – were willing to collaborate in implementation of activities; (2) it was assumed that attractive cost-benefit sharing arrangements could be negotiated between the local communities and the government so that the local people would be motivated to work with the government as partners in forest conservation; and, (3) it was assumed that the GOT would be able to gradually assume the recurrent operating costs for its institutions through increased revenue collection and retention, the establishment of trust funds, and the streamlining of operations to reduce costs.

The major risk was seen to be governmental restructuring. It was not clear if the forestry sector would be restructured or whether some or all of the Forestry and Beekeeping Division's functions were to be taken over by an executive agency. It was also difficult to predict the future direction of evolution in taxation systems and retention schemes.

The Amani Nature Reserve organizational structure and Conservation Fund were not operational. Thus, risks existed that problems might arise in launching these new mechanisms. Flexibility was ensured, however, in that the Tanga Regional Catchment Forest Office (TRCFO), which had previously managed ANR, was able to provide back-up support, when necessary, during the transitional period.

EUCAMP was designed to be compatible with priority Tanzanian policy goals as well as to support Tanzania's national obligations under the Convention on Biological Diversity. These policies all stress the need for poverty reduction, conservation of biological diversity and efforts to control deforestation. They are correlated with goals of the Finnish Development Co-operation – poverty reduction, protection of the environment and human rights, democracy and governance. These goals are also endorsed by the European Commission.

EUCAMP focuses on environmental protection. It assists in the sustainable management of approximately 30,000 ha of government forest reserves in the East Usambaras. It also assists in the management of village forest reserves located on public lands and in improving farm forestry practices.

EUCAMP was designed to address rural poverty by improving rural incomes and empowering the poor. The programme enhanced economic growth through farm forestry activities and sharing benefits of JFM. It contributes to increasing the standard of living of the poor and the development of human rights, democracy and governance through efforts to strengthen village-level institutions. The programme addresses the need for transparency and stakeholder participation in planning, implementing, and the monitoring of its activities.

EUCAMP was designed to ensure long-term sustainability of forest conservation efforts. It further develops a favorable environmental policy, especially with respect to nature conservation, JFM, and local VFM issues. It put into place long-term mechanisms for financial sustainability through improved revenue retention, trust funds, and reduction of recurrent operating costs. The programme strengthened the institutional capacities of the FBD, particularly the TRCFO and the ANR, and their collaborators, with a particular focus on building village-level institutions for conservation.

The programme promoted indigenous knowledge and values, as they relate to forest conservation, and encouraged the broad participation of a variety of stakeholders. In particular, efforts are in place to involve village women in conservation efforts and to reach the youth, specifically through environmental education programmes. Past efforts had focused on encouraging local participation and the development of stakeholder platforms. EUCAMP focuses on environmental sustainability, in collaboration with the local people to better manage the forests. The key focus is on biodiversity and catchment values and forest management for conservation, followed by environment management for both conservation and utilization. The technology, such as that used in tree nurseries, is appropriate and in place, and can be sustained by villagers in the future.

EUCAMP was designed to be implemented by the FBD, in collaboration with local communities and other stakeholders. The aim was to strengthen existing organizational structures, rather than separate “project structures.” Support was provided to the TRCFO for conservation activities in national catchment forest reserves, village forests, and neighboring village lands. Additional support was provided to the ANR, which has its own separate organizational structure. Certain joint programmes, such as extension efforts, were supported directly by the programme.

Management teams for the respective units guided day-to-day implementation, monitoring, and reporting of activities. The Tanga Regional Catchment Forester, the ANR Conservator and their staff prepared annual Plans of Operations (work plans) and budgets that in turn were coordinated and consolidated into a single plan for the programme. These plans, budgets and reports were submitted to the Programme Steering Committee, and then to the Supervisory Board for review, approval, and, if necessary, modification. For the ANR, any plans and budgets had to also be approved by the ANR Advisory Board. The portion of the funds specifically designated for ANR was deposited into the ANR Conservation Fund, which was then dispersed in accordance with the approved work plan for Amani.

## 6. INPUTS

### 6.1. PROGRAMME FINANCING

The original budget for the programme period was TSh 251,000,000 (Euro 312,074 equivalent), contributed by the Government of Tanzania, Euro 2,411,718 by the Government of Finland, and Euro 1,444,584 by the European Union, totaling Euro 4,168,376. The GOT contributed 7%, the GOF 53 %, while the European Union contributed 40 % of the total funding.

The original budget and actual costs are summarized in Table 1 below. Detailed budget and the programme's actual costs are presented in Annex 2.

The major events during the period under review, which adversely affected the original budgets, were salaries and allowances increases, currencies fluctuations, and the work plan revision of August 2001.

**Table 1**  
BUDGET VS ACTUAL COSTS

Description	Budget	Actual Costs	% Used
Investments	461,623	385,805	84
Recurrent Costs	2,647,014	2,259,324	85
Technical Assistance	1,059,819	1,079,3591	102
<b>Total</b>	<b>4,168,456</b>	<b>3,724,520</b>	<b>89</b>

Almost all of the budgeted investments were made during the programme period with the exception of two tractors, two trailers and two motorcycles, which were to be procured under the European Union budget. Procurement of the two tractors and two trailers is pending European Union's undisbursed balance still in Brussels to date. The inventory list of all purchased equipment and facilities is presented in Annex 3.

89% of the budgeted recurrent costs were disbursed by the end of 2002. The biggest apparent saving is under the Acquisition of Ecological Corridors (Derema) budget line, an activity that is lagging behind to date. The over-expenditures in the Biodiversity Surveys budget lines were because of the additional non-budgeted Mgambo Forest survey.

The Technical Assistance budget was slightly over budget, the main contributing factor being the currencies fluctuations.

The overall financial performance of the programme at the end of 2002 is 89%. Once the European Union funds are released and hence the above tractors and trailers purchased, the Acquisition of the Ecological Corridors will be the only major deferred activity.

As seen in Table 2 below, the actual costs for the donor funding has been summarized in the following main categories:

**Table 2**  
FINLAND FUNDS

<b>Category</b>	<b>EURO</b>	<b>Per Cent</b>
Office & Field Equipment / Materials	354,059	15
Degree Training	44,208	2
Transport	415,587	18
Staff Allowances	294,266	13
Villagers & Casual Labor	85,444	4
Technical Assistance & Consultancies	1,105,652	48
Other	18,519	1
<b>Subtotal</b>	<b>2,317,735</b>	<b>100</b>
Unspent	93,982	–
<b>Total</b>	<b>2,411,717</b>	–

**Table 3**  
EUROPEAN UNION FUNDS

<b>Category</b>	<b>EURO</b>	<b>Per Cent</b>
Office & Field Equipment / Materials	173,490	16
Degree Training	24,894	2
Transport	148,318	14
Staff Allowances	157,202	15
Villagers & Casual Labor	171,230	6
Technical Assistance & Consultancies	456,386	43
Other	12,246	1
<b>Subtotal</b>	<b>1,143,767</b>	<b>100</b>
Unspent	300,817	–
<b>Total</b>	<b>1,444,584</b>	–

## 6.2. TECHNICAL ASSISTANCE, INSTITUTIONAL PARTNER AND CONSULTANTS

At the end of the project cycle the role of technical assistance in the project implementation was gradually becoming smaller, whereas simultaneously the progress of the staff training at all levels was being increased. In a high local ownership and high participation type project like EUCAMP, the overall need of international technical assistance is also less than average.

For the third phase of EUCAMP, additional inputs in community participation, in social forestry, JFM and village forestry were regarded necessary. Consequently, long-term Social

Forestry Adviser (Ms. Taina Veltheim) was recruited for the period of Jul 1, 1999 – Dec 2002. In addition, short-term Participatory Forest Consultant (Ms. Irmeli Mustalahti) was recruited for the period Jan 1 – March 31, 2002. The long-term Chief Technical Adviser (Dr. Veli Pohjonen) guided the programme from Jun 1, 1999 – Dec 31, 2002.

### **6.3. CAPACITY BUILDING**

#### **FBD Staff**

Staff capacity building was one of the key activities in the programme. The major aim was to enable them to perform their day-to-day conservation activities. This produced a positive sustainable output in terms of skills gained and practiced in the working environments.

The programme supported both short-term and long-term training. In-service and on-the-job training was also conducted to staff at all levels, such as the undertaking of biodiversity surveys that provided skills on the systematic sampling of flora and fauna and the establishment of forest monitoring plots.

Seminars and workshops were organized to raise awareness on issues related to forest conservation, policy and regulations, and forest management at large. Staff also participated in various seminars, meetings and workshops organized by other stakeholders and those at higher ministerial / divisional levels. Long-term training included MSc., BSc. and Diploma and Certificate programmes. Short-term courses were identified according to the priorities of the programme. Annex 6 shows the list of courses, the number of participants, the venue and the duration of these events.

#### **Local Institutions**

Training and extension activities for local communities were strongly strengthened in the final phase of the Project. Training was given on farm forestry, income generating activities (such as on-farm nurseries, agro forestry, soil conservation, beekeeping, fish farming) and Participatory Forest Management (PFM). Study tours and farmer-to-farmer exchange visits were also organized. Workshops and seminars to stakeholders were conducted on topics such as gender strategy, the establishment of the proposed Derema Forest Reserve, and PFM. Some training and extension activities were conducted in 50 villages within the project area, involving about 3,200 people (of which 48% women) attending training courses, workshops, seminars and study tours on various topics and about 4,700 people (of which 59% women) attending film shows on forest conservation (see Annex 6). The PFM issues were also collaborated on with area NGOs, such as 4H and TFCG.

### **6.4. OVERVIEW OF THE USE OF EQUIPMENT**

The programme purchased equipment and facilities which played a great role in facilitating the smooth running and achievement of activities. The equipment and facilities included working gear, such as uniforms, vehicles, tractors and motorcycles used for extension, protection and farm forestry.

The programme also purchased office supplies such as computers and software, as well as other office machines that were used for documentation, monitoring and database maintenance (see Annex 3).

## **6.5. CONCLUSION OF INPUTS**

EUCAMP budget for Phase III was 3.3 billion TSh, the contribution from GOT being 0.25 billion TSh, 1.75 billion TSh from GOF, and 1.3 billion TSh from the EU.

Fund flow from the GOF was appropriate, on time and according to the main budget until the middle of the fourth year, after the pooling out with the EU Fund. Coordination of the fund was basically appropriate based on the financial regulation of the donor country and financial agreement between GOT and GOF. A total sum of 3,706,414 Euros was spent during Phase III.

The EU remitted a total sum of 1,444,584 Euros for the implementation of the EC-Rider. The disbursement of funds from the EC was somehow bureaucratic and not always on time. Procurement through the EC-Rider was not adequately covered due to the delay of funds release. For the same reason, the EU could not release all budgeted funds and, consequently, some procurement including tractors and motorbikes was not effected.

The direct contribution from GOT was 82 million TSh. The rest of the funds were appropriated through the paying of salaries, formal education and other personal emoluments of the programme staff as per contract. The flow of funds from the GOT was at its highest in the fourth year of the programme period. The GOT, however, was unable remit the amount equivalent to that budgeted as its contribution.

## **7. ACTIVITIES AND OUTPUTS**

### **7.1. RESULT 1: MAB AND MANAGEMENT OF EAST USAMBARA BIOSPHERE RESERVE**

#### **Sub Results**

- The East Usambara Biosphere Reserve contributed to the conservation of landscapes, ecosystems, species and genetic variations, while fostering rural economic, ecologically and culturally sustainable development in the area.
- Capacity to complex environment and development issues through education, technical training and public awareness was built.
- Institutional support.

#### **Planned Activities**

- Prepare and submit application forms
- Awareness raising
- Develop management strategy for MAB and East Usambara Biosphere reserve
- Develop poverty reduction strategy for East Usambara biosphere reserve in coherence with national poverty reduction plans
- Update EUCAMP gender strategy in relation to national and MAB gender
- Support training
- Conduct management, steering and supervisory board meetings
- Update inventory of EUCAMP equipment
- Procure vehicles tractors and staff working gears

- Provide salaries and terminal benefits to temporary employees
- Support office by supplying fuel, vehicle maintenance and house renovations
- Conduct auditing and evaluation

### **Activities Carried Out and Outputs**

The East Usambara area was declared a Biosphere Reserve under the UNESCO Man and Biosphere (MAB) Programme in November 2000. In order to raise awareness of the stakeholders, the Village Conservation and Development Committee (VCDC), the ANR Advisory Board, EUCAMP Steering Committee and Supervisory Board were informed on the new conservation status of the East Usambara area.

A network for integrating existing management systems (nature reserve, village forestry, farm forestry and catchment forestry) was established. Support for research, monitoring and education and information exchange was provided in order to achieve management and conservation goals of East Usambara Biosphere Reserve.

Biodiversity conservation in the East Usambaras improved by increasing protected areas through reserving more forest areas under the Central Government forest reserve and VFRs. Efforts were also made to reserve Derema Proposed Forest Reserve and Wildlife Corridor to reduce forest fragmentation.

EUCAMP started community based forest management (CBFM) such as JFM and village forestry in order to involve local communities in forest conservation and to also reduce the government workload in forest conservation.

EUCAMP developed a poverty reduction strategy for East Usambara Biosphere Reserve in coherence with the national poverty reduction plan. This was accomplished by commissioning a short-term local consultancy in collaboration with the FBD to study the possible ways of reducing poverty in villages adjacent to the forest reserves in the MAB area.

A consultant was commissioned to establish gender strategy for EUCAMP, in relation to national gender strategy. EUCAMP staff then received training on gender issues. In order to increase the capacity of staff, EUCAMP enabled two personnel to receive Master's Degrees, two Bachelor Degrees, three Diplomas, and two Certificates. The staff also attended short courses on tropical ecology (one person), plants conservation techniques (one person), computer course (two persons), English course (two persons), forest health monitoring (one person), PRA for JFM (11 staff), orientation on policy issues and programme activities (23 staff). In order to learn about community participation and the promotion of eco-tourism, 25 EUCAMP staff attended study tours to Zanzibar, Mtwara, Lindi, Arusha, Kilimanjaro, Morogoro, Iringa Tabora and Singida (see Annex 6).

In order to ensure smooth and efficient implementation of programme activities, EUCAMP conducted three Supervisory Board, seven Steering Committee, and seven Management Team meetings, as planned. Also, regular Management Team meetings were conducted almost every week.

Procurement of necessary equipment was done to ensure smooth implementation of activities, including eight vehicles, ten motorbikes, 33 bicycles, field equipment, staff uniforms, and office utilities. EUCAMP daily activities were supported through vehicle running, office and field staff houses renovation, bill payment for electricity, water,

communication, and other services. A list of EUCAMP purchased equipment was updated as planned to enhance handing over of the project equipment to the GOT (see Annex 3).

EUCAMP temporary and permanent employed staff was paid salaries accordingly. Terminal benefits for the temporary employees were also paid as per labor regulations.

### **Deviations**

- EUCAMP gender strategy was not updated due to time and financial constraints
- EUCAMP two tractors and two motorbikes were not procured due to delay in the release of EU funds
- Efficiency in implementation of activities was reduced by a vehicles re-registration exercise where by all EUCAMP vehicles were parked for three months
- Some of the recommendations of the review mission team affected the implementation of some activities, most prominently the reservation of the Derema Proposed Forest Reserve and Wildlife Corridor
- Robbery, which occurred at EUCAMP head quarter's office, affected the budget as extra costs were incurred for the employment of a security group

## **LESSONS LEARNED AND RECOMMENDATIONS**

### **Capacity Building**

EUCAMP built up capacity of its staff at all levels – forest assistants and forest officers receiving Certificates, Diplomas, Bachelor's and Master's Degrees. Capacity building was also conducted to the local communities adjacent to forest reserves, nature reserve and VFRs through training and extension on topics such as nurseries, seeds collection, agro forestry, soil and water conservation, improved wood stoves and forest management planning.

### **Collaboration**

Collaboration with other conservation institutions and stakeholders played a big role in the achievement of project objectives. Collaborators included local communities, District Councils of Muheza and Korogwe, TRCFO, Tanzania Forest Research Institute (TAFORI), Frontier Tanzania, Sokoine University of Agriculture, University of Dar es Salaam, Tanzania Forest Conservation Group, 4H Tanzania, Mlingano Soil Conservation, and National Institute for Medical Research.

### **Technical Assistance**

EUCAMP received two technical advisors during phase three of the Project – Chief Technical Advisor (CTA) and Social Forestry Advisor (SFA) – who worked closely with and advised programme management team on achieving programme goals.

### **Institutional Support**

EUCAMP was able to procure most of its equipment and working gear, such as vehicles, motorbikes, bicycles, uniforms and other daily office consumables.

### **Financial Support**

EUCAMP received financial support from the Governments of Tanzania and Finland and the European Union. The GOT delayed the releasing of counterpart money as per agreement; this delayed implementation of catchment forest activities. Also, bureaucracy failed in the releasing of EU funds and caused the failure in procurement of EUCAMP some tractors.

## **7.2. RESULT 2: VILLAGE FOREST RESERVES AND FARM FORESTRY CONCEPTS EXTENDED TO VILLAGERS AND OPERATIONALIZED**

### **Sub-results 2.1 & 2.2: Facilitate Establishment of VFRs and Preparation of VFR Management Plans**

#### **Planned Activities**

- Raise awareness of the villagers in the 11 villages having a VFR or interested in the establishment of a VFR
- Border survey and map production for the three proposed VFRs (Kizingata, Kizee and Mfundia)
- Follow-up of registration of four proposed VFRs
- Facilitation of formulation of simple village forest management plans and by-laws for eight VFRs

#### **Activities Carried Out and Outputs**

Introductory meetings on forest policy on specific issues of participatory forest management were done in 11 villages, namely Hemsambia and Vuga (jointly managing Mpanga VFR), Mgambo Miembeni (Handei proposed VFR), Zirai (proposed Kizingata VFR), Misozwe and Mwarimba (jointly managing proposed Kizee VFR) and Gombero, Makangara, Mkwajuni, Kijango and Makumba villages (proposed Mfundia VFR). Mfundia is divided into four VFRs, each of them managed by one village, except Makangara and Mkwajuni that jointly manage the forest area within their boundaries.

Simple participatory forest assessments were conducted in Handei, Kizee and Kizingata proposed VFRs, a participatory forest inventory was conducted in Mfundia proposed VFRs, and a Biodiversity Survey undertaken in Mpanga VFR. Border survey and mapping was done for the six VFRs (Kizee, Kizingata and Mfundia VFRs).

Facilitation of the formulation of simple village forest management plans and by-laws for eight VFRs was completed

List of trees, shrubs, herbs and animals found in the village forest was obtained for Handei, Kizingata and Kizee proposed VFRs and attached to the management plans. For Mpanga VFR the biodiversity survey report by Frontier Tanzania is available (EUCAMP Technical Paper 51). Because the proposed Mfundia VFR has a fairly large area (about 800 ha) and could be used for timber production, a participatory forest inventory was conducted and the results are presented in the EUCAMP Technical Paper 60. The data from the simple participatory forest assessment or inventory or the biodiversity survey was utilized as a basis for decision making on the wise use of forest resources. The information also enabled the planning teams to zone their forest (for example in Handei village forest).

A participatory forest border survey was done and a map produced at the FBD survey section in Dar es Salaam for Kizingata (6.2 ha, Jb No. 2436), Kizee (39.4 ha, Jb No. 2437). The survey and map production for Mfundia forest VFRs was contracted to the Land Office of the Korogwe District Council so as to capacitate the district for survey and map production of village forests. Proposed Mfundia VFR was an example so that if need arises for other VFRs to be surveyed, the district will be able to do the work. Through VFM, a total of 1,049 ha were secured by villagers from general land forest.

Management planning process was facilitated for eight VFRs (Mpanga, Handei, Kizingata, Kizee and the four VFRs in Mfundia). Management plans and by- laws were formulated by representatives from the village (planning teams selected in the village assembly). Management planning process was completed at the village level for Mpanga, Handei, Kizee and Kizingata VFRs and the draft management plans and by-laws were sent to the District Council for final approval.

Village forest committees are in place for managing Mpanga, Handei, Kizingata and Kizee VFRs and training was conducted for Kizee forest committee.

Facilitation of the Kizee and Mfundia VFR exercises was handed over to Muheza and Korogwe District Councils, respectively. A model for a contract with the District Council was prepared (EUCAMP Technical Paper 66).

A facilitation tool for the preparation of a PFM plan and by-law, and tools for monitoring the progress of participatory planning were developed. Lessons learned from the PFM planning are documented in the EUCAMP Technical Paper 61.

### **Deviations**

- The gazettement of six new forest reserves indicated in the project document was not accomplished because in the new forest act (though not yet effected), gazettement of a VFR can only be done after three years of the initial registration of the VFR at the District Council. Therefore, effort was made to register the VFRs at the district level. Even though the registration was discussed several times with the DFOs of the Muheza and Korogwe District Council, no administrative procedures were taken to establish a VFR registry. The registration should only be a formality after the approval of the VFR management plan and by-law by the District Council.
- The Land Office of the Korogwe District Council failed to produce the map for the Mfundia VFRs. The exercise was to be ready by the end of May 2002. First draft of the map was not received until August 2002, and it had several mistakes and discrepancies. In spite of several meetings on the issue and strong follow-up by EUCAMP, the Land Office did not complete the task.
- Management planning process was not completed for Mfundia VFRs by the end of November 2002 as agreed in the agreement between EUCAMP and the Korogwe District Council. Drafts for the management plans and by-laws are ready, but still need to be finalized at the village level, for example by including the data and conclusions from the participatory forest inventory, which was conducted in August 2002.

### **LESSON LEARNED AND RECOMMENDATIONS**

Local communities are very interested in managing their forest resources if the initial idea originates from them after rising awareness. The training of villager / communities to manage their forest resources should be the next step after the community realizes the need for managing the resources. This includes facilitating the preparation of a proper management plan and the formulation of a by-law. Continuous training and support to the implementation of the VFR management plan and adequate follow-up for every step is also very important.

The concept of ownership, powers, responsibilities and benefits in forest resource management are the basis for proper management of the resources. When villagers

understand that the forest resources are theirs, they are able to control unwise and improper uses by themselves through the use of the simple forest management plan and the by-law they have formulated.

In small VFRs with the main objective of conserving a sacred forest, most of the activities are limited and very few forest uses are allowed ( as in Kizingata and Mpanga). In the proposed Mfundia VFRs villagers very strongly emphasized the potential for timber harvesting. In order to define sustainable harvesting schedules, a simple participatory inventory was important. In Handei VFR (156 ha) villagers came up with the idea of zoning the forest for proper management.

Capacity building at the district is very important on the PFM issues. This was obvious when follow-up was made and most of the villagers / planning teams seemed to lack a proper initial base on awareness. This particular incidence indicates limited capacity of facilitators to impart required knowledge to the villagers at the right time. Facilitators need to listen, advice accordingly and share ideas concerning the forest resource management. No single facilitator knows every issue and sometimes the consultation for proper advice and authority is necessary. This is because PFM needs integration of issues. The incapacity was obvious when the Land Office failed to produce the map in time.

It can be difficult to deal with two different organizations when there is no direct chain of command. This was obvious when coordinating the Mfundia VFRs activities, where there existed hidden conflicts between the DNRO and DFO. This brought delays of implementation of the Mfundia activities and was also seen when EUCAMP sometime had to push too much though it only had a follow-up and advisory role.

**Sub-result 2.3: Capacity Building of Village Forest Committees and Women's Groups**  
**Sub-result 2.7: Awareness rising on PFM and East Usambara Biosphere Reserve**

**Planned Activities**

- Study tour to Duru-Haitemba VFR in Babati for forest committee representatives.\
- Farmer-to-farmer exchange visits to VFRs within the programme area
- Training of forest committees and women groups on bookkeeping, accounts and data collection
- Three divisional and two district level workshops on PFM and the East Usambara Biosphere Reserve

**Activities Carried Out and Outputs**

Two farmer-to-farmer exchange visits to VFRs within the programme area were conducted. 15 village forest committees were trained on the implementation of the forest management plan and by-law, including bookkeeping, accounting, reporting etc. (11 committees for JFM, and four committees for VFR). Two district level workshops were conducted to councilors and technical staff of the District Councils on PFM and the East Usambara Biosphere Reserve

**Deviations**

- Study tour to Duru-Haitemba and divisional level workshops on PFM were cancelled due to financial constraints
- The training of nine village forest committees (seven VFRs and two JFMs) and women groups was not conducted due to time and financial constraints
- Some farmer-to-farmer exchange visits on VFRs were not conducted due to slow performance of activities in the Mfundia VFR planning exercise

**LESSONS LEARNED AND RECOMMENDATIONS**

Training is the best way of empowering local communities to manage resources properly. Therefore though it is costly should not be ignored since its impact is significant.

**Sub-result 2.4: Promote Appropriate Agro Forestry****Planned Activities**

- Support on-farm nursery establishment
- Advice on tree planting
- Advice on tree pruning
- Conduct tree survival assessment

**Activities Carried Out and Outputs**

Training on nursery establishment and management and tree planting was conducted in 19 villages in ANR and in 31 villages in the Longuza, Maramba and Kilangangua field stations. In addition to technical assistance, the programme supplied individual farmers, women groups, other groups, schools and other institutions with tree seeds and some nursery materials. Cuttings and seedlings of cinnamon and black pepper were also supplied in eight villages. Technical assistance was given on growing of other spices and fruit trees.

Training on tree pruning was conducted in 18 villages to 148 people (24% women). Assessment on the survival of planted trees was conducted in 2001 for trees planted in 1999 and in 2000, and in 2002 for trees planted in 2001

Seedling production in village nurseries during 2000 – 2002 in the ANR is presented in Table 4 and in Longuza, Maramba and Kilangangua field stations in Table 5. In 1999 at least 104,000 seedlings were produced in village nurseries (data available only from two field stations). Thus, at least 880,000 tree seedlings and 124,000 seedlings of spices and fruit trees have been raised in village nurseries in the programme area in phase III. Seedlings of 14 different tree species were grown, the most common being *Grevillea robusta*, *Tectona grandis* and *Cedrela odorata*. Spices and fruit tree species included cinnamon, black pepper, clove, coffee and lemon.

**Table 4**  
SEEDLING PRODUCTION IN VILLAGE NURSERIES IN AMANI NATURE RESERVE

Year	# of Villages	# of Nurseries	# of Seedlings	
			Trees	Spices & Fruit
2000	–	–	359,025	6,250
2001	19	144	141,043	89,163
2002	15	79	48,268	24,603
<b>Total</b>	<b>34</b>	<b>223</b>	<b>548,336</b>	<b>120,016</b>

**Table 5**  
SEEDLING PRODUCTION IN VILLAGE NURSERIES IN THE LONGUZA, MARAMBA AND KILANGANGUA FIELD STATIONS

Year	# of Villages	# of Nurseries	# of Seedlings	
			Trees	Spices & Fruit
2000	13	37	68,650	–
2001	27	113	95,163	1,988
2002	29	100	63,757	1,500
<b>Total</b>	<b>79</b>	<b>250</b>	<b>227,570</b>	<b>3,488</b>

#### Deviations

- The number of planted trees and their survival rate are presented in Table 6. Survival assessment of trees planted in 2002 will be conducted in 2003. When compared to the seedling production, the number of planted trees is much smaller – especially in the ANR. Some of the raised seedlings died before planting, and some seedlings remained at nurseries as leftovers. In some cases (for example in 2000 in the ANR), a number of seedlings from on-farm nurseries had been sold to other villages outside the programme area and to private companies such as sisal estates.

**Table 6**  
RESULTS OF PLANTED TREES AND TREE SURVIVAL ASSESSMENT  
(NOT INCLUDING SPICES AND FRUIT TREES)

Year	Villages in Amani Nature Reserve		Villages in Longuza, Maramba & Kilangangua	
	# of Trees Planted	Survival %	# of Trees Planted	Survival %
1999	10,702	78	23,785	64
2000	28,001	92	31,591	64
2001	57,943	86	87,558	72
2002	22,000	–	77,857	–
<b>Total</b>	<b>118,646</b>	<b>–</b>	<b>220,791</b>	<b>–</b>

## **LESSONS LEARNED AND RECOMMENDATIONS**

Local communities are very willing to raise seedlings and plant trees on their farms but often lack technical knowledge. Assistance on seedling production should continue in order to reduce pressure on natural forests. Tree planting also contributes to poverty reduction.

Material support to nursery establishments should primarily be targeted to villagers planning to plant trees on their own farms, as markets to sell seedlings are very limited. Close follow-up of tree planting is needed to avoid wasting of seedlings.

The assistance should primarily be targeted to villages surrounding ANR and villages involved in joint management of catchment forest reserves. Technical assistance should emphasize the collection and using of locally available seeds and nursery materials in order to reduce dependency on external support.

The big difference between the number of seedlings produced and planted can only partly be explained by reasons such as selling or the dying of seedlings. Field officers should be more accurate with the statistics and verify data provided by field assistants, as probably the major reason for the discrepancies is careless record keeping.

### **Sub-result 2.5: Soil and Water Conservation Practices**

#### **Planned Activities**

- Train on soil and water conservation practices
- Establish demonstration plots
- Identify contact farmers
- Conduct a study tour for farmers

#### **Activities Carried Out and Outputs**

524 individual farmers (36% women) were trained on soil and water conservation techniques – training was also conducted for primary schools students. Contact farmers were identified through evaluation, to be planted on contour of farmers using contours.

A total of 159 adopters in soil and water conservation on measures are present in the EUCAMP area. Also, nine primary schools in the EUCAMP area have established a soil and water conservation demonstration plot. The total area under contour farming, however, remains very small at only 6.8 ha (see table below).

**Table 7**  
ADOPTION OF SOIL AND WATER CONSERVATION PRACTICES

Year	Before 1999		In June 2002					
	# of Villages	# of Adopters	# of Villages	# of Farmers	% of Women	Area ha	# of Schools	Area ha
Amani Nature Reserve	4	48	6	77	36	30.0	3	4.7
Longuza, Maramba & Kilangangua	1	5	10	82	46	17.2	6	2.1
<b>Total</b>	<b>5</b>	<b>53</b>	<b>16</b>	<b>159</b>	<b>42</b>	<b>47.2</b>	<b>9</b>	<b>6.8</b>

#### Deviation

- Study tour for farmers was not done due to budget constraints.

#### LESSONS LEARNED AND RECOMMENDATIONS

The adoption of soil and water conservation measures is not very promising even though many farmers were trained. Only about a third of the number of farmers trained has started to practice the trained skills. Farming lands in the East Usambaras are often at fairly steep slopes and need special attention on soil protection. As such, more training on the issue is still needed. An option could be that soil and water conservation measures are included in the village by-law.

#### Sub-result 2.6: Development and Promotion of Alternative Options to Forest Resources

##### Planned Activities

- Train to construct fuel saving stoves
- Train and support beekeeping
- Train and support fish farming
- Train on using mud bricks in house construction

##### Activities Carried Out and Outputs

EUCAMP facilitated and supported interested farmers in training of how to construct fuel saving stoves, beekeeping, and fish farming and also supported farmers in two villages in ANR with moulds for training on using mud brick. The numbers of the farmers trained are in Annex 6.

There are now 974 households, which have constructed and are using fuel saving stoves in the EUCAMP area. Most of them have started the practice during Phase III of EUCAMP, which facilitated training of 674 people (73% women). The fuel-saving stoves were easily and cost-effectively spread through the Training of Trainers (TOT) technique, whereby the trained farmers are used as trainers in other villages. The technique has also spread within villages as more people have the stove than were initially trained by EUCAMP. Especially women are very interested in the improved stoves. Using them reduces their workload and

keeps the kitchen clean. Most optimistic users claim about 50% savings in the energy consumption. Consequently, the effect on saving forest resources is very important.

**Table 8**  
ADOPTION OF FUEL SAVING STOVES

Year	Before 1999		In June 2002			
	# of Villages	# of Adopters	# of Villages	# of Households	# of Schools	# of Other Institutions
Amani Nature Reserve	6	107	17	530	1	11
Longuza, Maramba & Kilangangua	0	0	21	444	6	0
<b>Total</b>	<b>6</b>	<b>107</b>	<b>38</b>	<b>974</b>	<b>7</b>	<b>11</b>

Adoption of beekeeping is also encouraging as an increase of beekeepers / adopters during this four-year period was observed. There are now 100 beekeepers in 22 villages of which (4% are women). There are altogether 737 beehives. Also, six groups / schools have 93 beehives. EUCAMP assisted with 29 modern beehives for demonstration purposes. Beekeeping is an activity that is not harmful to the environment.

**Table 9**  
ADOPTION OF BEEKEEPING

Year	Before 1999		In June 2002					
	# of Villages	# of Adopters	# of Villages	# of Farmers	% of Women	# of Hives	# of Schools	# of Hives
Amani Nature Reserve	6	25	13	66	6	207	2	26
Longuza, Maramba & Kilangangua	6	39	9	34	0	530	4	87
<b>Total</b>	<b>12</b>	<b>64</b>	<b>22</b>	<b>100</b>	<b>4</b>	<b>737</b>	<b>6</b>	<b>113</b>

134 adopted fish farming (1% were women (see the table below). The adopters altogether have 147 fishponds, seven of them belonging to groups / schools.

**Table 10**  
ADOPTION OF FISH FARMING

Year	Before 1999		In June 2002					
	# of Villages	# of Adopters	# of Villages	# of Farmers	% of Women	# of Ponds	# of Schools	# of Ponds
Amani Nature Reserve	8	47	13	102	2	108	3	4
Longuza, Maramba & Kilangangua	1	32	1	32	0	32	2	3
<b>Total</b>	<b>9</b>	<b>79</b>	<b>14</b>	<b>134</b>	<b>1</b>	<b>140</b>	<b>5</b>	<b>7</b>

### LESSONS LEARNED

Having alternatives to forest resource use is very vital and farmers adopt easily if the alternative has a positive impact on daily life. Fish farming and beekeeping are also income-generating activities. Fish from fishponds also provides a substitute to protein as opposed to having to hunt wild animals from the forests. Technical advice, however, is very important for better yield.

### Sub-result 2.8: Production of Extension Material

#### Planned Activities

- Production of a calendar for 2000, 2001 and 2002
- Production of three booklets in the series of “Tales from the Forest”
- Distribution of extension materials produced by the FBD and other organizations

#### Activities Carried Out and Outputs

A calendar was produced for 2000, 2001 and 2002 and 10,000 copies were distributed each year to farmers, government offices and collaborators. The topics of the calendars were the Protection of Indigenous and Rare Species (2000), Conservation of Water Sources (2001) and Alternatives to Forest Products (2002).

Three booklets in the series “Tales from the Forest” narrated by local elders were produced and a total of 20,000 copies were distributed to primary schools.

A manual on improved stoves construction and maintenance was produced. A reprint of 2,000 copies of a fire prevention poster produced in Phase II of EUCFP was taken and distributed to village leaders and institutions.

Copies of a booklet on the use of Neem tree (*Azadirachta indica*) in the agriculture produced by the Urban Vegetable Promotion Project were procured and distributed to extension staff. Copies of booklets on the new forest policy and PFM produced by the FBD were distributed to village governments and village forest committees. 400 copies of the booklet on

environmental education produced by Frontier Tanzania were distributed to primary schools and village leaders.

### **LESSONS LEARNED AND RECOMMENDATIONS**

Extension materials are expensive to produce, but very important to support the extension messages to communities.

## **7.3. RESULT 3: MANAGEMENT OF NATIONAL CATCHMENT FOREST RESERVES IMPROVED THROUGH REDUCTION OF FOREST FRAGMENTATION AND JOINT FOREST MANAGEMENT SYSTEMS**

### **Sub-result 3.1: Forest Protection, Re-survey and Variation of Forest Reserves Boundaries**

#### **Planned Activities**

- Forest protection – forest patrols and fire line maintenance
- Forest enlargements (Kwamtili estate forests and SHIWIMU area)
- Re-surveys and variation of the existing forest reserves

#### **Activities Carried Out**

##### **Forest Patrols**

Forest protection is one of the most important activities in ensuring the security and sustainability of the forest resources. The objective of this major activity is to take short and long-term measures against illegalities, such as forest fires, and any other calamities threatening the existence of forest resources.

The programme staff, together with local communities neighboring the reserves, had conducted patrols in and outside the reserves. In other areas with JFM intervention, such as the Mtai and Manga forest reserves, the forest committees did the patrols jointly with the Programme staff.

Findings in this activity show that, after involving the local communities, there is a decline in illegalities in the East Usambara forests compared to the past. This is especially true within the forest reserves. The most prominent illegalities noticed during the period were the cultivation of *Cannabis sativa* in the Nilo forest reserve and mining in the Mtai forest reserve, (though the latter is no more a threat). Other incidences were pole cutting, curving and lumbering.

##### **Prevention of Forest Fires**

Another activity to consolidate the protection is the placement and maintenance of fire lines to prevent fires expanding from outside the forest reserves; forest fires are the most destructive agent to the East Usambara forests.

Annual fires normally occur between July – September, and, most damagingly, January – March, which is the driest period of the year. Normally fire lines are the same as forest boundaries. Because of these factors and in order for the fire lines to be effective, the activity is supposed to be carried out twice. Because of financial constraints, however, it was

sometimes conducted once and some times left incomplete; out of the planned 371 km to be maintained for the whole period, only 64 km (~17%) was done. As a result, 25 incidences of forest fire were reported, destroying about 854 ha of the forest, and 7,397 border trees burned and died.

### **Re-survey and Variation of Forest Reserves**

The variation order for Mtai and Nilo forest reserves was done in 1999 with order GN. Nos. 286 and 287 of October 10, 1999. Mlungui Forest Reserve was also officially gazetted on the GN. No. 285 of October 10, 1999, while the re-surveying of Bombo East I and II was done in 2000 (738 ha was reduced from the previous area) and data with minutes from the villages for the variation was sent to FBD for further actions.

### **Deviation**

- Inclusion of Kwamtili estate forest area (about 700 ha.) and Shiwimu forest area (about 800 ha) in Kwamgumi Forest Reserve and Segoma Forest Reserve, respectively, was not done because of financial constraints. The objective was to combine the Segoma, Bamba Ridge and Kwamgumi forest reserves combined into one forest block

## **Sub-result 3.2: Border Demarcation and Management**

### **Planned Activities**

- Forest border maintenance
- Border tree planting
- Forest road maintenance
- Beacon installation
- Crop slashing in the forest reserves

### **Activities Carried Out**

#### **Border Maintenance**

A well-managed forest begins with a clear and well-demarcated forest border and a known area. The East Usambara forest reserves were surveyed and demarcated and border maintenance was deemed vital to the maintenance.

The total border length of catchment forests needing weeding and slashing was 842 km (of which 584.3 km, or 69.4%, was actually maintained) and the maintenance was supposed to be done twice a year. The border maintenance has three main purposes: (1) to make the border clear and visible to avoid encroachments; (2) to weed out planted trees for demarcation and for better growth; and, (3) to ensure that the weeded border acts as fire line during the fire season.

#### **Border Tree Planting and Beacon Installation**

Forest border demarcation by trees and beacons had been done to identify forest boundaries and hence reduce the chances of encroachment into the forests, and therefore reduce unnecessary conflict with the local communities.

Out of the planned 272 km, a total of 234.5 km of forest border was planted with trees. Most of the planted trees, however, have been destroyed by annual fires. This causes this activity

to be repeated every year. 199 beacons (about 28% of the planned amount) were installed on the corners of the forest border. 343 beacons were re-numbering after the variation of the forest borders.

#### **Deviation**

- Construction and installation of beacons to permanently demarcate the border was not completed because of financial constraints

### **Sub-result 3.3: Systematic Procedures Developed for Joint Forest Management**

#### **Planned Activities**

- Finalize management plans for Kwamarimba and Manga forest reserves
- Conduct meetings for JFM
- Conduct PRA for JFM
- Prepare management plans and by-laws for JFM for Mtai and Manga
- Zonation and demarcation of the village management areas for Mtai and Manga forest reserves
- Farmers study tour to Ufiome
- Prepare and sign management agreements for JFM for Mtai and Manga

#### **Activities Carried Out**

It is directed in the National Forest Policy (1998) that “in order to improve forest conservation and management and to ensure equitable sharing of benefits amongst all stakeholders, joint management agreement between the central government, specialized executive agencies, private sector or local governments, as appropriate in each case, and organized local communities or other organizations of people living adjacent to the forest will be promoted. The local communities will be granted appropriate user rights for forest produce and forests will be managed in accordance with approved management plan.”

To fulfill the policy directions, the programme had initiated the JFM in two forest reserves in the East Usambaras Muheza District, namely the Mtai Forest Reserve which is neighbored by eight villages and situated in the Maramba division and the Manga Forest Reserve, neighbored by three villages, in Ngomeni division.

Participatory Rural Appraisal (PRA) was conducted at the villages adjacent to Mtai. Three workshops were conducted to introduce the JFM concept to the village leaders and representatives, the Ward and Divisional leader. This was later followed by village meetings on the same subject. The planning for the VFM areas for the two forest reserves was done by the planning teams nominated among the communities (villagers) and facilitated by the programme staff.

Eleven JFM management plans and by-laws for eleven villages and management agreements for the two forest reserves have been developed and sent to FBD for comments and, later on, for signing.

**Deviations**

- Management plans for Kwamarimba and Manga were not done due to the new approach towards JFM. As a result, efforts were concentrated on Matai and Manga forest reserves, starting with management plans at the village level
- Study tour of farmers to Ufyome was cancelled due to shuffling of programme priorities as a result of financial constraints

**Sub-result 3.4: Gazettement and Management of Proposed Derema Forest Reserve and Corridors in Place****Planned Activities**

- Conduct social impact assessment
- Conduct meetings with stakeholders
- Forest border survey, demarcation and mapping
- Crop assessment and compensation

**Activities Carried Out**

One of the activities given priority in Phase III of EUCAMP was the gazettelement of the Derema proposed forest reserve and its corridors. This is important because Derema is a link between northern the forest blocks of the East Usambaras and the ANR in the south. The link will play a big role in reducing fragmentation, a threat to the East Usambara forests and the Eastern Arc as a whole.

The procedure started by conducting a Social Impact Assessment (SIA) which covered five villages surrounding the Derema proposed forest reserve (Kambai, Kwezitu, Msasa IBC, Kisiwani and Kwemdimu). Two workshops were followed the SIA, one a feedback from the assessment results, the other the mid-term review mission report.

Forest border surveys and mapping were conducted, showing that the Derema proposed forest reserve and its corridors would have an area of 956 ha, with a forest boundary of 27 km. During the survey work, slashing of crops to open up the border was necessary, forcing the programme to conduct valuation and compensation of the slashed crops before the inbound crop assessment as a precondition from the peasants. The amount of TSh 114,355,908 was paid to 162 affected peasants. These activities were preceded by a number of meetings with the local communities in the villages.

The inbound crop assessment was conducted, and findings showed that there are 1,128 peasants who will be affected in the five villages. The compensation amount demanded was TSh 3,361,879,633.60 (USD 3,000,000).

**Deviation**

- In-bound crop compensation for Derema was not effected because of time and financial constraints. Crop counting and valuation was completed, pending the appraising of the valuation report

## LESSONS LEARNED

It has been observed that involvement of the local communities in managing the forest resources is a gradual learning process. In order for this concept to be understood and accepted by the communities, patience is required.

Where JFM is being practiced, people are willing to devote their time in forest conservation. They do expect, however, to get direct benefits from the forest resources (such as sawn timber). And in reality, with a sensitive area like the East Usambara forests, there is very little to share so far, which hinders a full, motivated participation of the local communities. For this reason the draft management plans proposed that the FBD continue paying for a share of forest management activities (such as border maintenance and enrichment planting) from the Eastern Arc Trust Fund, the villagers then taking the responsibility of protecting the forests by, among other things, patrolling and controlling the collection of minor forest products.

Planning process, preceded by PRA, is easier to conduct by the community planning team than one without a PRA first, as the exercise sensitizes the local communities on the PFM concept as well as increases sense of ownership of the resources.

Most of the forest reserves in the East Usambaras are neighbored by more than two villages, and for better management, the reserves are partitioned into VFM areas. Partitioning these areas is guided by the administrative boundaries of the adjacent villages. It was realized, however, that most of the villages in East Usambara are not surveyed and don't have maps. This situation caused some problems on agreeing where the management border should be in the forest reserves, followed by several meetings for discussion and therefore increased the number of days of the JFM exercise.

One of the problems experienced in PFM is the time frame that is set to accomplish certain tasks. It is known from the programme / project point of view that each activity should be given a specified period to be implemented. But for participatory approach this is not always true, as the local communities also have their own activities and priorities on their farmland. These need to be implemented concurrently with the conservation activities and in some communities forestry is not a priority.

It has been realized that where there is strong, trusted leadership in the village, there is always a higher degree of participation and commitment in forest management.

### **7.4. RESULT 4: MANAGEMENT OF ANR IMPROVED TO SUPPORT ECO-TOURISM, RESEARCH AND TRAINING**

#### **Main Activities under Amani Nature Reserve**

The aim is to ensure management approaches developed and tested for nature reserves and have the nature reserve system expanded. To achieve this, the following activities were planned and implemented:

- ANR management plan implemented; ANR general management plan approved and implemented through out the programme period

- Management plan updated; not implemented due to fund shortage. (EC funds ended before the time of updating the plan)
- Identifying reserve areas for expanding the nature reserve systems in East Usambara; Nilo Proposed Nature Reserve was identified and a Biodiversity Survey completed
- Gazettement of new nature reserves in East Usambara; not implemented based on mid-term review mission recommendation (EUCAMP, 2001)
- FBD HQ establishes a nature conservation unit; not implemented as proposed, as there is only one nature reserve in Tanzania. Alternatively, the FBD agreed to include nature reserve under the Catchment and Mangrove Unit
- To encourage the FBD to create other nature reserves; ANR was used as a model in formulation of New Forest Policy and New Forest Act. Both spell out the category of protected area (nature reserves) and modalities of establishing them

#### **Main Activities under Eco-tourism**

- The objective is to ensure eco-tourism is developed and practiced in East Usambara as an alternative use of the forests, at the same time ensuring sustainability of conservation
- Identify areas of project support for eco-tourism development and support; ANR was selected and developed to support eco-tourism activities in East Usambara
- Identify collaborators and investors; a number of collaborators were identified and various investors were contacted to invest in tourism activities in ANR and East Usambara in general
- Include East Usambara in tourism master plan; ANR and East Usambara in general were included in the Tanzanian tourism master plan. A number of tourism guidebooks, including Lonely Planet, included ANR as tourism destination. The new tourism circuit of the coastal belt and the Eastern Arc Mountains gives high priority to Usambara Mountains
- Complete Amani facilities; ANR facilities for supporting tourism activities, including rest houses, the Information Centre, camping and picnic sites, conference hall and laboratory were developed and furnished
- East Usambara interpretative material prepared; interpretative materials for marketing tourism in East Usambara were developed. This includes installing signboards along the road from Muheza to Amani, production and distribution of the ANR fact sheets, production and distribution of the ANR trail guidebook, establishment of an attractive web site, production and distribution of Tanga tourism resource book, and production and distribution of the Usambara View

#### **Main Activities under Development of Amani Botanical Garden, Training and Research Centre**

- The theme is to develop the ABG as a tourism attraction and to make use of it, including circumscribed infrastructures for research and training.
- Transfer ownership of ABG to the FBD; not implemented due to complexity of land tenure and failure of relocating NIMR
- Prepare and implement general management plan for ABG; not done due to lack of expertise, failure of relocating NIMR, fund shortage and time constraints
- Centre for research and training at Amani formally created; partially implemented through approval of ANR general management plan. The issue of establishing a research centre was found redundant, however, as it would create a parallel structure and duplicate activities of TAFORI

- Develop training programs using acquired EUCADP facilities; implemented accordingly by renovating the conference hall, replicating EUCAMP library at ANR and procuring important training materials (such as a computer, an overhead projector and a slide projector)
- Feasibility study for NIMR relocation; completed and report produced
- Rehabilitate facilities acquired from NIMR; not implemented due to funds shortage
- Inauguration of Research and Training Centre by holding centennial workshop at acquired NIMR buildings; not implemented due to failure to acquire NIMR facilities

### **Outputs in the Amani Nature Reserve**

ANR was established during Phase II in 1997. Phase III aimed to ensure sustainable management of ANR. To achieve the main aim of establishing ANR, the following was implemented during Phase III:

- The ANR general management plan was finalized and approved by the ANR Advisory Board and the minister of Natural Resources and Tourism
- The ANR Conservator and the ANR Advisory Board members were nominated and the ANR Advisory Board inaugurated. The Conservator operationalized the ANR activities as an autonomous body including preparation and implementing ANR work plans
- The ANR Conservation Fund was operationalized to cover all recurrent expenditures. Sources of revenues were expanded and collaboration with the Tropical Biology Association (the main financier of ANR Fund) was strengthened by signing the Memorandum of Collaboration until 2005
- The ideas of establishing other nature reserves in Tanzania were adopted by the FBD. The ANR model was adopted in the New Forest Act (2002). FBD adopted nature reserves as an important part of conservation by expanding the unit of Catchments and Mangroves to cover nature reserve management

### **Deviations**

- The nature reserve system in East Usambara was not expanded as planned in the programme document as it was discouraged by the review mission recommendations
- An independent unit for nature reserves was not established at the FBD HQ instead, nature reserves management was kept under the Catchment and Mangrove Unit. This was though most applicable as there is only one nature reserve in Tanzania

### **Outputs in Eco-tourism**

The sustainability of the ANR and the activities of EUCAMP eco-tourism in the East Usambara Mountains were promoted through the following:

- Furnishing, displaying and recruiting staff for managing the ANR Information Centre at Sigi
- Marketing and networking eco-tourism in East Usambara was strengthened through participating in trade fairs, exhibitions, installation of signboards, and production and distribution of leaflets and brochures
- Recreational areas for visitors including camping and picnic sites were developed in Amani. These recreational areas are currently managed by the ANR but will be managed by the private sector in future

- To support eco-tourism, research and training, the facilities formally used by EUCAMP were handed over to the Ministry of Natural Resources and Tourism. These facilities include the buildings that are now used as the headquarters of ANR as well as the training centre
- For sustainability of tourism in the East Usambara Mountains, eco-cultural tourism was introduced by linking the tourism in ANR with a lively hood of surrounding local communities. The people were educated on how to promote their culture and traditions as part of tourist commodities. The handicrafts from local communities were marketed through the ANR

### **Deviations**

- Modalities for involving local communities were not fully developed due to lack of expertise and time. This was observed to be an over-ambitious expectation based on time, finances and expertise available. This activity was later delegated to the ANR for further action

### **Outputs in Amani Botanical Garden, Research and Training Centre**

It was planned for the ABG to be rehabilitated for research, training and tourism purposes. It was further envisaged that a centre for tropical forestry research and training be developed. To achieve this, the following was implemented:

- Feasibility study for relocating NIMR was conducted and budget presented to EUCAMP Steering Committee and Supervisory Board for approval and establishment of way forward
- Picnic sites were established in the ABG and some gaps within the garden were planted with endemic and rare tree species of East Usambara
- Linking ABG with other botanical gardens of the world, including the Kew Botanical Garden, the South African Botanical Garden and the Indian Bamboo Botanical Garden was done

### **Deviations**

- Management plan for ABG was not prepared due to financial constraints
- ABG was not rehabilitated based on approved management plan due to financial reasons
- Amani Ecological Training and Research Centre was not established due to failure of relocating the NIMR

## **7.5. RESULT 5: RESEARCH RELEVANT FOR FOREST CONSERVATION AND MANAGEMENT INCREASED, DISSEMINATION OF INFORMATION IMPROVED, AND MONITORING SYSTEMS RELATED TO CONSERVATION ACTIVITIES IMPROVED**

### **Sub-results**

- Research encouraged on priority topics
- Improved access to and dissemination of information
- Biodiversity surveys
- Monitoring systems in place

### Planned Activities

- Identify research collaborators
- Disseminate priority topics to researchers
- Encourage and provide logistical support to researchers.
- Management of agro forestry research trial in Emau
- Utilize research in forest management
- Improve library services and update database information (biodiversity and library)
- Procure additional documentation relevant to forest conservation and management
- Disseminate of programme information
- Conduct biodiversity surveys in selected forest reserves and prepare reports
- Train staff on database use to improve information accessibility
- Link database to biodiversity network
- Prepare and implement a monitoring plan and system

### Activities Carried Out and Outputs

Major research collaborators identified by the programme include Frontier Tanzania, University of Helsinki, Sokoine University of Agriculture, University of Dar es Salaam, ITC, Kent University (UK), TAFORI, and Mlingano – ARI. Others interested were individual researchers from various institutions in the USA, Sweden, Kenya, Tanzania (UCLAS, IDM and the SIT – Iringa / Arusha). The programme has strengthened collaboration with researchers in performing research studies in the area.

A total of 26 research studies, including contracted work to PhD and MSc programs, were conducted and some reports produced, usually in the form of theses and technical papers. Biodiversity assessment was identified as a priority research method and was contracted to Frontier Tanzania that had worked in the area since 1995. Biodiversity surveys were conducted to seven forest reserves (ANR, Nilo, Mlinga, Bombo I, Bombo II, Mgambo and Mpanga VFR) from 1999 – 2002. 11 (four pending during Phase II) biodiversity reports from 26 studies were completed and submitted to the programme. (Refer to Annex 5, Table 8)

Other useful studies conducted include birds, the impact of forest fragmentation to amphibians, on-going ecological monitoring, fungal effect on *Newtonia buchananii*, agro forestry experiment plot, dependence of local communities on protected forests as sources of non-timber forest products and its role in forest management, and community based eco-cultural tourism. Researchers who carried out these useful studies were provided with logistical support, including the use of computers and e-mail facilities, occasional assistance with transport, use of library and data acquisition, and counterpart staff when needed.

A library manual catalogue was developed to supplement the database. The library database was continuously updated and over 60 documents were added. Seven staff members received orientation training on the use of the library catalogue and others on the library database.

The programme improved information dissemination through e-mails, the usambara.com web site and distribution of hard copies of various research reports to researchers and other stakeholders. Relevant programme publications were distributed to forest stations for reference (Annex 8).

Five Tanga head office staff received orientation training on the use of biodiversity database. Biodiversity data was used in preparation of Mpanga, Manga, and Kwamarimba draft management plans as well as demarcation of utilization zones for ANR and the preparation of MAB zonation map. Various researchers utilized existing biodiversity data as baseline data for their studies. The programme continued to collaborate in collecting of hydrological and meteorological data. Three damaged hydrological stations were repaired by June 2000 and seven meteorological stations maintained and handed over to the Meteorological Agency in December 2001. The programme no longer supports the two collaborative activities.

The monitoring system of the programme was improved in terms of the internal monitoring of field activities, vehicle running and funds management. Forms were designed to monitor activities and databases for accounts and vehicles developed. Targeted activities were performed in relation to budget allocated. Impact of forest fragmentation and the density to birds was studied and a biodiversity monitoring test of procedures was conducted at Semdoe and Kwamgumi forest reserves and a report produced.

### **Deviations**

- Linking of EUCAMP database directly with other databases like the National Biodiversity database did not materialize because of the differences in the structure. There was an information exchange with the coordinator of the National Biodiversity Database on Zoological Data. Botanical specimens were held at the National Herbarium of Tanzania in Arusha
- Consultancy on development of a holistic monitoring database was not conducted; instead, the programme adopted simple reporting formats varying from field activities to running of vehicles and funds management
- The programme organized and conducted a biodiversity survey for Mpanga VFR, and biodiversity monitoring for Semdoe & Kwamgumi forest reserves. These were not previously planned but later regarded as useful

### **LESSONS LEARNED AND RECOMMENDATIONS**

Biodiversity surveys have laid down a baseline for long-term monitoring, forest management planning as well as setting priorities in conservation of the MAB reserve area and learning ground for Eastern Arc conservation. These surveys still produce new species – especially plants – to add to the East Usambara species lists.

Involvement of local communities through training in biodiversity inventory techniques is invaluable to the future protection of reserves because it results in increased awareness of biodiversity and the importance of reserve. Environmental education within local communities through workshops, school visits, and women group meetings have raised awareness about conservation and biodiversity issues in particular within local communities.

Capacity building to forest officers through on-the-job training has been successful and essential knowledge has been acquired to help officers to manage forest reserves. The programme has got two competent biodiversity experts (one botanist).

The involvement and participation of expatriate researchers has raised awareness internationally to the importance of the East Usambara for biodiversity.

Handing over collaborative activities has been a good experience to the programme, though the exercise should be performed on a step-by-step basis for better performance.

The impact of forests climatologically and to the hydrological cycle needs thorough and consistent data collection over a controlled study area for better analysis and comparison.

## **8. EFFICIENCY**

### **8.1. POLICY AND LEGISLATION SUPPORT**

The programme was strongly supported at the international, national, regional and district levels. Such commitment and moral support was the key factor in enabling the project to continue even after the big change proposed by the Review Mission. By fulfilling its financial commitment, especially after the closure of the EU Fund, the FBD had a major positive impact to the implementation of the programme. The awards by Metsähallitus to EUCAMP staff and by the Ministry of Foreign affairs in Finland to the key local community are good indicators of project success and efficiency. The Gold Medal attained at Expo 2000 by EUCAMP is another sign of the efficiency in programme implementation. Efficiency of the programme was increased further due to the frequent visit of national level politicians, including the President of the United Republic of Tanzania.

There was interference during the fourth year, caused by the change of registration numbers of programme vehicles. This reduced efficiency. The implementation of activities continued, regardless, due to strong collaboration between the TRCFO and the ANR. There was also a robbery that caused substantial deviation in the funds as increased security at the main office and other properties became necessary.

The main issue that affected the programme implementation was the mid-term review recommendation. Most affected areas were the planned expanding of the nature reserve systems, the management of the ABG and the process of gazettelement of the Derema Forest Reserve. Other factors were the EUCAMP budget the delay in the release of the EU Fund.

### **8.2. PROGRAMME ORGANIZATION STRUCTURE**

EUCAMP, being directly under the FBD of the Ministry of Natural Resources and Tourism, was able to implement its activities smoothly and most of the new programme innovations were assimilated to the national programs. The availability of the Steering Committee and the Supervisory Board made decision making easier and less bureaucratic. Programme implementation strategies were good enough to prevent crosscutting activities between the central and local governments and authority was adequately covered.

The organization structure for EUCAMP was formulated in such a way that it will ensure sustainability of programme activities after the phasing out of donor support. All activities will be implemented by the ANR and TRCFO. The TRCFO will use the buildings in Tanga and implement all catchment activities in East Usambara, outside the boundary of the ANR. The ANR will acquire all buildings and assets within its boundaries and implement all conservation-related activities within the ANR.

### **8.3. EFFICIENCY IN PLANNING, IMPLEMENTATION AND REPORTING**

Participatory work plans were prepared on time, based on the available resources, including donor commitments and GOT commitments. Implementation of plans of work for the first two years, excluding the bridging phase, was effective with most of the activities occurring as planned. The implementation of work plans for the third and fourth years was interacted with the Review Mission and, subsequently, the third year work plan was not fully covered. The formulation and implementation of the fourth year work plan was also quite different from the approved structure and strategies in the original EUCAMP document. Strategies were significantly changed based on the review mission's recommendations. Changes in the implementation strategy adversely affected the output and achievements of some of the immediate objectives of the program.

## **9. FULFILLMENT OF OBJECTIVES**

The long-term development objective EUCAMP was the contribution to the global and Tanzanian efforts to conserve biodiversity, in harmony with the needs of the local people. The main importance of the East Usambara forests is biodiversity conservation and as long as local the local communities need to co-exist with the forests and the population keeps growing, the development objective remains valid. It was observed during Phase III that the development objective needs to be set for a longer time period which explains the change in emphasis from “project” to “programme.” On the other hand, the East Usambara Biosphere Reserve was established in correlation with the development goal of EUCAMP.

EUCAMP substantially covered its immediate goal (programme purpose). Establishing the East Usambara Biosphere Reserve under the UNESCO MAB Programme is the way forward towards setting a long-term funding mechanism. EUCAMP also spearheaded the establishment of the Eastern Arc Trust Fund. Model management systems, including simple PFM plans for Mtai and Manga forest reserves and simple VFR management plans for Handei, Mpanga, Kizee, Kizingata and Mfundia were developed. Again, the establishment of the new VFRs has contributed to the increase of the protected forest area in East Usambara. Remittance of a 20% share from the ANR Conservation Fund to local communities and the documentation of step-by-step procedures on PFM are good indicators of the achievement of programme goals and purpose. Other indicators include the availability of Biodiversity Surveys and a reliable database.

## **10. SUSTAINABILITY**

The future of conservation of the forests in the East Usambara Mountains will depend on proper and appropriate approaches toward managing the forests in a sustainable manner. The sustainability of these important forests should focus on financial security, institutional framework and capable human resources.

During phasing out, EUCAMP has strived towards achieving the sustainability goal stipulated in the programme document.

### **10.1. COMPATIBILITY WITH THE NATIONAL POLICIES**

Tanzania has about 33.5 million ha of forests and woodlands. About 1.6 million ha of the total forested land area have been gazetted as catchment forest reserves. The East Usambaras is among these.

EUCAMP has implemented its activities in line with the National Forest Policy of 1998, which insists upon sustainable forest management both in forest reserves and on public land, enforcing compatibility with priority Tanzanian policy goals.

In the state forest reserve, the programme has practiced JFM which is the focus of forestry management in the country. On public lands the programme has sensitized and facilitated the local communities to establish VFRs to improve farm forestry for the sustainable use of forest resources. The exercises were done in conjunction with the new Land Act No. 4 and Village Land Act. 5.

### **10.2. INSTITUTIONAL FRAMEWORK**

The FBD implemented EUCAMP. At project level, it operated from at the TRCFO in collaboration with District Councils of Muheza and Korogwe as well as other stakeholders in the Tanga region. Some of the activities initiated by EUCAMP were handed over to the above district councils while support was provided by the programme. This objective was fully supported by the district councils at the end of donor support.

The programme implemented and supervised the activities from the head office in Tanga, while the ANR, with a different organizational structure, was supervised from the ANR headquarters in Amani.

EUCAMP collaborated in conservation and development issues with NGOs in the East Usambara area. The Tanzania Forest Conservation Group (TFCG) is dealing with forest conservation in East Usambara as well as other parts of Tanzania. Another one, Tanga Sanitary Dairy Development Project (TSDDP) supports dairy farmers in Amani and Maramba, and therefore collaborates in farm forestry interventions.

### **10.3. INSTITUTIONAL CAPACITY**

Managing of the East Usambara forests requires people qualified in conservation. Fortunately the programme has high quality staff in this regard. The programme also trained the staff on new innovations such as eco-tourism to keep par with global conservation outlook. The number of staff and distribution is adequate.

EUCAMP increased the local community know-how on conservation matters through the “training of the trainers” approach. This has been very successfully in areas such as soil and water conservation and improved stoves and nurseries. The farmers usually ran the trainings after having been trained by staff experts. This increased capacity and confidence.

#### **10.4. PARTICIPATION AND OWNERSHIP**

EUCAMP was designed and implemented in a participatory manner and this increased the sense of ownership of the stakeholder. When JFM started, one criteria used to select the initial forest block was the prevalence of illegalities in the forest reserve (an example being the Mtai Forest Reserve where illegalities were high, but after the involvement of the communities for about two years, the incidences were reduced significantly). For VFRs, the sense of ownership is so highly regarded that the by-laws to protect these forests are even stricter within the communities, compared to that of JFM.

#### **10.5. GENDER**

Gender refers to the socially constructed role held by women and men, their responsibilities and the relationship between them. Problems of gender issues in East Usambara are not different to those in other parts of Tanzania. One major problem, for women's participation in conservation, is the lack of access to land which prevents them from investing on the husband's land, although women are the land tillers in the family. Customs such as this have adverse effects to tree planting in some areas.

The programme has been addressing this problem through involving local women, together with men, in workshops, trainings and in formulation of different committees at the village level. These include forest committees and establishment of women groups that deal with income generating activities.

#### **10.6. ENVIRONMENT**

The major focus of the programme is the environmental protection of globally significant tropical forests. The programme has dealt with reduction and fragmentation in the East Usambaras as well as the reservation of the remaining patches of forests through VFRs. As a result, five VFRs with respective management plans and by-laws are in place. Again, for long-term sustainability, the programme started JFM in two forest reserves and the ANR is co-managed by the surrounding communities and the FBD. For better management of the East Usambaras, EUCAMP strived to upgrade the conservation status of East Usambara Mountains to a MAB Reserve category. In September 2000, the area was designated as a MAB Biosphere Reserve under UNESCO's Programme, the major focus being to integrate conservation and development activities for sustainable biodiversity conservation.

#### **10.7. FINANCIAL SUSTAINABILITY**

For the first eight years of EUCFP (1991 – 1998), most the funds for recurrent and development were contributed by the GOF, while the GOT contributed about 4% of the overall budget. In order to sustain conservation of forests in the East Usambaras, long-term funding from the local sources was addressed in Phase III of the project. The aim was to gradually increase GOT support while decreasing the donor support. To begin Phase III, the GOT increased its contribution from 4% to 8%, the money coming from a revenue retention fund.

EUCAMP established the ANR Conservation Fund which collects revenues from eco-tourism, research and entry fees to the ANR. The money accrued from these sources is used to run ANR activities and to support the local communities around the ANR.

It is obvious that the indicated money from local sources is not enough for recurrent and development activities in the East Usambaras. Some proposed activities to increase funding are not yet in place, such as contribution by urban water and hydropower electricity authorities that depend solely on water discharged from the catchment forests and, thus, the trust fund.

## **11. IDENTIFICATION OF ALTERNATIVES**

The Phase III programme document was well-prepared, using experiences and lessons learnt in Phases I and II. It covers both international and local possible intervention systems in a broader way. The document provides different alternatives and approaches to solving the existing problem. The main problem was the time allocated was too short for each intervention. To reach the end result in the given time frame makes the document look overly ambitious.

## **12. FURTHER ANALYSIS**

Three main areas require further analysis, impact study or evaluations:

### **12.1. JOINT FOREST MANAGEMENT APPROACH**

Managing East Usambara forests under JFM is a very good idea for the sustainability of conservation and improving the livelihood of local communities. The document considers this approach to be introduced and implemented in nine forest reserves within four years of the programme period. Lessons learned from the two JFM exercises shows that participatory processes are time-consuming and a big learning process for both the villagers and the staff. As far as JFM implementation, these exercises are still in their infancy. They need to be closely monitored and the experiences properly recorded in order to make future adjustments possible.

### **12.2. DECLARING EAST USAMBARA BIOSPHERE RESERVE AS THE WAY FORWARD TO SUSTAINABLE CONSERVATION**

It was planned to improve and to ensure sustainable management of East Usambara forests by declaring the area a Biosphere Reserve. It is likely that this approach was not exhaustively explored before embarking in the process of nomination. The approach was tested and the area was declared Biosphere Reserve, but modalities of using the reserve emblem to solve existing problems were not set and tested due to time constraints.

### **12.3. COST BENEFIT SHARING**

Cost benefit sharing was addressed in the programme document, indicating that all stakeholders should observe the benefits of conservation, at the same time contributing to conservation through equitable sharing of costs and revenue. It is likely that modalities of cost and benefit sharing were not adequately covered or the stakeholders' analysis was not adequate. The consequence of this was the failure to relocate NIMR, the inability to establish most of proposed corridors in East Usambara and the failure to bring the ABG under a single institution.

The Phase III programme document includes most possible alternatives to be used to address the problem. Lack of time and resources remain a factor.

## **13. NEED FOR FURTHER ASSISTANCE**

### **13.1. FURTHER ASSISTANCE IN DEVELOPING EAST USAMBARA BIOSPHERE RESERVE**

UNESCO nominated the East Usambara Biosphere Reserve in November 2000. The concept of this is still new in the FBD and the expertise not sufficient. In early 2002, a consultant was hired by EUCAMP to develop the strategic plan of managing the reserve. Based on the 2002 EUCAMP work plan, however, it was not possible to implement many of the things proposed by the consultant. The East Usambara Biosphere Reserve could be considered as the umbrella and actually the coordinator of several plans of action for sustainable development and management of natural resources of East Usambara. Without extra support, the whole effort of establishing East Usambara Biosphere Reserve will conceivably be meaningless and, on top of that, the concept will become a burden – rather than a relief – to both, the implementers and local communities.

### **13.2. FURTHER ASSISTANCE IN ECO-TOURISM DEVELOPMENT AND MARKETING**

Eco-tourism in East Usambara is considered as an alternative way of making use of the valuable biodiversity and catchment forests, which are no longer exploited by logging. Eco-tourism is also considered as the way forward to sustainable forest management, as it can offer job opportunities to local communities and additional means for revenue collection. The experience obtained from the ANR indicates that if infrastructures and marketing is further developed, it is possible to attract more tourists and to create adequate revenue to finance most of the conservation activities in the East Usambaras. The lessons learned from the ANR need to be replicated to the rest of the East Usambara area. To accomplish this, more financial and technical support is needed.

### **13.3. FURTHER ASSISTANCE IN ECO-TOURISM DEVELOPMENT AND MARKETING**

One of the immediate objectives of EUCFP and, later, EUCAMP, was to ensure biodiversity conservation and the improvement of generic resources through the reduction of forest fragmentation in East Usambara by the establishment of corridors. This objective was not attained from Phase I to the end of Phase III as the corridors were not legally established. A number of activities were covered towards gazettement of Derema and its two corridors. A substantial amount of money is required for the entire process of compensation, gazettement and, later on, preparation of practical management plans. Failure to secure additional support outside the contribution of the GOT will not only result in failure of gazettement and the loss of investment, but also in conflicts within and between local communities, policy makers and the conservation institutions in the Tanga region. On top of gazettement, it is vital to conduct a biodiversity survey for Derema in order to obtain baseline information. Biodiversity surveys have been conducted to the rest of East Usambara forest reserves.

### **13.4. PARTICIPATORY FOREST MANAGEMENT BASED ON THE NEW FOREST ACT**

EUCAMP started to practice PFM by establishing five VFRs, including Mpanga, Handei, Mfundia, Kizee and Kizingata. JFM was initiated in the Mtai and Manga forest reserves and CBFM in the ANR. JFM remains in its infancy as it was not clear by the end of Phase III how cost benefit sharing could be practical. The New Forest Act (Forest Act 2002) was enacted in 2002 but was not in operation by the end of Phase III. Because of this, many participatory plans prepared during Phase III will be practiced only after phasing out of the donor support. This brings a dilemma in the valuation of PFM in East Usambara. Based on these facts more support is required.

## **14. POLICY RELEVANCE**

### **14.1. CONSISTENCY WITH POLICY ON POVERTY REDUCTION**

An immediate goal of the programme was to improve the well-being of surrounding communities by providing job opportunities, improving the level of education regarding natural resources, improving land productivity through agro forestry and soil and water conservation, and supporting training for local communities and FBD staff. Establishment of the ANR Conservation Fund, supplying fees to local guides and setting and implementing revenue sharing programs are other avenues towards poverty reduction. Declaring the East Usambara Biosphere Reserve, promoting and implementing JFM, and strengthening institutional capacity at the FBD are other important implementations to reduce poverty and increase the income of Tanzanians.

## **14.2. CONSISTENCY WITH POLICY ON ENVIRONMENT SUSTAINABILITY**

Environmental sustainability is an integral part of the programme. Promoting sustainable forest land use has a positive impact on the environment. Efforts were made on improving, watershed management, soil productivity, better resistance against erosion, wise use of fuel wood and increased biodiversity. All of these impacts are also in the farmers' best interest. The problem is that production options are not diversified enough to significantly contribute to poverty alleviation (cardamom was the main source of income in the area before the programme started). There is a risk that the remaining natural forest – which could produce valuable timber in the long-term and maintain biodiversity and livelihood – is substituted by cardamom cultivation if potential sources of alternative income are not explored. Also the new land law is not in conformity with the environmental policy. Due to the current cost of gazetting new forest reserves in Tanzania, establishing a new state forest reserve may be “a good old story.”

## **14.3. CONSISTENCY WITH POLICY ON HUMAN RIGHTS, DEMOCRACY AND GOOD GOVERNANCE**

EUCAMP addressed human rights issues by empowering local people in the management of forests through JFM, village forestry and farm forestry. Local people established eight VFRs and also participated in the management of two JFM forests in the programme area. They were fully empowered in decision-making, especially in the management of VFRs and JFM. They prepared their own management plans and by-laws. The development of human rights, democracy and governance had also been addressed through established village level institutions such as village environment committees, natural resource committees and women groups.

EUCAMP involved local people adjacent forest reserves in planning of the phasing out and also in the preparation of the ANR general management plan. Local people in the ANR also had their representative in the Advisory Board and the Eastern Arc Trust Fund.

## **14.4. CONSISTENCY WITH POLICY ON GENDER EQUALITY**

In order to develop a gender strategy for the programme, a short-term consultant was hired in 1999 – 2000 for two months. Gender-awareness training was conducted to 11 staff and two villagers in conjunction of this consultancy. Together with the trained staff and villagers the consultant conducted PRA studies in six programme villages, three of them being so-called pilot villages in programme Phase II, and three new villages in programme Phase III. Based on the PRA results, the consultant prepared a strategy and together with the trained staff and villagers, training manuals for village leaders, women groups and for staff were prepared.

The main effect of the awareness training has been a clear change of attitudes with the programme staff on gender issues and sharing of the workload of women. Gender issues have not been implemented as a separate activity, but as a crosscutting issue which is taken into account in all activities.

The effect at the village level has been seen in such a way that when starting to work with a new programme village, there was often very strong resistance in the beginning to select

women to different village institutions (planning teams, forest committees, etc.). This was strongly emphasized by EUCAMP staff. In the old programme villages, farmers usually proposed equal (or almost equal) representation of both men and women in different bodies and also selected women for chairpersons and secretaries. Consequently, the programme enabled the increase of women's participation in decision making.

None of the EUCAMP activities were "for women only," although the majority of trainees in improved stoves training courses were usually women. This contributed considerably to the acknowledging of the workload of women. When conducting trainings in the villages or selecting participants for study tours, the representation of women was consistently emphasized. On average, 48% of trainees in the village level training were women. In the future, awareness-raising on gender issues should be continued to be strongly emphasized at the village level.

## **15. GENERAL EXPERIENCES GAINED / LESSONS LEARNED**

### **15.1. GENERAL IMPLEMENTATION OF ACTIVITIES**

- The programme was overly ambitious during planning – many activities were planned but could not be implemented due to time and financial constraints
- It was expected that donor funding could be decreased while GOT funding increased gradually so that the programme could continue without external funding at the end of December 2002. This is not possible, as most of activities still need support

### **15.2. ECO-TOURISM DEVELOPMENT AND MANAGEMENT OF ANR**

The ANR being the only nature reserve in Tanzania as a whole brought forth good experience as well as a number of issues to be studied.

#### **Fund Retention Scheme as Applied to the ANR Conservation Fund is the Way Forward to Sustainable Conservation**

The ANR managed to cover all of its recurrent expenditures and some of the development activities by using the ANR Conservation Fund. If that fund had not been established, a number of activities, including running of vehicles and upkeep of the station would not have been possible for the years 2001 and 2002.

#### **Change of Attitude is a Process and Not an Activity**

Local communities and other stakeholders of the ANR for a long time had a notion that conservation, particularly in forestry, is a function of the government alone. This attitude was attributable to the old version of the Tanzanian Forest Ordinance. Together with simplified orders and rules for the ANR, and many meetings and workshop organized for stakeholders from 1997 to date, this attitude still remains. More time is required to revolutionize the mind to PFM principles.

### **Eco-tourism One-way Towards Sustainable Forest Conservation in Tanzania**

Most of catchment forest reserves in Tanzania have potentials for Eco-tourism. The ANR especially has a lot of unique natural resources to cater for tourism. Tanzanian catchment forest reserves require to be supplemented with few infrastructures including rest houses, picnic and camping sites and simple well-finished earth roads. Another aspect required is marketing and networking to attract customers. By establishing eco-tourism in the catchment forest reserves, such as with the ANR, a new avenue for revenue generation will be developed and this can be used to cater for recurrent expenditures rather than waiting for allocation from the central government. Alternative uses can also be created from the natural resources, as most of catchment forests are not for harvesting. The third advantage and key element for sustainable conservation is the sharing of revenue accrued from eco-tourism with all stakeholders, including the local community. By doing so, a direct benefit to local communities is realized and management becomes participatory.

### **Cost Benefit Sharing is Possible When Tangible Benefits are Realized by All Parties Involved**

Before the establishment of the ANR Conservation Fund and the disbursement of 20% of revenues of the ANR to local communities, it was difficult and almost impossible to get local communities to help fight forest fires without being instructed by a forester or other government official. Today local communities organize themselves for forest protection and fire fighting as each village knows that this is imperative in order to achieve the gains.

### **15.3. HANDING OVER OF SOME ACTIVITIES TO THE MUHEZA AND KOROGWE DISTRICTS**

During Phase III of the programme, some of activities were handed over to the district councils. During implementation of these activities (for example, management of the Mfundia and Kizee VFRs), frequent follow up by EUCAMP was necessary. This shows that handing over is a slow process that needs plenty of awareness-raising and capacity-building. Moreover, when these activities are not reflected in the district strategic plans, they get less priority if there are other competing activities. It was further learned that if the idea of establishing a VFR originates from the villagers themselves, the whole exercise runs smoothly, compared to forests where conservation ideas originated from outside the villages.

### **15.4. RESEARCH**

Research studies that were conducted during Phase III were found very useful in the implementation of some activities. This is especially true for baseline information on biodiversity, which was used for planning purposes and the zonation of forests. Biodiversity surveys continue to discover new species to add to already impressive species list.

### **15.5. RESERVATION OF DEREMA PROPOSED FOREST RESERVE AND WILDLIFE CORRIDOR**

The new land law has affected significantly the exercise of Derema reservation. Prices for crops compensation raised for more than five times therefore the allocated money for compensation was not enough any more. If compensation fails, local community will lose confidence to the government and this may affect conservation activities in the East Usambara due to possible conflicts, which may arise.

## ANNEX 1: PROJECT FACT SHEET

<b>Programme Title:</b>	East Usambara Conservation Area Management Programme (EUCAMP)
<b>Project Title:</b>	East Usambara Catchment Forest Project (EUCFP) Phase III (1999-2002)
<b>Project Number:</b>	28219401
<b>Sector:</b>	Environment and Natural Resources
<b>Sub Sector:</b>	Forestry
<b>Focus:</b>	Forest Conservation and Management
<b>Geographical Coverage / Project site:</b>	East Usambara Mountains, Tanga Region, Tanzania
<b>Duration:</b>	Four (4) years (1999-2002)
<b>Starting Date:</b>	1 January 1999
<b>Project Financing:</b>	Tanzanian Shillings (TSh)
GOF	1.75
GOT	0.25
EC	1.3
Total	3.3 billion
<b>Competent Authorities:</b>	Ministry of Finance United Republic of Tanzania
	Ministry of Natural Resources and Tourism United Republic of Tanzania
<b>Helsinki:</b>	Government of Finland, Ministry for Foreign Affairs;
<b>Brussels:</b>	European Commission, Directorate for Development, Belgium
<b>Implementing Agency:</b>	Forestry and Beekeeping Division; Metsähallitus Consulting Oy

## ANNEX 2: BUDGET AND ACTUAL COSTS

EC-Rider Funds 2002 – 2002, EURO

Budgeted & Actual Programme Costs and Remaining Funds at end of November 2002

Description	Budget EURO	Used EURO	Remaining EURO
Permanent Staff, GOT	–	70	–
Short-term Consultancies, International	18,360	39,654	– 21,294
Short-term Consultancies, Local	4,960	12,878	– 7,918
Financial Controller Fees, Local Adviser	40,066	25,342	14,724
<b>Sub-total Unit Price A</b>	<b>63,386</b>	<b>77,945</b>	<b>– 14,559</b>
Traveling	2,250	2,178	72
<b>Traveling – Total</b>	<b>2,250</b>	<b>2,178</b>	<b>72</b>
Field Equipment	13,320	2,716	10,604
Extension Equipment	940	–	940
Nursery Equipment	990	15	975
Office Equipment	11,264	5,786	5,478
Purchase of Vehicles	106,990	66,822	40,168
<b>Equipment – Total</b>	<b>133,504</b>	<b>75,338</b>	<b>58,166</b>
TA-Reimbursable Costs, GOF	–	270	– 270
Financial Controller - Reimbursable Costs	15,460	–	15,460
Per Diems Consultants, International	5,630	4,186	1,444
Per Diems Consultants, Local	2,000	1,994	6
<b>Allowances, TA-Reimbursable Costs – Total</b>	<b>23,090</b>	<b>6,449</b>	<b>16,641</b>
Biodiversity Surveys	124,686	279,013	– 154,327
Formal Education	36,994	27,635	9,359
Short Courses	15,110	3,366	11,744
Extension Training and Study Tours	53,564	9,119	44,445
Aerial and Satellite Images	18,248	129	18,119
Acquisition of Ecological Corridors	622,658	237,080	385,578
Printed Materials	39,894	41,024	– 1,130
Housing Renovations	–	32,024	– 32,024
<b>Services – Total</b>	<b>911,154</b>	<b>629,391</b>	<b>281,763</b>
Recurrent Costs, Field Work and Consumables	7,950	26,629	– 18,679
Housing Maintenance	8,240	10,106	– 1,866
Recurrent Costs, Training	14,980	11,901	3,079
Local Staff, Allowances / Permanent, Salaries / Temporary	49,424	58,655	– 9,231
Laborers	30,180	27,263	2,917
Vehicle Maintenance and Fuel	49,644	61,810	– 12,166
Nursery Operating Costs	3,340	3,173	167
Recurrent Costs, Office Consumables	18,136	21,977	– 3,841
Recurrent Costs, Office Maintenance	5,580	7,015	– 1,435
Recurrent Costs, Office Utilities	8,880	11,464	– 2,584
Recurrent Costs, Communication	24,656	23,244	1,412
Recurrent Costs, Extension	3,190	2,332	858
<b>Operating Costs – Total</b>	<b>224,200</b>	<b>265,497</b>	<b>– 41,297</b>
Evaluations, Auditing	–	–	–
GOF Supervision	–	–	–
<b>Evaluation – Total</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>Sub-total Unit Price B</b>	<b>1,294,198</b>	<b>978,853</b>	<b>315,345</b>
Consultant Administrative Fee – 6% (Unit Price C)	87,000	86,969	31
<b>Grand Total Unit Prices A, B, C</b>	<b>1,444,584</b>	<b>1,143,767</b>	<b>300,817</b>

**Government of Finland Funds 1999 – 2002, EURO**  
**Budgeted & Actual Programme Costs and Remaining Funds at end of November 2002**

<b>Description</b>	<b>Budget EURO</b>	<b>Used EURO</b>	<b>Remaining EURO</b>
Permanent Staff, CTA and SFA	844,424	850,313	- 5,889
Short-term Consultancies, International	18,502	41,080	- 22,578
Short-term Consultancies, Local	20,014	10,727	9,286
Financial Controller Fees, Local Adviser	26,493	11,347	15,146
<b>Sub-total Unit Price A</b>	<b>909,433</b>	<b>913,467</b>	<b>- 4,034</b>
Traveling	3,890	2,246	1,644
<b>Traveling – Total</b>	<b>3,890</b>	<b>2,246</b>	<b>1,644</b>
Field Equipment	20,094	19,802	293
Extension Equipment	-	-	-
Nursery Equipment	998	4,643	- 3,645
Office Equipment	67,780	68,580	- 800
Purchase of Vehicles	239,247	217,460	21,787
<b>Equipment – Total</b>	<b>328,119</b>	<b>310,485</b>	<b>17,634</b>
TA-Reimbursable Costs, GOF	198,212	151,999	46,213
Financial Controller - Reimbursable Costs	8,394	5,513	2,881
Per Diems Consultants, International	7,064	5,947	1,117
Per Diems Consultants, Local	5,674	5,589	84
<b>Allowances, TA-Reimbursable Costs – Total</b>	<b>219,344</b>	<b>169,049</b>	<b>50,295</b>
Biodiversity Surveys	44,482	128,928	- 84,446
Formal Education	30,010	35,904	- 5,894
Short Courses	31,945	22,008	9,937
Extension Training and Study Tours	129,978	83,245	46,733
Aerial and Satellite Images	2,922	1,094	1,829
Acquisition of Ecological Corridors	-	1,825	- 1,825
Printed Materials	29,648	29,552	95
Housing Renovations	34,293	47,299	- 13,006
<b>Services – Total</b>	<b>303,279</b>	<b>349,855</b>	<b>- 46,577</b>
Recurrent Costs, Field Work and Consumables	25,818	20,640	5,178
Housing Maintenance	39,362	35,709	3,653
Recurrent Costs, Training	25,173	16,962	8,211
Local Staff, Allowances / Permanent, Salaries / Temporary	107,888	127,797	- 19,908
Laborers	67,972	72,681	- 4,709
Vehicle Maintenance and Fuel	122,793	121,995	798
Nursery Operating Costs	5,694	12,989	- 7,296
Recurrent Costs, Office Consumables	50,014	27,073	22,941
Recurrent Costs, Office Maintenance	20,034	8,005	12,029
Recurrent Costs, Office Utilities	29,224	26,911	2,313
Recurrent Costs, Communication	47,787	45,533	2,254
Recurrent Costs, Extension	17,111	12,775	4,336
<b>Operating Costs – Total</b>	<b>558,871</b>	<b>529,071</b>	<b>29,800</b>
Evaluations, Auditing	61,855	30,258	31,597
GOF Supervision	26,927	13,304	13,623
<b>Evaluation – Total</b>	<b>88,782</b>	<b>43,562</b>	<b>45,220</b>
<b>Sub-total Unit Price B</b>	<b>1,502,285</b>	<b>1,404,268</b>	<b>98,017</b>
Consultant Administrative Fee – 6% (Unit Price C)	-	-	-
<b>Grand Total Unit Prices A, B, C</b>	<b>2,411,718</b>	<b>2,317,735</b>	<b>93,983</b>

**Government of Tanzania Funds 1999 – 2002, TSH**  
**Budgeted & Actual Programme Costs and Remaining Funds at end of November 2002**

Description (Budget Code in Parenthesis)	Budget TSH	Used TSH	Remaining TSH
Permanent Staff , GOT (11)	–	–	–
Short-term Consultancies, International (22)	–	–	–
Short-term Consultancies, Local (21)	–	–	–
Financial Controller Fees, Local Adviser (15)	–	–	–
<b>Sub-total Unit Price A</b>	<b>–</b>	<b>–</b>	<b>–</b>
Traveling (16)	–	2,200,000	– 2,200,000
<b>Traveling – Total</b>	<b>0</b>	<b>2,200,000</b>	<b>– 2,200,000</b>
Field Equipment (70)	–	–	–
Extension Equipment	–	–	–
Nursery Equipment (91)	–	–	–
Office Equipment (111)	–	–	–
Purchase of Vehicles (51)	–	–	–
<b>Equipment – Total</b>	<b>–</b>	<b>–</b>	<b>–</b>
TA-Reimbursable Costs, GOF (14)	–	–	–
Financial Controller - Reimbursable Costs	–	–	–
Per Diems Consultants, International	–	–	–
Per Diems Consultants, Local	–	–	–
<b>Allowances, TA-Reimbursable Costs – Total</b>	<b>–</b>	<b>–</b>	<b>–</b>
Biodiversity Surveys (23)	–	–	–
Formal Education (31)	17,110,000	18,000,000	– 890,000
Short Courses (32)	–	–	–
Extension Training and Study Tours (81, 82)	–	–	–
Aerial and Satellite Images (101)	–	–	–
Acquisition of Ecological Corridors (61)	–	–	–
Printed Materials (103, 104)	–	–	–
Housing Renovations (41)	–	–	–
<b>Services – Total</b>	<b>17,110,000</b>	<b>18,000,000</b>	<b>– 890,000</b>
Recurrent Costs, Field Work and Consumables (71, 72)	–	–	–
Housing Maintenance (42)	–	–	–
Recurrent Costs, Training (33, 34)	–	–	–
Local Staff, Allowances / Permanent, Salaries / Temporary	126,715,500	168,820,879	– 47,459,782
Laborers (13)	13,115,250	0	13,115,250
Vehicle Maintenance and Fuel (52, 53)	88,305,000	17,388,594	70,916,406
Nursery Operating Costs (92, 93)	–	–	–
Recurrent Costs, Office Consumables (112)	–	–	–
Recurrent Costs, Office Maintenance (113)	–	–	–
Recurrent Costs, Office Utilities (114)	5,125,750	3,958,590	1,167,160
Recurrent Costs, Communication (115, 116)	848,250	848,575	– 325
Recurrent Costs, Extension (83, 85)	–	–	–
<b>Operating Costs – Total</b>	<b>234,109,750</b>	<b>191,016,637</b>	<b>37,738,710</b>
Evaluations, Auditing (120)	–	2,959,900	– 2,959,900
GOF Supervision (12)	–	–	–
<b>Evaluation – Total</b>	<b>–</b>	<b>2,959,900</b>	<b>– 2,959,900</b>
<b>Sub-total Unit Price B</b>	<b>251,219,750</b>	<b>214,176,537</b>	<b>31,688,810</b>
Consultant Administrative Fee – 6% (Unit Price C)	–	–	–
<b>Grand Total Unit Prices A, B, C</b>	<b>251,219,750</b>	<b>214,176,022</b>	<b>31,688,810</b>

## ANNEX 3: INVENTORY LIST OF PURCHASED EQUIPMENT AND FACILITIES

### Programme Vehicles

	Description	Location	Date
FIN	Isuzu Truck, TAW 414	Tanga	30.09.1999
EU	Land Rover 110 Pick Up, STJ 6106	Amani	01.02.2002
EU	Land Rover Defender, STJ 6105	Amani	01.02.2002
FIN	Motorcycle, Honda XL 125S, TAW 285	Amani	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 291	Amani	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 291	Amani	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 292	Maramba station	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 294	Longuza station	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 295	Kilangangua station	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 296	Kilangangua station	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 297	Maramba station	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 298	Amani	30.09.1999
FIN	Motorcycle, Honda XL 125S, TAW 299	Amani	30.09.1999
FIN	Toyota Hilux Pick-up, TAU 125	Tanga	31.12.1995
FIN	Toyota Hilux Pick-up, TAU 126	Tanga	31.12.1995
FIN	Toyota Hilux Pick-up, TAW 422	Tanga	30.04.2000
FIN	Toyota Hilux Pick-up, TAW 503	Tanga	30.04.2000
FIN	Toyota Land Cruiser Hardtop, TAW 201	Tanga	30.09.1999
FIN	Toyota Land Cruiser, TAU 127	Tanga	31.12.1995
FIN	Toyota Land Cruiser, TAU 504	Tanga	30.09.1996
FIN	Toyota Land Cruiser, TAW 504	Tanga	31.12.2000
FIN	Toyota Land Cruiser, TAW 629	Tanga	30.09.1999
FIN	Tractor trailer TAS 821	Amani	31.12.1991
FIN	Tractor trailer TAS 823	Maramba station	31.12.1991
FIN	Tractor, Valmet 604-4, TAS 825	Amani	31.12.1991
FIN	Tractor, Valmet 604-4, TAS 826	Maramba station	31.12.1991

### Computers, Printers & Accessories

	Description	Location	Date
EU	CD writable, for Acer desktop computer	Tanga, CTA room	24.05.2000
FIN	CD writable, for Compaq laptop computer	Tanga, CTA room	24.07.2002
EU	Desktop computer	Amani	24.05.2000
FIN	Desktop computer	Amani, Conservator house	31.12.1999
FIN	Desktop computer	Amani, Main office	31.12.2000
FIN	Desktop computer	Amani, Main office	31.12.2000
FIN	Desktop computer	Korogwe, DFO office	15.08.2002
FIN	Desktop computer	Maramba station	31.12.2001
FIN	Desktop computer	Tanga	18.10.2002
FIN	Desktop computer	Tanga, catchment room	31.12.1998
FIN	Desktop computer	Tanga, computer room	31.12.1998
FIN	Desktop computer	Tanga, computer room	31.12.1999
FIN	Desktop computer	Tanga, FC room	31.12.1999
FIN	Desktop computer, Acer	Tanga, CTA room	31.12.1999

**Computers, Printers & Accessories (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Desktop computer, Acer	Tanga, Res. & Monitoring	31.12.1998
FIN	Desktop computer, AST Vision	Tanga	20.11.2001
FIN	Digital Camera, Canon Power Shot A50	Tanga	30.09.1999
FIN	Laptop computer, AST	Tanga, FC room	31.12.1998
FIN	Laptop computer, Compaq	Tanga, PM room	31.12.1998
FIN	Laptop computer, Compaq 1700	Tanga, SFA room	31.12.1998
FIN	Laptop computer, Compaq Armada E500	Tanga, CTA room	30.06.2000
FIN	Monitor	Amani	31.12.2000
FIN	Monitor	Tanga	18.10.2002
FIN	Monitor	Tanga, catchment room	31.12.1998
FIN	Monitor	Tanga, computer room	31.12.2000
FIN	Monitor, Acer 77 C, 17 inch	Tanga, computer room	31.12.1999
FIN	Monitor, Acer 77 C, 17 inch	Tanga, CTA room	31.12.1999
FIN	Monitor, Acer 77 C, 17 inch	Tanga, Res. & Monitoring	31.12.1999
FIN	Monitor, Nutech	Amani, Main office	31.12.2000
FIN	Monitor, Nutech	Amani, Main office	31.12.2000
FIN	Monitor, Nutech	Korogwe, DFO office	15.08.2002
FIN	Monitor, Nutech	Maramba station	31.12.2001
FIN	Monitor, Nutech	Tanga	23.10.2000
FIN	Monitor, Nutech	Tanga	18.10.2002
FIN	Monitor, Nutech 15 inch	Tanga	15.10.2002
FIN	Monitor, Nutech 15 inch	Tanga, FC room	31.12.2000
FIN	Monitor, Proview	Amani, Conservator house	31.12.1999
FIN	Monitor, Proview 15 inch	Tanga	23.09.2000
FIN	Monitor, Proview PX-456	Tanga	31.12.2000
FIN	Power supply, Stabilizer	Amani, Main office	31.12.1998
FIN	Power supply, Stabilizer	Tanga, computer room	31.12.1998
FIN	Power supply, Stabilizer	Tanga, FC room	31.12.1998
FIN	Power supply, Stabilizer	Tanga, library room	31.12.1998
FIN	Power supply, Stabilizer	Tanga, Res. & Monitoring	31.12.1999
FIN	Power supply, Stabilizer 100VA FRO	Tanga	14.05.2001
FIN	Power supply, Stabilizer, Fiskars 250	Tanga, CTA room	31.12.1998
FIN	Power supply, Stabilizer, Reguvolt D-100	Tanga, farm forestry room	31.12.1998
FIN	Power supply, Stabilizer, Samlex CVR100	Tanga, library room	20.03.2001
FIN	Power supply, UPS	Amani	31.12.2000
FIN	Power supply, UPS	Amani, Conservator house	31.12.1999
FIN	Power supply, UPS	Amani, Main office	31.12.2000
FIN	Power supply, UPS	Amani, Main office	31.12.2000
FIN	Power supply, UPS	Korogwe, DFO office	15.08.2002
FIN	Power supply, UPS	Maramba station	31.12.2001
FIN	Power supply, UPS	Tanga	18.10.2002
FIN	Power supply, UPS	Tanga, catchment room	31.12.1998
FIN	Power supply, UPS	Tanga, computer room	31.12.1999
FIN	Power supply, UPS	Tanga, CTA room	31.12.1999
FIN	Power supply, UPS	Tanga, Res. & Monitoring	31.12.1999
FIN	Power supply, UPS 650 APC	Tanga, library room	05.03.2001
FIN	Power supply, UPS, APC	Tanga, FC room	31.12.2000
FIN	Power supply, UPS, Katkoton 800mx15	Tanga, Store	31.12.1998

**Computers, Printers & Accessories (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Power supply, UPS/APC 650	Tanga	31.12.1998
FIN	Power supply, UPS/APC 650	Tanga	31.12.1998
EU	Power supply, UPS/APC 650	Tanga	03.01.2000
FIN	Power supply, Voltage transformer FBT	Tanga	01.06.2001
FIN	Printer, Canon Multipass C50	Tanga, CTA room	31.12.1998
FIN	Printer, Hp 1100	Tanga, computer room	31.12.1999
EU	Printer, HP 610	Amani	24.05.2000
FIN	Printer, HP 610C	Tanga, FC room	31.12.2000
FIN	Printer, HP 650	Tanga, CTA room	31.12.1999
FIN	Printer, HP 656c	Tanga	30.09.2002
FIN	Printer, HP 845 C	Tanga	18.10.2002
FIN	Printer, HP 895	Tanga, Res. & Monitoring	31.12.1999
FIN	Printer, HP Deskjet	Amani	31.12.2000
FIN	Printer, HP Deskjet	Amani, Conservator house	31.12.1999
FIN	Printer, HP Deskjet	Amani, Main office	31.12.2000
FIN	Printer, HP Deskjet	Amani, Main office	31.12.2000
FIN	Printer, HP Deskjet	Korogwe, DFO office	15.08.2002
FIN	Printer, HP Deskjet	Maramba station	31.12.2001
FIN	Printer, HP Deskjet	Tanga, catchment room	31.12.1998
FIN	Printer, Hp Deskjet 610c	Tanga	13.10.2000
FIN	Printer, HP Deskjet 350	Tanga	15.07.2001
EU	Printer, HP Deskjet 610c	Tanga	03.01.2000
FIN	Printer, HP Laserjet 1100	Tanga	31.12.1999
FIN	Printer, HP Laserjet 1100	Tanga, SFA room	31.12.1998
FIN	Tape drive with adaptor, Back pack 800TD	Tanga, Store	31.12.1998
FIN	Video camera, Panasonic & adapter	Tanga, PM room	31.12.1998
FIN	Zip drive, Iomega external	Tanga, CTA room	31.12.2000

**Office & Other Equipment**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Air conditioner	Tanga, FC room	31.12.1998
FIN	Air conditioner	Tanga, PM room	31.12.1998
FIN	Air conditioner, Daikin	Tanga	31.12.1991
FIN	Air conditioner, Daikin	Tanga	31.12.1991
FIN	Air conditioner, Daikin	Tanga	31.12.1991
FIN	Air conditioner, Daikin	Tanga, library room	31.12.1998
FIN	Air conditioner, Sanyo	Tanga	15.08.1999
FIN	Air conditioner, Sanyo	Tanga	15.08.1999
FIN	Air conditioner, Sanyo	Tanga	31.12.1991
FIN	Air conditioner, Zenihu	Tanga, SFA room	31.12.1998
FIN	Air conditioner, Zenthon	Tanga, computer room	31.12.1998
FIN	Altimeter	Tanga, Store	31.12.1998
FIN	Antenna for Radiocall	Amani, Annex office	31.12.1998
FIN	Backbags, set of 2	Tanga	31.12.1998
FIN	Battery for solar power system	Tanga	31.12.1998
FIN	Battery for solar power system	Kilangangua station	31.12.1998
FIN	Battery for solar power system	Longuza station	31.12.1998

**Office & Other Equipment (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Battery set for Radiocall	Maramba station	31.12.1998
FIN	Battery set for solar panel	Kwamkoro station	31.12.1998
FIN	Bicycle, mountain type, Champion	Sigi rest house	31.12.1998
FIN	Bicycle, sport type, Phoenix	Tanga, Store	31.12.1998
FIN	Bicycles, mountain type, Champion, set of 6	Amani, Accounts office	31.12.1998
FIN	Binding machine	Tanga, Registry room	31.12.1998
FIN	Binocular	Kilangangua station	31.12.1998
FIN	Binocular	Kwamkoro station	31.12.1998
FIN	Binocular	Longuza station	31.12.1998
FIN	Binocular	Maramba station	31.12.1998
FIN	Binocular	Tanga	31.12.1998
FIN	Binocular	Tanga, PM room	31.12.1998
FIN	Binocular, 8 x 40	Amani, Main store	31.12.1998
FIN	Binocular, Hiking 7 x 50	Tanga	31.12.1998
FIN	Binocular, Nikon 7 x 50	Tanga	31.12.1998
FIN	Binocular, Nikon 7 x 50	Tanga	15.06.2000
FIN	Bow saw	Longuza station	31.12.1998
FIN	Camping mattress	Tanga	31.12.2000
FIN	Canvas, Blue	Tanga, Store	31.12.1998
FIN	Cash box	Tanga, Accounts room	31.12.1998
FIN	Ceiling fan, National	Tanga	15.08.1999
FIN	Ceiling fan, National	Tanga	15.08.1999
FIN	Ceiling fan, National	Tanga	15.08.1999
FIN	Ceiling fan, National	Tanga	15.08.1999
FIN	Ceiling fan, National	Tanga	06.01.1999
FIN	Ceiling fan, National	Tanga	31.12.1999
FIN	Cellular phone, Nokia 6110	Tanga, CTA room	14.03.2000
EU	Cellular phone, Siemens 25/S 25	Tanga, FC room	02.01.2000
FIN	Chain Saw	Amani, Accounts office	31.12.1998
FIN	Chain Saw, Jonsered 2050	Tanga, Store	31.12.1998
FIN	Chain Saw, Jonsered 2050	Tanga, Store	31.12.1998
FIN	Clinometer, PM-5/1520P	Tanga, Store	31.12.1998
FIN	Clinometer, PM-5/360PCT	Tanga, Store	31.12.1998
FIN	Combination cooker, electric and gas	Amani, Restaurant	31.12.1999
FIN	Compass, Kb-77/360RT hand bearing	Tanga, Store	31.12.1998
FIN	Compass, prismatic	Kwamkoro station	31.12.1998
FIN	Compass, Suunto	Kilangangua station	31.12.1998
FIN	Compass, Suunto	Longuza station	31.12.1998
FIN	Compass, Suunto - 517219-854040	Tanga, Store	31.12.1998
FIN	Cutting machine	Tanga, Registry room	31.12.1998
FIN	Desk calculator, Canon P39-D	Tanga, CTA room	31.12.1998
FIN	Desk calculator, P39-D	Tanga, FC room	31.12.1998
FIN	Electric cooker	Amani, Basement house	31.12.1998
FIN	Electric cooker	Amani, Kitchen	31.12.1998
EU	Electric cooker CE6104 GR	Amani	05.02.2001
FIN	Electric cooker, Fiesta	Tanga	06.01.1999
FIN	Electric cooker, 4 plate, Belling Compaq	Amani, Assistant house	31.12.1998
FIN	Electric cooker, 4 plate, Belling Compaq	Amani, Conservator house	31.12.1998

**Office & Other Equipment (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Electric cooker, 4 plate, Samet	Sigi station	31.12.1998
FIN	Electric kettle	Amani, Kitchen	31.12.1998
FIN	Electric stove, Italina	Tanga	15.08.1999
FIN	Electric stove, Samet	Tanga	15.08.1999
FIN	Electric stove, Upo	Tanga	31.12.1998
FIN	Fax-machine, Canon B340	Tanga	31.12.1998
FIN	Fax-machine, Panasonic KX-F50	Tanga, CTA room	31.12.1998
FIN	Filing cabinet, steel type	Tanga, Registry room	31.12.1998
FIN	Flip board	Tanga, Store	31.12.1998
FIN	Flip chart, Board	Amani, Conference room	31.12.1998
FIN	Freezer, Ocean	Sigi station	31.12.1998
FIN	Freezer, Whirlpool	Amani, Store No. 1	31.12.1998
FIN	Gas cylinder	Amani, Store No. 1	31.12.1998
FIN	Generator, Honda 650	Tanga, Store	31.12.1998
FIN	Generator, Massey Ferguson	Amani	15.06.1995
FIN	Generator, Massey Ferguson	Tanga	15.06.1995
FIN	GPS, Garmin 48	Tanga	15.07.2000
FIN	GPS, Magellan IA010843	Tanga, Store	31.12.1998
FIN	GPS, model 35911576	Tanga, Store	31.12.1998
FIN	GPS, model 35911904	Tanga, Store	31.12.1998
FIN	GPS, model 35911904	Tanga, Store	31.12.1998
FIN	GPS, model 35911911	Tanga, Store	31.12.1998
FIN	High lift (jack)	Tanga	15.08.1999
FIN	Jack (five tons)	Longuza station	31.12.1998
FIN	Lighting system, portable	Tanga, Store	31.12.1998
FIN	Logger tape	Tanga, Store	31.12.1998
FIN	Measuring tapes	Tanga, Store	31.12.1998
FIN	Microware	Tanga	10.01.1999
FIN	Mirror stereoscope	Tanga, Store	31.12.1998
FIN	Overhead Projector	Amani, Accounts office	31.12.1998
FIN	Overhead Projector, portable	Tanga, Store	31.12.1998
FIN	Overhead Projector, portable, 200 AHST	Tanga, Store	31.12.1998
FIN	Overhead screen	Amani, Conference room	31.12.1998
FIN	Overhead screen	Tanga, library room	31.12.1998
FIN	Photocopier, Canon 1559	Tanga, computer room	31.12.1998
FIN	Photocopier, Canon PC-11	Tanga	31.12.1998
FIN	Photocopier, Canon PC-11	Tanga, CTA room	31.12.1998
FIN	Photocopier, Canon PC-11	Tanga, PM room	31.12.1998
FIN	Photocopier, Minolta	Amani, Main office	31.12.1998
EU	Photocopier, Minolta EP 1054	Amani	02.01.2000
FIN	Power supply for radio call, YAESU	Amani, Office No. 2	31.12.1998
FIN	Power supply for radiocall	Kwamkoro station	31.12.1998
FIN	Power supply for Radiocall	Amani, Annex office	31.12.1998
FIN	Punching machine, heavy duty	Tanga, PM room	31.12.1998
FIN	Punching machine, heavy duty	Tanga, Store	31.12.1998
FIN	Radiocall	Kwamkoro station	31.12.1998
FIN	Radiocall (YAESU FT 280a)	Amani, Annex office	31.12.1998
FIN	Radiocall (YAESU FT 280a)	Kilangangua station	31.12.1992

**Office & Other Equipment (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Electric cooker, 4 plate, Samet	Sigi station	31.12.1998
FIN	Electric kettle	Amani, Kitchen	31.12.1998
FIN	Radiocall (YAESU FT 280a)	Tanga, Registry room	31.12.1998
FIN	Radiocall equipment set	Longuza station	31.12.1998
FIN	Radiocall set, 2N840158	Maramba station	31.12.1998
FIN	Radiocall, YAESU FT 180A	Amani, Office No. 2	31.12.1998
FIN	Radio-cassette, Sony CP 777	Amani, Restaurant	31.12.1998
FIN	Refrigerator	Amani	31.12.1999
FIN	Refrigerator, Carry Cooler	Tanga	31.12.1998
FIN	Refrigerator, Carry Cooler	Tanga	31.12.1998
FIN	Refrigerator, Philips	Sigi rest house	31.12.1998
FIN	Refrigerator, Samsung	Amani, Conservator house	31.12.1998
FIN	Refrigerator, Sanyo	Amani, Basement house	31.12.1998
FIN	Refrigerator, Sanyo	Amani, Restaurant	31.12.1998
FIN	Refrigerator, Super General	Tanga	15.08.1999
FIN	Refrigerator, West Point, small	Amani, Assistant house	31.12.1998
FIN	Refrigerator, Whirlpool	Tanga	15.08.1999
FIN	Refrigerator, Whirlpool	Tanga	06.01.1999
FIN	Refrigerator, Whirlpool	Sigi station	31.12.1998
FIN	Refrigerator, Whirlpool	Amani, Restaurant	31.12.1998
FIN	Safe, double key type	Tanga, Accounts room	31.12.1998
FIN	Safe, number lock type, Leeco	Tanga, CTA room	31.12.1998
FIN	Security light set	Tanga	31.12.1999
FIN	Sleeping bags, set of 3	Tanga	31.12.1998
FIN	Slide projector	Amani, Accounts office	31.12.1998
FIN	Sofa set, hardwood	Tanga	07.01.1999
FIN	Solar panel	Tanga	31.12.1992
FIN	Solar panel	Kilangangua station	31.12.1992
FIN	Solar panel	Kwamkoro station	31.12.1998
FIN	Solar panel	Longuza station	31.12.1998
FIN	Solar panel	Maramba station	31.12.1998
FIN	Stand fan	Tanga, catchment room	31.12.1998
FIN	Stand fan	Tanga, Res. & Monitoring	31.12.1998
FIN	Stand fan, Velox	Tanga, farm forestry room	31.12.1998
FIN	Stapler, Rapid 49	Tanga, PM room	31.12.1998
FIN	Steel cabinet	Amani, Main office	31.12.1998
FIN	Switch board, Philips Sopho	Tanga, FC room	31.12.1998
FIN	Telephone receiver	Tanga, catchment room	31.12.1998
FIN	Telephone receiver	Tanga, PM room	31.12.1998
FIN	Telephone receiver	Tanga, Registry room	31.12.1998
FIN	Telephone receiver	Tanga, SFA room	31.12.1998
FIN	Telephone receiver, Panasonic	Tanga, farm forestry room	31.12.1998
FIN	Telephone receiver, Philips	Tanga, extension room	31.12.1998
FIN	Telephone receiver, Pro Series	Tanga, CTA room	31.12.1998
FIN	Telephone system, internal, Panasonic 616	Tanga	14.09.2000
FIN	Telephone, Siemens	Tanga	31.12.1999
FIN	Tent, office type, big	Tanga, Store	31.12.1998
FIN	Tent, office type, small	Tanga, Store	31.12.1998

**Office & Other Equipment (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Tents, set of 3	Tanga	31.12.1998
FIN	Thermometer	Tanga, Store	31.12.1998
FIN	Thermometers, set of 2 (max & min)	Tanga, Store	31.12.1998
FIN	Tool box	Tanga	31.12.1998
FIN	Tractor tyres (Big)	Tanga, Store	31.12.1998
FIN	Tractor tyres (Big)	Tanga, Store	31.12.1998
FIN	TV set, Panasonic, deck and stand	Tanga, library room	31.12.1998
FIN	Typewriter, Canon ES5	Tanga, computer room	31.12.1998
FIN	Tyre and tube	Tanga, Store	31.12.1998
FIN	Wall clock, Pioneer	Tanga, library room	31.12.1998
FIN	Wall clock, Round	Tanga, CTA room	31.12.1998
FIN	Wall clock, Round	Tanga, PM room	31.12.1998
FIN	Water cleaner	Tanga	15.08.1999
FIN	Water heater	Amani, Alan Tye house	31.12.1998
FIN	Water heater	Amani, Blue suite house	31.12.1998
FIN	Water heater	Amani, Green suite house	31.12.1998
FIN	Water heater	Amani, Kerenge house no. 1	31.12.1998
FIN	Water heater	Amani, Rest house	31.12.1998
FIN	Water heater, Coral	Sigi rest house	31.12.1998
FIN	Water heater, Coral	Sigi station	31.12.1998
FIN	Wheel spanner & Jack & Grease pump	Maramba station	31.12.1998

**Furniture**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Arm chair	Amani, Main office	31.12.1998
FIN	Arm chair	Kwamkoro station	31.12.1998
FIN	Arm chair	Tanga, Accounts room	31.12.1998
FIN	Arm chair	Tanga, catchment room	31.12.1998
FIN	Arm chair	Tanga, CTA room	31.12.1998
FIN	Arm chair	Tanga, extension room	31.12.1998
FIN	Arm chair	Tanga, SFA room	31.12.1998
FIN	Arm chair	Tanga, PM room	31.12.1998
FIN	Bed	Amani, Alan Tye house	31.12.1998
FIN	Bed	Amani, Annex hostel	31.12.1998
FIN	Bed	Amani, Basement house	31.12.1998
FIN	Bed	Amani, Blue suite house	31.12.1998
FIN	Bed	Amani, Conservator house	31.12.1998
FIN	Bed	Amani, Green suite house	31.12.1998
FIN	Bed	Amani, Rest house	31.12.1998
FIN	Bed	Tanga	09.01.1999
FIN	Bed	Sigi rest house	31.12.1998
FIN	Bed, double type	Amani, Kerenge house no. 1	31.12.1998
FIN	Bed, wooden	Tanga	15.08.1999
FIN	Bed, wooden	Tanga	15.08.1999
FIN	Bed, wooden	Tanga	31.12.1991
FIN	Bookshelf, big	Tanga	31.12.1998
FIN	Bookshelf	Amani, Conservator office	18.02.2000

**Furniture (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
EU	Bookshelf	Amani, Conservator office	27.03.2001
FIN	Bookshelf	Amani, Main office	31.12.1998
FIN	Bookshelf	Tanga, catchment room	31.12.1998
FIN	Bookshelf	Tanga, computer room	31.12.1998
FIN	Bookshelf	Tanga, farm forestry room	31.12.1998
FIN	Bookshelf	Tanga, Res. & Monitoring	31.12.1998
FIN	Bookshelf	Tanga, SFA room	31.12.1998
FIN	Bookshelf, glass type	Tanga, library room	31.12.1998
FIN	Bookshelf, small	Tanga	31.12.1998
FIN	Bookshelf, wooden	Tanga, CTA room	31.12.1998
FIN	Bookshelf, wooden	Tanga, Registry room	31.12.1998
FIN	Bookshelves, set of 2	Tanga, PM room	31.12.1998
FIN	Cabinet with glass doors	Tanga, Res. & Monitoring	31.12.1998
FIN	Chair	Amani, Store No. 1	31.12.1998
FIN	Clothe rack	Tanga	06.01.1999
FIN	Coffee table	Amani, Blue suite house	31.12.1998
FIN	Coffee table	Amani, Green suite house	31.12.1998
FIN	Coffee table	Amani, Rest house	31.12.1998
FIN	Coffee table	Tanga	07.01.1999
FIN	Coffee table	Sigi information centre	31.12.1998
FIN	Coffee table	Sigi rest house	31.12.1998
FIN	Coffee table	Tanga, library room	31.12.1998
FIN	Computer desk	Tanga, SFA room	31.12.1998
FIN	Conference chair	Amani, Conference room	31.12.1998
FIN	Conference table	Amani, Conference room	31.12.1998
FIN	Couch	Amani, Assistant house	31.12.1998
FIN	Couch	Sigi rest house	31.12.1998
FIN	Couch with cushions	Amani, Alan Tye house	31.12.1998
FIN	Couch with cushions	Amani, Annex office	31.12.1998
FIN	Couch with cushions	Amani, Basement house	31.12.1998
FIN	Couch with cushions	Amani, Conservator house	31.12.1998
FIN	Couch with cushions	Amani, Green suite house	31.12.1998
FIN	Couch with cushions	Amani, Rest house	31.12.1998
FIN	Couch with cushions	Tanga, farm forestry room	31.12.1998
FIN	Couch, large size with cushions	Amani, Green suite house	31.12.1998
FIN	Cupboard	Tanga	15.08.1999
FIN	Cupboard	Sigi information centre	31.12.1998
FIN	Cupboard	Sigi rest house	31.12.1998
FIN	Cupboard	Sigi station	31.12.1998
FIN	Cupboard, wooden with glasses	Tanga, Registry room	31.12.1998
FIN	Desk	Tanga	15.08.1999
FIN	Desk	Tanga, FC room	31.12.1998
FIN	Desk, 1 drawer type	Tanga, computer room	31.12.1998
FIN	Desk, 1 drawer type	Tanga, CTA room	31.12.1998
FIN	Desk, 1 drawer type	Tanga, farm forestry room	31.12.1998
FIN	Desk, 1 drawer type	Tanga, Registry room	31.12.1998
FIN	Desk, 1 drawer type	Tanga, SFA room	31.12.1998
FIN	Desk, 3 drawer type	Tanga, computer room	31.12.1998

**Furniture (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Desk, 3 drawer type	Tanga, CTA room	31.12.1998
FIN	Desk, 3 drawer type	Tanga, extension room	31.12.1998
FIN	Desk, 3 drawer type	Tanga, farm forestry room	31.12.1998
FIN	Desk, 3 drawer type	Tanga, Res. & Monitoring	31.12.1998
FIN	Desk, 3 drawer type	Tanga, SFA room	31.12.1998
FIN	Desk, 4 drawer type	Tanga, catchment room	31.12.1998
FIN	Desk, 4 drawer type	Tanga, FC room	31.12.1998
FIN	Desk, 4 drawer type	Tanga, PM room	31.12.1998
FIN	Desk, 4 drawer type	Tanga, Res. & Monitoring	31.12.1998
FIN	Desk, 4 drawer type	Tanga, timber grading room	31.12.1998
FIN	Dining chair	Amani, Assistant house	31.12.1998
FIN	Dining chair	Amani, Restaurant	31.12.1998
FIN	Dining chair	Sigi station	31.12.1998
FIN	Dining table	Amani, Assistant house	31.12.1998
FIN	Dining table	Amani, Blue suite house	31.12.1998
FIN	Dining table	Amani, Library	31.12.1998
FIN	Dining table	Amani, Restaurant	31.12.1998
FIN	Dining table	Sigi information centre	31.12.1998
FIN	Dining table	Sigi rest house	31.12.1998
FIN	Dining table	Sigi security office	31.12.1998
FIN	Dining table	Sigi station	31.12.1998
FIN	Dining table set, 4 chairs	Tanga	07.01.1999
FIN	Dressing table	Amani, Rest house	31.12.1998
FIN	Executive chair	Tanga, FC room	31.12.1998
FIN	Executive chair	Tanga, Res. & Monitoring	31.12.1998
FIN	File cabinet	Tanga, PM room	31.12.1998
EU	File cabinet for office	Amani	31.07.2000
FIN	File cabinet for office	Tanga	05.04.2000
FIN	File shelf	Tanga, FC room	31.12.1998
FIN	Garden chair	Amani, Conference room	31.12.1998
FIN	Garden table	Sigi security office	31.12.1998
FIN	Kitchen cupboard	Tanga	12.01.1999
FIN	Kitchen table	Tanga	15.08.1999
FIN	Mattress	Amani, Annex hostel	31.12.1998
FIN	Mattress	Amani, Conservator house	31.12.1998
FIN	Mattress	Amani, Green suite house	31.12.1998
FIN	Mattress	Amani, Rest house	31.12.1998
FIN	Mattress	Tanga	15.08.1999
FIN	Mattress	Tanga	09.01.1999
FIN	Mattress	Sigi rest house	31.12.1998
FIN	Office cabinet, metallic	Kilangangua station	31.12.1998
FIN	Office cabinet, wooden	Kilangangua station	31.12.1998
FIN	Office chair	Amani, Accounts office	31.12.1998
FIN	Office chair	Amani, Annex office	31.12.1998
FIN	Office chair	Amani, Basement house	31.12.1998
FIN	Office chair	Amani, Blue suite house	31.12.1998
FIN	Office chair	Amani, Green suite house	31.12.1998
FIN	Office chair	Amani, Kerenge house no. 1	31.12.1998

**Furniture (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Office chair	Amani, Kitchen	31.12.1998
FIN	Office chair	Amani, Library	31.12.1998
FIN	Office chair	Amani, Main office	31.12.1998
FIN	Office chair	Amani, Office No. 2	31.12.1998
FIN	Office chair	Kilangangua station	31.12.1998
FIN	Office chair	Longuza station	31.12.1998
FIN	Office chair	Maramba station	31.12.1998
FIN	Office chair	Sigi information centre	31.12.1998
FIN	Office chair	Sigi rest house	31.12.1998
FIN	Office chair	Sigi security office	31.12.1998
FIN	Office chair	Tanga, Accounts room	31.12.1998
FIN	Office chair	Tanga, catchment room	31.12.1998
FIN	Office chair	Tanga, farm forestry room	31.12.1998
FIN	Office chair	Tanga, FC room	31.12.1998
FIN	Office chair	Tanga, library room	31.12.1998
FIN	Office chair	Tanga, PM room	31.12.1998
FIN	Office chair	Tanga, Registry room	31.12.1998
FIN	Office chair	Tanga, Registry room	31.12.1998
FIN	Office chair	Tanga, Res. & Monitoring	31.12.1998
FIN	Office chair	Tanga, SFA room	31.12.1998
FIN	Office chairs, set of 2	Amani, Annex hostel	31.12.1998
FIN	Office chairs, set of 6	Tanga	15.08.1999
FIN	Office desk	Tanga	15.08.1999
FIN	Office desk	Maramba station	31.12.1998
FIN	Office table	Amani, Annex office	31.12.1998
FIN	Office table	Amani, Basement house	31.12.1998
FIN	Office table	Amani, Blue suite house	31.12.1998
FIN	Office table	Amani, Green suite house	31.12.1998
FIN	Office table	Amani, Kerenge house no. 1	31.12.1998
FIN	Office table	Amani, Kitchen	31.12.1998
FIN	Office table	Amani, Main office	31.12.1998
FIN	Office table	Kilangangua station	31.12.1998
FIN	Office table	Longuza station	31.12.1998
FIN	Office table	Maramba station	31.12.1998
FIN	Office table	Tanga, library room	31.12.1998
FIN	Office table, 3 drawer type	Amani, Annex office	31.12.1998
FIN	Office table, 3 drawer type	Amani, Main office	31.12.1998
FIN	Office table, 3 drawer type	Sigi rest house	31.12.1998
FIN	Office table, 4 drawer type	Amani, Accounts office	31.12.1998
FIN	Office table, 4 drawer type	Amani, Main office	31.12.1998
FIN	Office table, 4 drawer type	Amani, Office No. 2	31.12.1998
FIN	Reception table	Sigi information centre	31.12.1998
FIN	Secretary chairs, set of 2	Tanga, computer room	31.12.1998
FIN	Sofa (couch)	Tanga	15.08.1999
FIN	Steel cabinet	Longuza station	31.12.1998
FIN	Steel cabinet	Maramba station	31.12.1998
FIN	Steel cabinet	Tanga, Accounts room	31.12.1998
FIN	Table	Amani, Store No. 1	31.12.1998

**Furniture (Continued)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Table & chair for office	Tanga	31.08.1999
FIN	Table, 1 drawer type	Tanga, PM room	31.12.1998
FIN	Table, Laminate type	Tanga, CTA room	31.12.1998
FIN	Table, Living room type	Tanga	15.08.1999
FIN	Tent	Tanga	31.12.2000
EU	Tents, set of 4, biosurvey type	Tanga	31.01.2002
FIN	Triple couch	Amani, Assistant house	31.12.1998
FIN	Triple couch	Amani, Green suite house	31.12.1998
FIN	Triple couch	Sigi rest house	31.12.1998
FIN	Triple couch with cushion	Amani, Alan Tye house	31.12.1998
FIN	Triple couch with cushion	Amani, Conservator house	31.12.1998
FIN	Triple couch with cushion	Amani, Rest house	31.12.1998
FIN	Writing desk	Tanga	15.08.1999

**Houses (Buildings)**

	<b>Description</b>	<b>Location</b>	<b>Date</b>
FIN	Bamba staff house	Maramba station	31.12.1998
FIN	Foroforo staff house	Kilangangua station	31.12.1998
FIN	Information centre building	Sigi station	31.12.1998
FIN	Kambai staff house	Longuza station	31.12.1995
FIN	Kisiwani staff house	Sigi station	31.12.1998
FIN	Kuze kibago staff house	Kilangangua station	31.12.1998
FIN	Kwagunda staff house	Amani	31.12.1998
FIN	Kwezitu staff house	Longuza station	31.12.1996
FIN	Lanzoni staff house	Maramba station	31.12.1998
FIN	Metal container	Tanga	15.06.1991
FIN	Misozwe staff house	Longuza station	31.12.1996
FIN	Mwiti staff house	Maramba station	31.12.1998
FIN	Office building	Kilangangua station	31.12.1998
FIN	Office building	Sigi station	31.12.1998
FIN	Office house, combined with living house	Maramba station	31.12.1998
FIN	Potwe staff house	Amani	31.12.1998
FIN	Rest house building	Sigi station	31.12.1998
FIN	Security guard building	Sigi station	31.12.1998
FIN	Store building	Kilangangua station	31.12.1998
FIN	Three residential buildings	Kilangangua station	31.12.1998

**ANNEX 4: EUCAMP CONSULTANCIES 1999 – 2002**

<b>Topic</b>	<b>Consultant(s)</b>	<b>Completion</b>
Conservation Management and Eco-tourism Development for EUCAMP	Dr. Stig Johansson	15.09.1999
Monitoring and Evaluation Systems for EUCAMP	Mr. Leo Eerola	31.10.1999
Training on Soil and Water Conservation	Mr. Abiud Kaswamila	31.12.1999
Gender Strategy and Training in Gender Awareness	Mr. Edward H. Mhina	31.01.2000
Training of Local Guides and EUCAMP Staff for Eco-tourism Development	Mr. Vedasto S. Izoba Mr. Ari J. Koivu	10.03.2000
Updating Amani Nature Reserve Trail & Drive Leaflets	Mr. Antony Ellman	15.05.2000
People's Participation, Supervising PRA-exercises and Making Analysis for Joint Forest Management Planning	Mr. J.J. Kigula	20.05.2000
East Usambara Biodiversity Database Training and Development	Ms. Nike Doggart	20.05.2000
Census of the Long-billed Tailorbird in the East Usambaras	Mr. Norbert Cordeiro	31.07.2000
Designing Illustrations and Layout for Amani Nature Reserve Trail and Drive Leaflets	Mr. Stephen Valentine	15.08.2000
Social Impact Assessment of the Gazettement of the Proposed Derema Forest Reserve and Corridors	Dr. G.L.K. Jambiya Dr. Hussein Sosovele	31.08.2000
Feasibility Study on Shifting NIMR (National Institute of Medical Research), Amani Station Top Muheza	Proper Consult (T) Ltd	30.04.2001
Development of Handicraft Skills	Ms. Heli Jaskanen	15.05.2001
Compensation for Crops, Lands and Rights in Derema Ecological Corridor	Mr. Albert Mallya	31.12.2001
Feasibility Study on Valuation of for Crops, Lands and Rights in Derema Ecological Corridor (boundary crops)	Proper Consult (T) Ltd	31.12.2001
Development of Management Strategy for East Usambara Man and Biosphere Reserve	Mr. Timo Hokkanen	31.03.2002
Development of VFRs Through Community Based Forest Management in East Usambaras	Ms. Irmeli Mustalahti	15.04.2002
Derema Ecological Corridor: Inbound Crops, Lands and Rights Inside the Demarcated Area for Compensation Purpose	Proper Consult (T) Ltd	31.07.2002
Poverty Reduction Strategy for East Usambaras	Mr. Samwel Masanyika	30.11.2002
Biodiversity Surveys in East Usambaras	Frontier Tanzania	15.12.2002

## ANNEX 5: MONITORING

### Monitoring of Biodiversity Surveys

Biodiversity surveys have been conducted at 17 forest reserves with the aim of establishing systematic baseline information for long-term monitoring of forests in the East Usambaras. A lot of information has been collected from the surveyed forests.

During 2001, a monitoring assessment was conducted for the Semdoe and Kwamgumi forest reserves (a biodiversity survey had been done previously) as a test of procedures for future monitoring programs. There was a remarkable change in the overall increase in the dbh of trees and shrubs previously recorded in vegetation plots. Little change was observed in-terms of species accumulation curves. Generally, the findings show that species richness, species accumulation and the richness of endemic and near-endemic species had remained stable. Among the selected fauna groups (bats, amphibians and reptiles) the results provided added species for the list previously compiled. Use of GIS and remote sensing in monitoring was emphasized. Vegetation monitoring has been highly recommended in relation to disturbance assessment and threats within the East Usambara forests.

### Biodiversity Surveys in the East Usambaras 1994 – 2002

#	Name of Forest	Year Surveyed	Duration	Reporting Status
1.	Magoroto	Jul – Sept 1994	50 Research Days	Completed & Submitted
2.	Kwamgumi Kwamgumi follow-up	Jan – Mar 1995 Oct – Dec 1996	106 Research Days	Completed & Submitted
3.	Bamba	Jul – Sept 1995	50 Research Days	Completed & Submitted
4.	Mlungui	Jul – Sept 1995	26 Research Days	Completed & Submitted
5.	Longuza North	Oct – Dec 1995	51 Research Days	Completed & Submitted
6.	Kwamarimba	Oct – Dec 1995	51 Research Days	Completed & Submitted
7.	Kambai	Jan – Mar 1996	52 Research Days	Completed & Submitted
8.	Mtai	July – Sept 1996 Jan – Mar 1997	103 Research Days	Completed & Submitted
9.	Manga	July – Sept 1997	63 Research Days	Completed & Submitted
10.	Semdoe	Mar 1996 Aug – Dec 1997	70 Research Days	Completed & Submitted
11.	Segoma	Jan 1998 Jul – Sept 1998	78 Research Days	Completed & Submitted
12.	Mpanga	Nov 1999	12 Research Days	Completed & Submitted
13.	ANR	Oct 1999 – Mar 2000	360 Research Days	Completed & Submitted
14.	Nilo	Jul 2000 – Mar 2001	254 Research Days	Completed & Submitted
15.	Mlinga	April – June 2001	70 Research Days	Completed & Submitted
16.	Bombo I & II	Jan – Marc2002	70 Research Days	Draft Submitted
17.	Mgambo	Apr – Jun 2002	70 Research Days	Draft Submitted
18.	Kwamgumi & Semdoe	Jan – Mar 2001	70 Research Days	Completed & Submitted

### Monitoring of Forest Management Activities

Forest management was conducted to 14 state forest reserves in East Usambara. Out of these, two are now managed through the JFM approach (Mtai and Manga). The activities conducted in these reserves are forest reserve protection and border management and planning for JFM. Monitoring is accomplished in two ways: (1) through monthly progress reports, reported by field stations in charge and including the filling of monitoring and event forms such as fire occurrences; and, (2) through internal evaluation of activities. These reports are finally compiled into quarterly and annual reports.

### Monitoring of Community Based Forest Management (CBFM) Planning

EUCAMP has facilitated CBFM planning in 11 villages involved in JFM in two central government catchment forest reserves and in 11 villages having or willing to establish a VFR. A detailed action plan was made for each JFM and VFR exercise, setting targets with deadlines for different steps in the planning process. Monitoring was done by observing the percentage of the target achieved (see table below). A bar chart was designed to show the overall status of the progress of the different CBFM planning exercises. An example of this is seen on the following page.

#### Quarterly Targets for Jan – March 2002 for JFM in Mtai Forest Reserve

Target	Achieved	Remarks
<b>Actions Carried Forward from the Previous Quarter</b>		
Draft Mgmt Plan and By-law Typed and Edited for Matemboni and Muzi	Completed	–
Draft Mgmt Plan and By-law Presented to Village Government in Matemboni and Muzi	Partly Completed	Meeting in Matemboni on 22.3.2002. In Muzi one to two meetings are still needed with planning team before presenting the plan to village government.
Draft Mgmt Plan and By-law Presented to Village Assembly in Matemboni and Muzi	Delayed	–
Finalization and Signing of Mgmt Plan and By-law in Matemboni and Muzi	Delayed	–
Planning Teams Selected in Vuga and Hemsambia	Completed	–
Planning Started in Vuga and Hemsambia	Completed	–
<b>Actions for This Quarter</b>		
Mgmt Planning Conducted in Vuga and Hemsambia	Completed	–
By-laws Formulated in Vuga and Hemsambia	Completed	–
Draft Mgmt Plan and By-law Typed and Edited for Vuga and Hemsambia	Completed	–
<b>Achieved of the Target by 31.3.2002</b>	<b>75%</b>	–

### Community Based Forest Management (CBFM) Activities in EUCAMP – Progress by November 15, 2002

Villages	Process Steps																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
<b>Mtai JFM</b> (Responsible officer: Maramba station-in-charge)																															
Matemboni	R				NA		NA	R	R	NA		R		R						R							NA	R			
Muzi	R				NA		NA	R	R	NA		R		R						R								NA			
Hemsambia	R				NA		NA	R	R	NA		R		R						R								NA			
Vuga	R				NA		NA	R	R	NA		R		R						R							NA	R			
Maramba A	R				NA		NA	R	R	NA		R		R						R							NA	R			
Maramba B	R				NA		NA	R	R	NA		R		R						R							NA				
Kidundui	R				NA		NA	R	R	NA		R		R						R							NA				
Kwekuyu	R				NA		NA	R	R	NA		R		R						R							NA				
<b>Manga JFM</b> (Responsible officer: Longuza station-in-charge)																															
Kwatango					NA		NA	R	R	NA		R		R						R							NA	R			
Mkwajuni					NA		NA	R	R	NA		R		R						R							NA	R			
Misozwe					NA		NA	R	R	NA		R		R						R							NA	R			
<b>Mpanga VFR</b> (Responsible officer: Maramba station-in-charge)																															
Hemsambia, Vuga		NA				NA		R	R			R		R						R		NA						NA	NA	NA	NA
<b>Handei VFR</b> (Responsible officer: Kwamkoro station-in-charge)																															
Mgambo	R	NA				NA		R	R			R		R						R								NA	NA	NA	NA
<b>Kizingata VFR</b> (Responsible officer: Kilangangua station-in-charge)																															
Zirai	R	NA				NA		R	R	NA		R		R						R		NA						NA	NA	NA	NA
<b>Kizee VFR</b> (Responsible officer: DFO Muheza)																															
Misozwe, Mwarimba		NA				NA		R	R	NA		R		R						R		NA						NA	NA	NA	NA
<b>Mfundia VFR</b> (Responsible officer: DFO Korogwe)																															
Gombero		NA						R	R	NA		R		R								NA						NA	NA	NA	NA
Makangara/ Mkwajuni		NA						R	R	NA		R		R								NA						NA	NA	NA	NA
Kijango		NA						R	R	NA		R		R								NA						NA	NA	NA	NA
Makumba		NA						R	R	NA		R		R								NA						NA	NA	NA	NA

  Process Meetings     
 R Quantitative Output     
 NA NA Not Applicable

## Key to Process Steps

#	Step
1	Preliminary PRA -exercises in the planned VFM and JFM -villages. <b>Output: PRA-Report</b>
2	Introductory workshop to District, Ward and village level authorities
3	Introductory meeting with the village government
4	Village assembly (general awareness raising and selection of planning team)
5	Border demarcation and opening by the villagers
6	Demarcation of forest management areas for villages
7	Border survey, e.g. by Forest and Beekeeping Division, or other professional survey team
8	Map production, e.g. by Forest and Beekeeping Division in DSM. <b>Output: Map</b>
9	Simple forest assessment / Forest inventory / Biodiversity survey. <b>Output: Report</b>
10	Review of the past management by the planning team in the case of existing VFR.
11	Participatory management planning process in the villages
12	Planning team writes the draft management plan. <b>Output: 1st draft management plan</b>
13	Participatory by-law planning process in the villages
14	Planning team formulates the draft by-law. <b>Output: 1st draft by-law</b>
15	Typing and editing the management plan and the by-law drafts in District office or Tanga Catchment Forest office
16	Comments to management plan and by-law from the facilitators to the planning team
17	Planning team presents the management plan and the by-law drafts to the village government
18	Village government presents the management plan and the by-law drafts to the village assembly. Selection of the forest committee.
19	Signing of the management plan and by-law, forwarding them to the Ward Development Committee: <b>Output: 2nd draft management plan and by-law</b>
20	Training of the forest committee
21	Demarcation of the utilization zone
22	Feedback from Ward Development Committee received
23	Forwarding the management plan and the by-law to the District for approval
24	District Council Environmental Committee approves the management plan and by-law and forwards them to full District Council
25	District Council approves the management plan and by-law: <b>Output: 3rd version management plan and by-law</b>
26	Village Forest Reserve registered at the District level. <b>Output: District registration decision</b>
27	Developing management agreement (e.g. in a form of a workshop). <b>Output: 1st draft management agreement</b>
28	Sending the management agreement, management plan and by-law drafts to Forest and Beekeeping Division for comments
29	Village government and the forest committee finalize the management agreement, management plan and by-law based on comments from FBD
30	Signing management agreement between GOT and the village: <b>Output: signed management agreement</b>

**Monitoring of Farm Forestry**

In the beginning of EUCAMP Phase III monitoring of farm forestry was based on regular monthly reports from the field stations. Monthly reports, however, usually contained information only on activities carried out and, to a lesser extent, on the achievements of the activities. Moreover, reporting was not systematic or consistent at different field stations. Consequently, guidelines for more systematic monthly reporting were given in September 2000 and the project staff developed a system for monitoring achievements. Monthly reporting was to follow the same structure as the work plan, giving the monthly target, achievement and reasons for deviation – if any – for each activity. All training and extension activities were to be reported in monthly reports, by giving detailed information on the event (name of the village, topic of the event, date and duration of the event, trainers / facilitators, and number of male and female participants).

Data on achievements or outputs of different activities was collected either once or twice a year, depending on the activity, by using specific monitoring forms. The information from the forms was then inputted in MS Excel databases. The objective of the monitoring system was to give reliable and detailed data for managers in both, the head office and the field stations, and to keep the system as simple as possible. Experience from other projects has shown that monitoring systems are often too complicated and difficult to maintain in the long-term, especially when they are developed by outside consultants. They can become a burden rather than a helpful management tool.

The following information about each programme village was collected to the main database:

**General Information on the Programme Villages**

Name of the village and the number of sub-villages; number of population and households; does the village have a village resource management plan, an environmental committee, village by-laws dealing with forests, VFR, 4H-club, MOU with the ANR, etc. This information was collected in late 2000 and updated as necessary.

**Soil Conservation**

Number of male and female farmers and schools practicing soil conservation and in which area; this data was collected in December and June each year.

**Beekeeping**

Number of male and female farmers; number of women groups; other groups and schools practicing beekeeping; the number of beehives; this data was collected in December and in June each year.

**Fish Farming**

Number of male and female farmers; number of women groups; other groups and schools practicing fish farming; the number of fishponds; this data was collected in June each year.

**Improved Stoves**

Number of households, schools and other institutions that had constructed an improved stove and were using one; this data was collected in December and in June each year.

**Black Pepper Cultivation**

Number of male and female farmers, supported by EUCAMP, cultivating black pepper and the number of plants; this data was collected in June each year.

**Cinnamon Cultivation**

Number of male and female farmers, supported by EUCAMP, cultivating cinnamon and the number of plants; this data was collected in June each year.

In addition, information on on-farm nurseries, the number of planted trees and tree survival was stored in specific databases. It included the following information:

**On-farm Nurseries**

Number of seedlings of different tree species in each different type of nursery (individual farmers, women groups, other groups, schools, institution, 4H club members); this data was collected in December and March each year.

**Planted Trees**

Number of seedlings of different tree species and who had planted them (individual farmers, women groups, other groups, schools, institution, 4H club members); this data was collected in June each year.

**Tree Survival**

Number of planted trees of different species, their survival and who had planted them (individual farmers, women groups, other groups, schools, institution, 4H club members); this data was collected in March each year.

**LESSONS LEARNED**

Although the objective was to develop a fairly simple monitoring system, the implementation encountered problems. Monitoring forms were usually submitted late (after the deadline) from the field stations and they often contained discrepancies (For example, data may have conflicted with data submitted earlier on the same topic). Consequently, a lot of time was needed to verify the data.

Data collectors at the village level need to be followed closely, especially in the beginning so that the focus is on obtaining reliable data.

Perhaps data should be collected only once a year, putting more time and emphasis on acquiring exact and reliable data. This could be complimented by random field checking.

**Monitoring of Accounts**

Throughout EUCAMP lifetime, all financial monitoring procedures, as laid down in the programme document, were followed. Additional necessary internal checks, such as monthly stockings, we also conducted. Auditing of EUCAMP accounts of 1999 – 2001 was done in July 2002 by the National Audit Office – DSM, and the Audit Report is still to be received.

EUCAMP liquidity was generally good, although there was a delay in receiving the disbursements of EU contributions from Brussels. The installments of the GOT contribution, during 1999 – 2001 in particular, were also relatively inadequate.

The delays in receiving sufficient disbursements required advances of funds from other sources. Subsequently, at the close of November 2002, EUCAMP books indicate that the EU owes a total of 165,000 Euros to Indufor / Metsähallitus Group.

It is envisaged that once the EU releases its outstanding balance of 300,000 Euros, the above 165,000-Euro debt will be settled and the remainder of funds will be used for advances, additional tractors, and the Derema acquisition of the ecological corridors exercise.

## ANNEX 6: TRAINING COURSES, WORKSHOPS AND STUDY TOURS

### FBD Staff

#### Short-term Courses

Year	Type of Course	# of Participants	Location	Duration
1999	Orientation Course on Handling Visitors	3 EUCAMP Staff 10 Local Guides	Amani – Tanga	2 Days
1999	Plant Conservation Techniques in Eastern Africa	1	Nairobi – Kenya	1 Month
1999/2000	Gender Issues	10 EUCAMP Staff 2 Local Villagers	Amani – Tanga	2 + 2 Weeks
2000	Certificate in Tropical Ecology	1	Nairobi – Kenya	1 Month
2000	Introduction to Computer (MS Word)	1	DSM	2 Weeks
2000	English Course Stage I	1	Tanga	2 Months
2000	English Course – Stage I & II	1	Tanga	4 Months
2000	Computer Training (Introduction to MS Word)	1	Tanga	1 Month
2000	Orientation Programme on Policy Issues and Programme Activities	23	Muheza – Tanga	1 Week
2000	PRA for Joint Forestry Management (JFM) & Gender Issues	11	Amani – Tanga	2 Weeks
2000	Hanover EXPO 2000 Exhibition	1	Germany	1 Week
2001	Forest Health Monitoring	2	Tanga	2 Weeks
2002	Forest Health Monitoring	1	Voi – Kenya	1 Week

## Training Courses, Workshops and Study Tours (Continued)

### Long-term Courses

Year	Type of Course	# of Participants	Location	Duration
1998/2001	Support On-going BSc. Programme	1	Morogoro	3 Years
1998/2000	Support On-going Forestry Diploma & Certificate Courses at Olmotonyi Forestry Training Institute (FTI)	1 Diploma 1 Certificate	Arusha	2 years
1999/2001	Partial Support to Forestry Diploma Course at FTI	1	Arusha	2 years
2000/2002	Support Forestry Diploma & Certificate Courses at Olmotonyi Forestry Training Institute (FTI)	1 Diploma 1 Certificate	Arusha	2 years
2000/2003	Partial Support BSc. Program	1	Morogoro	3 years
2000/2001	MSc. Programme at Kent University	1	UK	1 year
2001/2002	MSc. Programme at Kent University	1	UK	1 year

### Study Tours

Year	Type of Course	# of Participants	Location	Duration
1999	Participatory Management of Conservation Areas	–	Lake Manyara, Ngorongoro Crater	1 week
2001	Management of Village Forest Reserves, JFM, Eco-tourism and Other Conservation Issues	10	Arusha & Kilimanjaro	1 week
2001	Management of Village Forest Reserves, JFM and Other Conservation Issues	9	Morogoro, Iringa, Singida & Tabora	1 week
2001	Participatory Forest Management	2	Liwale, Lindi	1 week

## Training Courses, Workshops and Study Tours (Continued)

### Local Communities and Other Stakeholders

#### Training Courses, Extension Events and Study Tours for Local Communities in ANR

Subject	# of Villages	# of Events	# of Participants		
			Men	Women	Total
Nursery Techniques & Tree Planting	19	–	155	213	368
Improved Stoves	13	14	42	225	267
Soil and Water Conservation	6	21	87	106	193
Beekeeping	6	8	71	18	89
Fish Farming	5	11	9	13	22
Village Forest Reserve	1	10	7	5	12
Study Tours (Agro Forestry, Beekeeping & Fish Framing)	3	1	6	6	12
Eco-tourism for Local Tour Guides	–	3	20	4	24
Development of Local Handicrafts as Souvenirs	7	7	21	74	95
Film Shows (Forest Conservation)	7	7	379	763	1,142
<b>Total</b>	–	<b>82</b>	<b>797</b>	<b>1,427</b>	<b>2,224</b>

#### Notes:

1. Some farmers have participated in more than one subject training.
2. Training on nursery techniques and tree planting is conducted in several training events. Number of participants is an estimation of trainees who had an individual nursery or participated in a group nursery. In addition, training has been conducted at primary schools and other institutions.
3. Soil and water conservation training has also been conducted for pupils at Kisiwani Primary School.
4. Fish farming training has also been conducted for pupils at Amani and Ubiri Primary Schools.
5. Number of events and participants of the VFR training refers to the number of planning team meetings and members. In addition, three other village meetings were conducted.
6. Local tour guides trained in eco-tourism come from different villages surrounding the ANR.
7. Data of number of participants in film shows was available from four villages only.
8. Some training has been conducted in 19 villages in the ANR.

## Training Courses, Workshops and Study Tours (Continued)

### Local Communities and Other Stakeholders

#### Training Courses, Extension Events and Study Tours for Local Communities and other Stakeholders in the Longuza, Maramba and Kilangangua Field Stations

Subject	# of Villages	# of Events	# of Participants		
			Men	Women	Total
Nursery Techniques & Tree Planting	31	–	206	246	452
Improved Stoves	20	20	139	268	407
Soil and Water Conservation	11	24	148	83	231
Beekeeping	6	7	117	36	153
Fish Farming	3	3	46	4	50
Tree Pruning	18	18	112	36	148
Fire Prevention	29	2	68	26	94
Workshop on JFM	13	3	80	23	103
Joint Forest Management	11	–	159	79	238
Village Forest Reserve	110	–	72	29	101
Study Tours (Agro Forestry, Beekeeping & Fish Framing)	33	3	15	16	31
Study Tours (Management of VFRs)	3	2	18	10	28
Workshop to District Councilors and Technical Staff on PFM (Korogwe and Muheza)	–	2	90	23	113
Film Shows (Forest Conservation)	10	10	1,520	1,995	3,515
<b>Total</b>	–	<b>94</b>	<b>2,790</b>	<b>2,874</b>	<b>5,664</b>

#### Notes:

1. Some farmers have participated in more than one subject training.
2. Training on nursery techniques and tree planting is conducted in several training events. Number of participants is an estimation of trainees who had an individual nursery or participated in a group nursery. In addition, training has been conducted at primary schools and other institutions.
3. Training on JFM and VFRs included the planning process and training of forest committees. The planning process consisted of – on average – seven planning team meetings and three other village meetings in each participating village. Forest committees were trained after the planning process. Number of participants refers to the number of trained planning team and forest committee members.
4. Some training activities have been conducted in 31 villages in the Longuza, Maramba and Kilangangua Field Stations.

## ANNEX 7: EUCAMP PUBLICATIONS 1999 – 2002

Primarily, EUCAMP staff members, other researchers, consultants and interested individuals prepare the reports. The views expressed in the reports are those of the author(s).

### Technical Papers – Completed

#	Title
39.	EUCAMP. 1999. Mtai Forest Reserve. A Biodiversity Survey.
40.	EUCAMP. 1999. Kwamgumi Forest Reserve. A Biodiversity Survey.
41.	Doggart, N. 1999. Manga Forest Reserve. A Biodiversity Survey.
43.	Mhina, E.H. 2000. Gender Awareness Training & Gender Strategies for EUCAMP.
44.	Doggart, N. 2000. The East Usambara Biodiversity Database: A User's Manual.
45.	Jambiya, G. 2000. The Social Impact Assessment of the Proposed Derema Forest Reserve and Wildlife Corridors.
46.	Kamugisha, S.M. 2000. Progress Report on Water Flow and Sediment Load in Sigi & Bombo Rivers.
47.	Cordeiro, J. N. 2001. Population Study on the Long-billed Tailorbird in the East Usambara Mountains.
48.	Kobb, D. 1998. Forestry Royalties in Tanga Region: Paper Versus Reality.
49.	Jaskanen, H. 2001. Amani Handicrafts as Souvenirs.
50.	EUCAMP. 2001. Segoma Forest Reserve. A biodiversity Survey.
51.	EUCAMP. 2001. Mpanga Village Forest Reserve. A Biodiversity Survey.
52.	EUCAMP. 2001. Amani Nature Reserve. A Biodiversity Survey.
53.	EUCAMP. 2002. Nilo Forest Reserve. A Biodiversity Survey.
54.	EUCAMP. 2002. East Usambara Forests. A Biodiversity Monitoring.
55.	Frontier. 2002. An Introduction to East Usambara Biodiversity Surveys (EUBS): Field Techniques.
57.	EUCAMP. 2002. Bombo I Forest Reserve. A Biodiversity Survey.
58.	EUCAMP. 2002. Bombo II Forest Reserve. A Biodiversity Survey.
59.	EUCAMP. 2002. Mgambo Forest Reserve. A Biodiversity Survey.
60.	Veltheim T. Kijazi, M, and Killenga, R 2002. Participatory Forest Inventory of Proposed Mfundia Village Forest Reserve.
61.	Veltheim, T. & Kijazi, M. 2002. Participatory Forest Management in the East Usambaras.
66.	Mustalahti, I. 2002. The Stick Has Been Handed Over.

### Technical Papers – In Preparation

#	Title
62.	EUCAMP. 2002. Consultancy Reports on Poverty Reduction Strategy in East Usambaras.

## Working Papers

#	Title
39.	Shoo, G.W. 1999. Library User's Guide.
40.	Veltheim, T. & Matiko, W. 2000. Report on Extension Materials Brainstorming Workshop.
41.	Mmasi, S. & Veltheim, T. 2000. Zanzibar Study Tour Report.
42.	Mshana, L.E., Mmasi, S.E. & Nandrie, J. 2001. Internal Review Report of the East Usambara Conservation Area Management Programme (Between Jan. 1999 – Dec. 2000).
43.	Pohjonen, V.M. & Cordeiro, N.J. 2001. Checklist on the Birds of the East Usambara Mountains.
44.	Veltheim, T., Mahenge, F. & Msoffe, E. 2001. Study Tour to Angai Forest Reserve Process in Liwale District, Lindi Region.
47.	EUCAMP. Bombo FR. Biodiversity Training Manual.
48.	EUCAMP. Environmental Education on Forest Conservation Manual.

## Administrative Reports – Project Documents and Review Reports

#	Title
–	The United Republic of Tanzania and The Republic of Finland. 1998. East Usambara Conservation Area Management Programme (EUCAMP). East Usambara Catchment Forest Project (EUCFP), Phase III: 1999 – 2002.
–	The United Republic of Tanzania 1998. East Usambara Conservation Development Project (EUCDP). Proposal for Rider: 1 January 1999 – 31 July 2001.

## Administrative Reports – Work Plans

#	Title
25.	EUCAMP. 1999. Work Plan 1999 / 2000.
26.	EUCAMP. 1999. Bridging Phase Report (January – June 1999).
28.	EUCAMP. 2000. Work Plan 2000 / 2001.
33.	EUCAMP. 2001. Work Plan 2001 / 2002.
39.	EUCAMP. 2002. Work Plan Jan – June 2002.

## Administrative Reports – Progress Reports

### Annual Reports

#	Title
27.	EUCAMP. 2000. Annual Monitoring Report (January – December 1999).
29.	EUCAMP. 2000. Annual Report 1999 / 2000.
34.	EUCAMP. 2000. Annual Report 2000 / 2001.
38.	EUCAMP. 2002. Annual Report 2001 / 2002.

### Quarterly Reports

#	Title
30.	EUCAMP. 2000. Quarterly Report. July –September 2000.
31.	EUCAMP. 2001. Quarterly Report. October –December 2000.
32.	EUCAMP. 2001. Quarterly Report. January – March 2001.
35.	EUCAMP. 2001. Quarterly Report. July – September 2001.
36.	EUCAMP. 2001. Quarterly Report. October – December 2001.
37.	EUCAMP. 2002. Quarterly Report. January – March 2002.

### Final / Completion Report

#	Title
40	EUCAMP. 2002. Completion Report 1999 – 2002.

### Recent Thesis Prepared in the East Usambara or in Collaboration with EUCAMP

#### PhD. Thesis

Kessy, J.F. 1999. The Involvement of Local Communities in Conservation: An Alternative Strategy for the East Usambaras. Wageningen Agricultural University.

#### MSc. Thesis

Katigula, M.I.L. 1999. Dependence of Local Communities on Protected Forests as Sources of Non-timber Forest Products and Its Role in Forest Management.

Mashauri, S. 2001. Eco-tourism Development and Its Relationship to Local Community in Tanzania.

#### BSc. Projects

Kijazi, S.M. 2001. Role of Local Knowledge and Institutions in the Conservation of Forest Resources in the East Usambara.

## ANNEX 8: EUCAMP – DISTRIBUTION OF TECHNICAL REPORTS

The EUCAMP / TRCFO library was established in 1994 and continued strengthened up to 2002. The major objective was to keep relevant documentation and publications and to provide staff access to information. The library also served researchers conducting their studies in the programme area and other visitors in terms of literature review.

Individual researchers from institutions (such as ITC, UDSM, SUA, ULCAS, IDM, Kent University and others from countries like the USA, UK, Kenya), developing their research proposals, made direct literature review from EUCAMP publications. Many other researchers requested various research reports through e-mails as attachments. Very few requested hard copies. The distribution of publications to institutions and individuals was not systematic, but random according to need.

### EUCAMP List of Publications Distributed from 1999 – 2002

Issued To	Publication Name	Date
<b>Institutions</b>		
FBD	EUCAMP Document 1999 2002	Jan 1999
	EU Rider (October 1999 - March 2002)	1999
	Administrative Reports: 23, 25 – 36	1999 – 2002
	Technical Papers: 30 – 35, 39 – 41 & 50 – 53 (Biodiversity Reports)	Apr 2002
	Trees of Amani Nature Reserve (2)	Nov 1999
	EUCAMP Review Mission Report (Phase III)	2001
Tanga Library	Technical Papers: 1, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 21, 23, 24, 25, 26, 36, 37. ABG Survey and Re-survey. Working Papers: 1, 2, 3, 4, 5, 6, 11, 13. Kiti Library.	June 1999
DSM Library	Trees of Amani Nature Reserve (2)	Nov 1999
ANR Library	Administrative Reports: 23, 25 - 36	1999 – 2001
	Technical Papers: 52, 47	–
	Working Papers: 42, 43	–
	EUCAMP Document 1999 – 2002	Jan 1999
	EU Rider (October 1999 – March 2002)	1999
	EUCAMP Review Mission Report (Phase III)	2001
	Trees of Amani Nature Reserve (2)	Sept 1999
	Birds of Kenya & Northern Tanzania (2)	Jun 2000
	Snakes and Us (1)	Jun 2000
	African Mammals (1)	Jun 2000
	The Butterflies of Kenya (1)	Jun 2000
	Birds of East Africa (1)	Jun 2000
	Reptiles and Amphibians of East Africa (1)	Jun 2000
A Field Guide to Tracks and Signs (1)	Jun 2000	
Upland Kenya Wild Flowers (1)	Jun 2000	
Others	41 Duplicate Publications	Oct 2002

Issued To	Publication Name	Date
<b>Individual Researchers &amp; Others</b>		
Researcher	Trees of Amani Nature Reserve (5)	1999 – 2000
	Technical Papers: 9, 16, 4, 30, 43, 45, 57 & 52.	1999 – 2002
Eastern Arc Info Coordinator	Technical Papers: 38, 39, Working Papers: 21, Administrative Reports: 21, 23 & 25.	Feb 2000
Visitors	Working Papers: 43 (20)	Nov 1999 – 2001
A. Mndolwa (Author)	Trees of Amani Nature Reserve (1)	Sept 1999
I. Rajabu (Author)	Trees of Amani Nature Reserve (1)	Sept 1999
<b>FINNIDA, FPS &amp; THE Finnish Embassy at Dar es Salaam</b>		
	EUCAMP Document 1999 2002	Jan 1999
	EU Rider (October 1999 – March 2002)	1999
	Administrative Reports: 23, 25 – 36	1999 – 2002
	Technical Papers: 43, 45 & 47	2000 – 2001
	Trees of Amani Nature Reserve	1999
	EUCAMP Review Mission report (Phase III)	2001
<b>Forest Stations: Longuza, Maramba &amp; Kilangangua</b>		
	Technical Papers: 39, 40 & 47	–
	Administrative Reports: 23, 25 – 36	1999 – 2002
	Working Papers: 7, 42 & 43	–
	EU Rider (October 1999 – March 2002)	1999
	EUCAMP Document 1999/ 2002	Jan 1999
<b>Forest Stations: Others</b>		
	EUCAMP Review Mission Report (Phase III)	2001
	Dictionary of Native Plant Names	2000
	Manga Forest Reserve Management Plan (draft)	2000
	Bamba Forest Reserve Management Plan (draft)	2000
	Kwamarimba Forest Reserve Management Plan (draft)	–
	Mammals of Africa Including Madagascar	2002
	Birds of Eastern Africa	2001
	New Forest Act (draft)	2002

## ANNEX 9: EUCAMP RESULTS ASSESSMENT FOR 1999 – 2002

### Result 1: MAB and Management of East Usambara Biosphere Reserve

Indicators for Results	Progress per Indicator	Main Achievements
East Usambaras declared MAB reserve by 2002	100 %	The East Usambara Declared MAB
General Management and Land-use Strategy Prepared	0 %	–
Long-term Staffing Plan Prepared and Implemented	70 %	–
Long-term Funding Strategies Developed	30 %	–
EU Biosphere Reserve Contributing Towards Implementation of National Forest Program in the Area of Biodiversity Conservation	60 %	–
Memoranda of Understanding (MoUs) between Tanga Regional Catchment Forest Office and Other Envisaged Collaborators	50 %	–
Specific Proposals for Short-term Funding Prepared and Interested Donors Identified	0 %	–
Gender Strategy Developed and Implemented.	55 %	–
Training Program Prepared and Implemented	80 %	–
Office Support, Equipment and Facilities Identified and Procured	95 %	–

## Result 2: Village Forest Reserves and Farm Forestry Concepts Extended to Villagers and Operationalized

Indicators for Results	Progress / Indicator	Main Achievements
4 Additional VFR Registered.	80 %	Some of EUCAMP Activities were Handed Over to Korogwe and Muheza Districts.
4 VFR Management Plans Prepared.	80 %	4 VFR Management Plans in Place.
5 Village Forest Committees Capacitated in Forest Management.	80 %	4 VFR Committees Capacitated.
Appropriate Agro Forestry Measures, Including Raising and Planting at least 250,000 Tree Seedlings Practiced by Villagers Under ANR, JFM and Village Forest Reserves.	100 %	–
Proper Soil and Water Conservation Activities Practiced at least in 10 Villages Under ANR, JFM and VFRs.	100 %	–
4 Existing Alternative Options to Forest Resources Developed and Promoted.	80 %	–
2 Workshops for Councilors at District Level in Areas with JFM, VFR and Around ANR Conducted on Participatory Forest Management (PFM) and EU Biosphere Reserve.	100 %	–
Extension Materials (Calendar 1999 – 2002 and “Hekaya toka Msituni” 3 volumes) Produced and Disseminated.	100 %	Extension Materials (Calendar 2002) were Produced and Disseminated.
At least 15 Women Groups Dealing with Conservation and Income Generating Activities Capacitated.	30 %	–
Lessons Learned Document about PFM Approaches and Methodologies in East Usambara Produced.	100 %	–

## Result 3: Management of National Catchment Forest Reserves Improved through Reduction of Forest Fragmentation and Joint Forest Management Systems.

Indicators for Results	Progress / Indicator	Main Achievements
JFM Plans Prepared and Approved for Selected Forest Reserves (Mtai and Manga).	90 %	JFM Activities were Replicated in Manga FR.
Derema and its Corridors, Bombo East I & II, Forests Legally Gazetted.	50 %	Compensation for Slashed Boundary Crops for Derema Proposed Forest Reserve and Wildlife Corridor was Effected.
Priority Areas of Forest Borders Maintained.	60 %	Crops Assessment and Valuation was Carried Out.
Forest Roads Inside Nilo Reserve Maintained.	100 %	–
Forest Reserves in East Usambara Well Protected.	75 %	–

**Result 4: Management of ANR improved to Support Eco-tourism, Research & Training**

Indicators for Results	Progress / Indicator	Main Achievements
ANR Management Plan Implemented.	80 %	Management of ANR Improved.
ANR Conservator and Advisory Board Fulfilling Their Responsibilities.	80 %	Advisory Board Meeting Conducted.
ANR Conservation Fund Covers 75% of Recurrent Cost by the End of 2002.	60 %	–
ANR Work Plans Prepared and Implemented.	75 %	ANR Work Plan Prepared.
The Acquired EUCDP Facilities Renovated.	60 %	Some Houses Renovated.
Funding for ABG Management Secured.	0 %	–
Management Plan for ABG Approved.	0 %	–
MOUs with Stakeholders of ABG Signed.	30 %	–
ABG Rehabilitated.	5 %	–
ANR Information Centre in Full Operation and Display Upgraded.	85 %	–
Amani Ecological Training and Research Centre Established.	0 %	–
The Number of Tourists Increased from 1,000 to 2,000.	0 %	–
1 Camping and 2 Picnic Sites in ANR Developed.	100 %	2 Camping Sites and 3 Picnic Sites Established.

**Result 5: Research Relevant for Forest Conservation and Management Increased Dissemination of Information Improved and Monitoring Systems Related to Conservation Activities Improved**

Indicators for Results	Progress / Indicator	Main Achievements
Compiled and Updated List of Research Priority Topics and Collaborators.	100 %	Updated List of Research Collaborators Prepared & Incentive Package Provided
Incentive Package for Researchers Conducting Priority Research.	100 %	Weeding and Data Collection Done as Planned.
On-going Research Study Supported.	100 %	Biodiversity Surveys Completed in 4 Forest Reserves, 1 Report Submitted.
7 Biological Surveys and 11 Reports Completed (4 Outstanding from Phase II and 7 Additional Reports).	100 %	–
150 Books / Publications Added to Both TRCFO and ANR Libraries.	70 %	–
Increased Subscriptions and Newsletters by 2002.	50 %	–
Database Linked to Related Databases of Other Institutions.	40 %	–
Updated Databases for Forest Conservation Monitoring for Preparation of Management Plans and Reports.	100 %	Biodiversity, Library and Agro Forestry Experiment Plot Databases Updated.