

**IMPACT EVALUATION OF AGROFORESTRY PROJECT  
IN SIX VILLAGES OF KARATU – ARUSHA, TANZANIA,  
IMPLEMENTED BY TANZANIA ASSOCIATION OF FORESTERS.**

**SUBMITTED IN PARTIAL FULFILMENT FOR THE REQUIREMENTS FOR  
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**Supervisors' Certification**

I have read the project and find it to be in the form acceptable for Review

Name:.....*Thaddeus M. Binamunger*.....

Signature.....*[Signature]*.....

Date.....*03/09/05*.....

**Declaration**

I, John V.B. Mwamhanga, I am declaring that this work is my own original work, and that it has not been submitted for similar degree in any other University.

**Dedication**

To: My beloved children Catherine, Benito and Pio. Humbly, they accepted and tolerated my absence from home during the preparation of this work.

### **Abstract**

The Tanzania Association of Foresters Karatu Agroforestry project was officially started in 1986 with four villages; later on in 1999 two villages were added. About 3,272 households were directly involved in the project. Project's goal was to see that local communities have ample sense and knowledge of tree planting and conservation of environment, derive as much of forest produce within the vicinity of project sites thus saving on due time to fetch from far off and that the practice is sustainably maintained. The project impact evaluation conducted revealed that the project has managed to establish tree nurseries in villages; which are under the village management. Due to project intervention, individuals have started their own nurseries. About 3.8 millions trees were planted in the project area. The project has highly managed to reduce conflicts over resources and land encroachment, further more, due to its initiatives communities in 5 villages have formed 9 income generating groups as a means of fighting poverty. The project has created awareness to majority of villagers about the importance of tree planting and environmental conservation. Communities future tree planting is on fruit and timber tree species. It was noted that successes of project interventions at local level have crossed the project boundaries to non-project villages, also natural resources committee has been formed in each village. The evaluation concluded that the project is now well known to both in the project and non-project villages and has positively influenced local communities tree planting and environmental conservation practices to a large extent. Further, the emergency of private tree nurseries seems the right approach to sustainability of tree planting practices. It was recommended that the project should

facilitate introduction of commercial aspects of agroforestry, build capacity of community, strengthen monitoring and evaluation system, soil fertility improvements, and increase demonstration plots.

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**List of acronyms.**

BSI	- Byskogsinsamlingen
EC	- Executive Committee
FAO	- Food and Agricultural Organization (of the United Nation)
HIMA	- Hifadhi ya Mazingira
LAMP	- Land Management Project
NGO	- Non-Governmental Organization.
OD	- Organizational Development
SACCOS	- Savings and Credit Cooperative Society
SECAP	- Soil Erosion Control and Agroforestry Programme
SWOT	- Strength, Weakness, Opportunities, Threat.
TAF	- Tanzania Association of Foresters
TOT	- Training of Trainers
VEC	- Village Environmental Committee

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## *CHAPTER I*

### **1 INTRODUCTION.**

#### **1.1 Introduction**

This paper presents a report of an evaluation of Tanzania Association of Forester Karatu Agroforestry Project. The reports come out as a result of my attachment with the local non Governmental Organization. The reports includes the following; introduction, literature review, research methodology, findings and recommendations and conclusion and implementation.

#### **1.2 About the Organization**

Tanzania Association of Foresters (TAF) is a non-governmental professional, and non-profit making organization, formed in 1976 with Registration No. SO 5979. Its motto is “Forests For Ever”.

##### **1.2.1 TAF vision:**

Becoming the best institution in forestry professional practices and advisory services in Africa.

##### **1.2.2 TAF mission:**

To provide professional advice and support for sustainable management and use of Tanzania’s Forest Resources, with significant contribution to socio-economic development.

##### **1.2.3 TAF objectives:**

- a) To foster public interest in forestry and in environmental conservation.

- b) To form a forum for all engaged in forestry and in environmental conservation.
- c) To advance and promote the forestry profession.
- d) To collect and disseminate information relating to forestry and environmental conservation.
- e) To advocate equitable cost and benefits sharing accruing from the management and utilization of forest resources amongst all stakeholders
- f) To undertake economic ventures to ensure financial sustainability of the Association
- g) To cooperate and liaise with other organizations in and outside Tanzania on matters of mutual interest.

#### **1.2.4 TAF values:**

Professional ethics, nature, ecological awareness, influencing others, helping society, human rights, economic security, democracy, networking, and advancement.

#### **1.2.5 TAF management:**

The affairs of the Association is managed by an EXECUTIVE COMMITTEE, which consist of; A President, A Vice president, A Secretary, Assistant Secretary, Treasurer, Assistant Treasurer and five members elected during the general meeting. The Executive Officer has been hired as overseer of every day activities.

### **1.3 The Karatu Villages Agroforestry Project.**

#### **1.3.1 The project background information:**

In 1982 it became apparent that Tanzania was losing trees at the rate estimated at 400,000 hectares yearly through mainly cutting for various uses, at this time afforestation was estimated at mere 100,000 hectares yearly. The deficit of 300,000 hectares can be considered to be the rate of land degradation each year.

To offset the deficit it was necessary to increase the rate of reforestation four fold. At this juncture TAF decided to increase the practice effort towards fulfillment of its objectives (a), (c) and (e) mentioned above. Initially, three villages in Karatu namely; Gongali, Bashay, and Geykum Arusha in Arusha region were keen to plant trees given needed technology and materials.

In 1986 TAF signed a cooperation agreement with a non-governmental organization in Sweden known as *Byskogsinsamlingen* (BSI) that enables the BSI to render the *fiscal support* to TAF for the Karatu Agro forestry initiatives.

Therefore, Karatu Agro forestry project officially started in 1986 with four villages. These were Gongali, Bashay, Geykum Arusha and Tloma villages, after signing the cooperation agreement between TFA and BSI. In 1999 two new villages; Changarawe and Kilimatembo were added on the list of participating villages.

Before the TAF interventions, the project area was devoid of trees following extensive and shifting cultivation, previously where use of tractors and ox ploughing found trees are hurdle and so were cleared down. Compelled with loose porous soil of volcanic nature, erosion and gullies was severe.

A total of 3272 households are being involved in the project directly.

**Table 1: Population number and household seedlings target for TAF Agroforestry village per year.**

NO	Village	Household (no.)	Population (no.)	Seedlings target (annual)
1	Gongali	653	4991	25,000
2	Bashay	800	5035	50,000
3	Geykrum Arusha	500	3180	40,000
4	Tloma	606	3715	40,000
5	Changarawe	300	1634	25,000
6	Kilimatembo	413	3260	25,000
<b>Totals</b>		<b>3,272</b>	<b>21,815</b>	<b>200,000</b>

Source: TAF Work Plan and Budget on afforestation and environmental conservation document 1999 – 2003.

Apart from above project, similar project has been established in southern highlands zone at Njombe and Mbeya rural. Other ongoing project is on rehabilitation and conservation of part of half-mile strip of Kilimanjaro Forest Reserve in cooperation with villages of Kidia, Mowo and Tella in Moshi Rural District.

### **1.3.2 The overall Goal of the project:**

To see that local community have ample sense and knowledge of tree planting and conservation of environment, derive as much of forest produce within the vicinity of project sites thus saving on due time to fetch from far off and that the practice is sustainably maintained.

### **1.3.3 The responsibilities of each project partner:**

#### **(a) Village and Institutions.**

Carry out the afforestation and conservation activities and as well as administering and managing forestry resources in good manner.

Trees planted and produce from conservation practices belong to beneficiaries responsible.

#### **(b) TAF.**

Provide necessary management knowledge, technical supervision, equipments and training of village and institution personnel in the project and surrounding villages.

#### **c) BSI.**

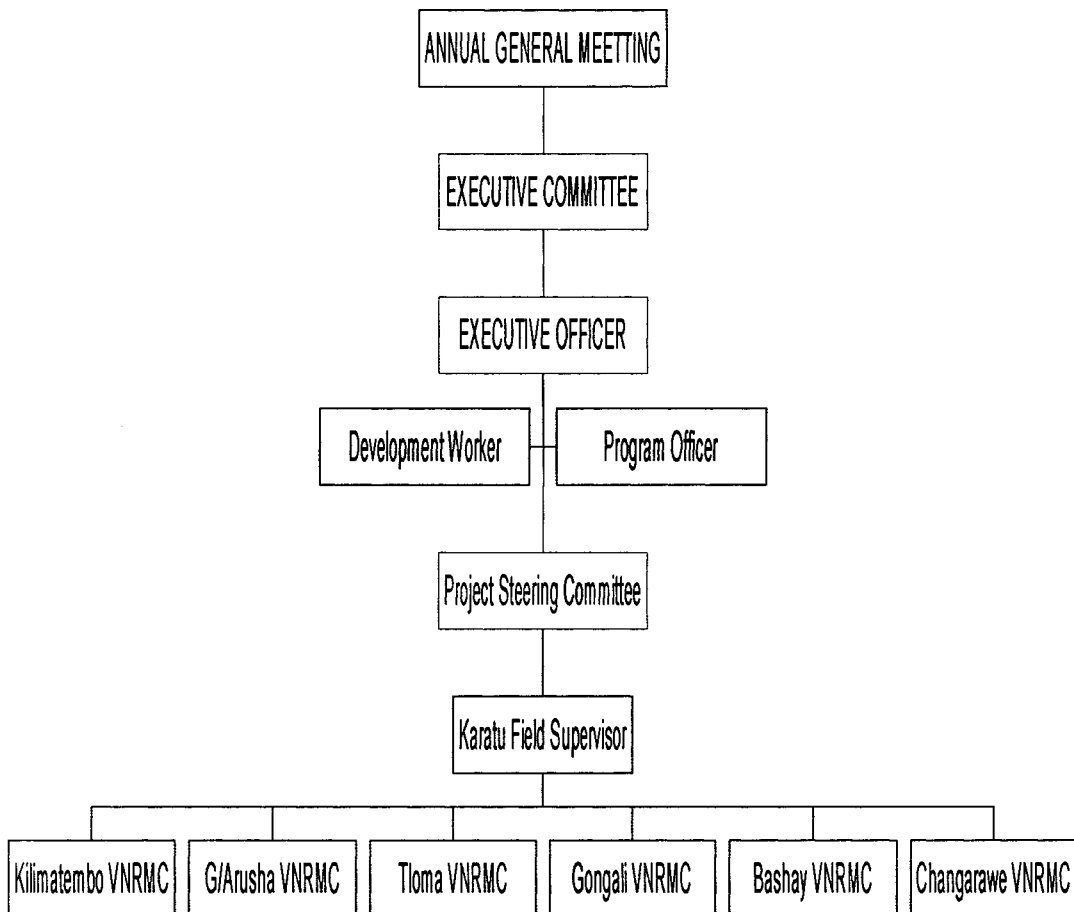
Provide financial and logistic support needed by TFA to oversee sound management and sustainable utilization of produce in the afforestation sites.

Also it is expected to build capacity for institutions, villages and TAF offices.

### **1.3.4 Project Management.**

The TAF Executive Committee manages the project, which is the highest decision making organ of the project. The Executive Officer assisted by the Program Officer based at Project's headquarter in Moshi town is the overseer of project's day to day activities. In the field, the project Field Officer is responsible for project's activities and resources.

### TAF KARATU AGROFORESTRY PROJECT ORGANOGRAM



*Figure 1: The project organization chart*

#### **1.4 Assignment.**

The Assignment for the project was to “Evaluate Impacts of Agroforestry Project in six villages of Karatu , Arusha implemented by Tanzania Association of Foresters since started in 1986”.

## *CHAPTER II*

### **2.0 LITERATURE REVIEW:**

#### **2.1 Theoretical:**

Sub-Saharan African is home to roughly 450 million people living in variety of physical, cultural and economic environments. The major ecological zones includes tropical forests, cool grass lands on the plateaus, wet montane forests and semi-arid savanna lands( Rocheleau *et al* 1988)

Tropical forests have been inhabited for thousands of years by communities that made use of them for subsistence in many ways, including agricultural activities. It was a type of agricultural production that took into account crop interactions and was carried out in such a way that not only did it prevent destruction of the forest but was able to be in harmony with it (World Rain Forest Movement, 1999). Further it was stated that, following colonial intervention, the colonized countries - the Third World were incorporated into the world market and an agricultural model was introduced that weakened indigenous land tenure and resources management systems (World Rain Forest Movement 1999, Jaroz 1993). Even when the countries achieved political independence, the model did not change and in general terms they remained captive of trade and economic dependency on the market of the North, hence creating instability, poverty and environmental degradation of the third world countries Agricultural systems. Over fifty five percent of global deforestation occurred between 1980 and 1990

took place in only seven countries; Brazil, Mexico, Venezuela, Malaysia, The Democratic Republic of Congo Bolivia and Indonesia (Abramovitz 1998)

In Tanzania especially in the dry central and northern regions, Villagezation programmes has led to the depletion of resources around settlements (UNCCD 2004)

It is said that; poverty / environmental degradation link accentuated by inequitable distribution of land, by the transformation of communal lands into *defacto* open access resources through nationalization, and by ambiguities and uncertainties in usufruct rights of land, water and trees. Some areas in Tanzania have signs of turning into a desert. Trees have been discriminately cut without serious replacement either by planting trees or by natural regeneration. This mishandling of the country's environment is one of the factors that placed the country into poverty vicious cycles (Kakakuona, 2002) In Tanzania it is estimated that the country's forest area has declined from 44,300,000 ha or 50% of total land area in 1938 to 33,096,000 ha or 43% of total land area in 1987.(URT 1997), the report gives the shocking figures on deforestation that "according to United Nations Food and Agricultural Organization (FAO) estimates, it ranges from 130,000 to 500,000 ha per annum" Wood accounts for 90% of the total energy used in Tanzania. Further more, more than 90% of the population depends on wood fuel energy.

It was reported that (URT, 1997) in 1993, fuel wood consumption was estimated at 45 million cubic meters per annum with a per capita wood consumption of 2.0 cubic meters



of round wood per annum. The rural areas alone consumed about 43.8 million cubic meters of firewood.

The challenges which we face are that; there is also pressure arising from the ever increasing demand for wood fuel, fodder, timber and forest land for other uses, especially agriculture. The challenge now is how to manage the forest resources as a national heritage on an integrated basis in order to optimize their environmental, economic, social and cultural benefits (UNCCD 2004). The best option is to adopt; "Agroforestry practices" (Rocheleau *et. al.* 1988).

Agroforestry refers to land-use system in which trees or shrubs are grown in association with agricultural crops, pastures or livestock, and in which there are both ecological and economical interactions between the trees and other components (Young, 1989). Therefore, the main components of Agroforestry systems are trees and shrubs, crops, pasture and livestock, together with the environmental factors of climate, soils and landforms. Rocheleau, *et.al.* (1988) Further elaborated that, agroforestry may involve a combination of practices in the same place at the same time (intercropping and related practices) or practices in the same place but at different times (rotational practices).

Agroforestry act as a "solution to problem of land and water degradation as well as an answer to shortages of food, fuel wood, cash income, animal fodder and building materials in sub-Sahara Africa; It serves many purposes and supply many products to a

wide variety of land users” (Rocheleau *et.al* 1988). Further they clarified that “trees used in agroforestry systems can also provide variety for services, such as the improvement of soil fertility for crop production, improvement of microclimate, and improve the quality of natural resources-including soil, water, vegetation and wildlife. In the early to mid 1990s, integrated conservation and development projects advocated tree planting on household lands, either next to houses or in fields and gardens (Hough 1991). In targeting small holders, agroforestry has largely replaced industrial plantation-style forestry schemes. This change in approach arose because of agroforestry’s potential for sustained improvement in rural living standards (Guggenheim and Spears 1991). Agroforestry programmes has been accused of emphasizing conservation rather than development activities. This shortfall of agrofoestry could be avoided by program planners to work with local people in designing and carrying out a programme that assures local subsistence needs in a sustainable way (Kottak 1999).

## **2.2 Empirical review.**

Afforestation in Tanzania dates back to colonial administration, when most forest plantations were established. Tree planting during that time was regarded as government activities. Community participation was through provision of labour. Therefore even laws established to govern the forest restricted access to resource by local people unless permitted by government. Community forestry emerged in 1972, aimed at meeting local people’s basic wood related needs. The needs include fuel wood, timber, fruits, fodder, medicine, honey, soil and improved environment (Kakakuona 2002).

The focus of the village afforestation activities has shifted from an emphasis on communal wood lots (in the 1970s) to individual and group tree planting initiatives. Perhaps the most fundamental change is towards a perception of tree as crops with a value to the farmers and households in terms of end uses.

It further stated that; the production of seedling in nurseries and distribution to villagers for planting remains principal activity in village afforestation. In some cases, the district forestry personnel are still involved in running central nurseries, but a range of school, church based, women and other groups are increasingly becoming concerned with seedling production.

Individual (Privately run) and family (household) nurseries are also increasingly common. It was observed that in Iringa District there was 890 on farm nurseries, these nurseries are more sustainable, cost-effective and reduce mortality losses from nursery to planting site (Minja R, and East R, 1996)

The failure of communal wood lots established under village afforestation campaigns in the 1970s was largely due to the absence of agreements about the sharing of benefits in terms of use and sale of fuel wood and timber produced. Further more was well managed only during the project period (Kerkhof 1990). To the extent that many of the villages afforestation projects are now involved in promoting individuals planting initiative on “private” land as experience, with the village afforestation programme in Kondoa. One difficult with conservation related agroforestry is that the desire to plant trees

corresponds primarily with international conservation goals, not necessarily with local perceived needs. (Kottak.C. 1999). In a research done at Ankarana village of Bevarly in Madagascar on why they have planted trees, one person said that he had to plant trees because it had seemed like a good idea at the time, although he had no use of Eucalyptus and did not imagine needing it in the future. In the future he like the fruit trees. (Lisa .L G and Freed B.Z, 2005).

With regard to extension work in relation to land husbandry in Tanzania, is carried out by Forestry and Bee-keeping division in the Ministry of Natural Resources and Tourism and the Department of Agriculture in the Ministry of Agriculture and Livestock (Habitat,1993). The overall function of extension services is to promote new technical practices, which is beneficial such as use of fertilizers, improved seed and agroforestry practices The study on probability and extent of adoption of agroforestry done in Campeche, Mexico revealed that educated farmers and those farmers who have been exposed to agroforestry (through extension agents and/or the neighbouring farmers) are more likely to adopt agroforestry (Casey J.F and Caviglia J.L, 2005). In Iringa district, Tanzania 63% of people are aware of the importance of agroforestry and have been able to practices the integration of trees and agriculture (Minja R and East R, 1996). Unfortunately the extension service in Tanzania is facing the problem of lack of adequate staffs, weak organization structure and transport. Hence the extension staffs reaches only about 27% of the rural majority. ([TFAP Technical annexes vol. 11 1989] in World Bank 1997). Some success in adopting agroforestry practices have been in

alleviation of village women's workload, primary through promotion of woodlots close to households. For example during the period 1993 to 1996 within Kising'a village in Iringa district-Tanzania, an estimated weekly average of 2.85 women household hours have been saved as a result of tree planting (Minja R and East R, 1996).

### **2.3 Policy review.**

Declining soil fertility due to inadequate farming practices, deforestation and overgrazing are among primary obstacles to increase agricultural productivity in sub – Saharan Africa (Findings 1997). Further it was explained that the problem could be solved through the successful implementation of policies and projects to address land degradation that is influenced by local ecological and socio-economic forces. Findings (1997), pointed that; one approach to mitigate land degradation involves the intensification of farming using sustainable production systems (such as agroforestry etc), and increasing productivity on the same unit of land.

A variety of important policy changes have taken place in the last decade. Some are the result of international (global and regional) protocols such as Agenda 21 and Copenhagen Social Development Summit. Some derive from national level economic liberation, market pressure concerned about the environment and access to resources and poverty and to some extent donor prompting.

Concerning with community conservation; the National Biodiversity Strategy and Action Plan (1999) Vision is “to build a society that values all the biodiversity richness, using it sustainably and equitably while taking the responsibility for actions that meet both the competing requirements of the present and legitimate claims of future generation.” To emphasize community participation in its implementation the strategy stated that it would ensure local communities are involved in decision-making regarding land use, management and development.

In regards to community participation Forestry policy (1998) clearly pointed that, in many parts of Tanzania local communities have the potential to ensure sustainable management of forest resources. However, land and tree tenure on communal and public land is not clear. This hampered local communities to participate in management of sustainable management of forest. The policy statement (39) clearly encourages local communities to participate in forestry activities. Clearly defined forestland and tree tenure rights will be instituted for local communities, including both men and women.

The Forestry Department acknowledge of having poor extension services which need to be strengthened therefore it “will strive to ensure increased awareness and skills among its people on sustainable management of forest resources” (Forest Policy 1998).

Further more it stresses the coordination and cooperation between forestry sector and NGOs and other institution in forestry extension activities. To address the issues of balance between development and conservation, one objective of the National Conservation Strategy for Sustainable Development (1995) is “to assist the nation in

achieving development with conservation by highlighting strategies which consider natural resources issues and priorities”.

Therefore in its analysis of the state of environment; National Environment Policy (1997) addressed poverty and satisfaction of the basis needs as its major objective, as well as protecting the environment in the course of development. The enhanced role of women is recognized. Some of its strategies related to wood fuel include:

- Promotion of wood fuel consumption through the development of alternative energy sources and wood fuel efficiency.
- Promotion of mixed farming through intercropping, agroforestry and other measures.

Tanzania National Energy policy (2000) places emphasis on the development and efficient utilization of indigenous energy sources in order to reduce dependence on imported petroleum based products. The goal is “ to ensure availability of reliable and affordable energy supplies and their use in a rational and sustainable manner in order to support national development goals”

Therefore planting trees for fuel wood in villages could be one of the useful initiatives in implementing the energy policy

### *CHAPTER III*

## **3.0 RESEARCH METHODOLOGY**

### **3.1 The Study area.**

Karatu District is one of 5 districts of Arusha Region, Tanzania. Karatu is surrounded by Mbulu to the West, Ngorongoro to the North, Babati and Monduli districts to the Southeast. The estimated area of district is approximately 3,300 square kilometers with lake Eyasi occupying about 10.60 square kilometers

The district has 4 administrative Divisions, 13 Wards and 45 registered Villages.

The climate varies across the district; in lake Eyasi Valley, the annual rainfall is between 300 millimeters per year to 400 millimeters per year. While North of Karatu town the range is between 900 millimeters per year – 1000 millimeters per year.

The district has a total population of about 186,825 as per 2002 census with the growth rate of 3.8% per year and has about 32,000 households with an average household size of 6 people. The economy of the district is mainly depending on agriculture and livestock keeping. The arable land is estimated at 96, 000 hectares whereby 80% of the population depends on agriculture.

### **3.2 Research Design:**

During the research, information were collected through Questionnaires from two villages joined at the beginning of the project these includes (Thoma and Gongali villages) and one village (Kilimatembo) that joined latter in 1999. One non-project



village (Rhotia) was selected for a study as a control. This was due to time and fund limits.

In the research design, a focus on evaluation document which stipulates questions what evaluation seeks to answer; resources needed, sources of information, data collection methods and tools to be used for information collection was prepared.

The researcher visited all six-project villages during data collection.

### **3.3 Research Approaches and Strategy:**

#### **3.3.1 Approaches:**

During the data collection, both Qualitative and Quantitative methods of data collection were used to obtain primary data from different sources.

Before actual data collection, questionnaires were tested to 10 people before formulating the final questions for individuals' household in four Karatu villages.

#### **3.3.2 Strategy:**

The household questionnaires were distributed to people through village government leaders, the focus group discussions were done in all 6-project villages.(Bashay 29 people; Gongali 42 people; G/Arusha 41 people; Changarawe 56 people; Kilimatembo 38 people; Tloma 25 people). Also the researcher managed to make individual contacts with village leaders, District's Forest, /Agricultural and Livestock staffs and also TAF officials both in Moshi and Karatu. Direct observation on agroforestry practices was done on site and photographs depicting various activities were taken.

### **3.4 Sampling Techniques:**

Simple Random sampling method was used for household in which semi structured Questionnaire were prepared and used to collect data. The Questionnaires were distributed to household through the probability method.

For Focus group discussion, members were selected among the villagers by village governments; information regarding the date and place for meetings were sent in advance so the necessary preparation could be done. Discussions with individual key informant with the village, districts and TAF officials were done in their respective office.

### **3.5 Data Collection:**

#### **3.5.1 Primary data:**

A variety of tactics and tools were used to collect primary data.

These includes:

- Questionnaires for household survey were used. These questionnaires contained questions that covered demographic, agroforestry practices and economic profiles.
- Direct / Villages walk. The purpose of these walk was primarily to build up a mental picture of the villages socio-economic status, agroforestry practices and status, specific information was gathered on; signs of livestock, degree of tree

planting species planted and planting pattern, materials used for house construction, business activities, farming techniques etc. A notebook was used to record the observations. This direct observation was very useful for crosschecking information given in meetings and / or interviews.

- The checklist to ensure that a minimum standard of information was gathered from each village guided focus group discussion.

### **3.5.2 Secondary data:**

A number of documents were consulted both at TAF Moshi and Karatu offices. These documents includes; the project proposal, progressive reports, Action Plan and relevant documents about the project.

### **3.6 Data Analysis:**

The Statistical Package for Social Science (SPSS) computer program analyzed primary data. Frequency, means and Percentages were computed. The outputs were summarized in tables and charts; and they are discussed in chapter IV of the report. Secondary data were analyzed by descriptive analyses.

## *CHAPTER IV*

### **4. FINDINGS AND RECOMMENDATIONS:**

#### **4.1 Findings.**

##### **4.1.1 Definition of key concepts underlying evaluation:**

Monitoring and Evaluation (M&E) is defined as “ The Collection and management of information to be analyzed and used for the regular and periodic assessment of a projects or program’s relevance, performance, efficiency and impact in the context of its stated objectives.” Project Monitoring and Evaluation System is a subset of the overall” Management information system” and it is concerned, specifically, with assessing achievement of a project’s objectives (Royal Ministry of Foreign Affaires, Norway 1993).

Monitoring refers to regular, ongoing collection, analysis and use of information within the project. Evaluation on the other hand, is the formal periodic assessment of available information usually involving key stakeholders within and outside the project. Project Monitoring and Evaluation is about assessing a project’s performance against its stated objectives covering final goal, immediate objective, outputs, activities, annual work plans and assumptions. The primary objective of project Monitoring and Evaluation is to assist the project and its partners to implement the project effectively through progressive evaluation of project implementation strengths and weaknesses.

In evaluation, the emphasis is normally on five general components namely: efficiency, effectiveness, impact, relevance and sustainability

- **Project efficiency** is the measure of out puts of the project. Qualitative or quantitative in relation to total resource inputs. In other words it measures how economically various inputs of the project are converted into outputs.
- **Project effectiveness:** It is the extents to which project objectives have been unambiguously and operationally defined with clear and appropriate outputs/indicators so as to make verification possible.
- **Project impact:** The concept of impact is far broader as it includes both positive and negative consequence whether these are foreseen and expected or not as a results of the project. These may be economic, social, political, technical or environmental effects.
- **Project Relevance:** This concerns whether the rationale behind the project is harmonized with priorities of the local community and the society in Question.
- **Project sustainability:** the Project sustainability is an overall assessment of the extent to which positive changes achieved as a result of the project can be expected to last after the project has been terminated. In many cases this is a Question of the relation between the necessary use of local resources and how recipients view the project. Sustainability is the final test of the project success.

## 4.2 Progress and Impacts of Project to six Karatu villages

### 4.2.1 Status of the project at the beginning.

At the beginning of the project, there was no base line study of the project area conducted.

### 4.2.2 Tree planting:

Discussion held with communities and field observations in the project area indicated that vegetations (flora) have improved over the past Eighteen years in Bashay, Gangali, Tloma, G/Arusha and Four Years in Kilimatembo and Changarawe Villages.

As up to June 2004 Total number of Trees planted in these six villages was 3.8 millions.

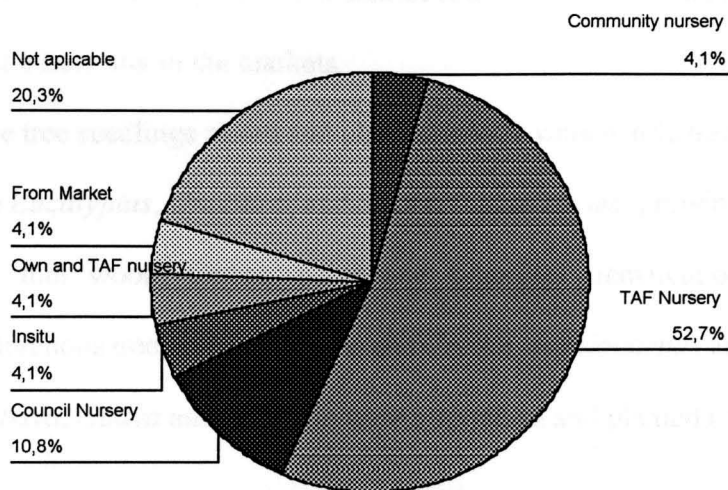
*Table 2: Number of trees planted by each project village*

NO	VILLAGE NAME	NO OF TREES PLANTED
1.	Bashay	1,000,000
2.	Gongah	750,000
3.	Thoma	1,200,000
4.	G/Arusha	750,000
5.	Kilimatembo	50,000
6.	Changarawe	50,000
	<b>TOTAL</b>	<b>3,800,000</b>

Source: Project 1986 - 2004 Quarterly Reports.

These trees planted were from different sources as shown in the Chart 1 below as obtained from the survey respondents: Tree seedlings from TAF nurseries supplies more than half of all trees planted.

**Chart 1: Sources of seedlings planted by villagers in the project villages**



Source: Project's Evaluation Survey 2005.

The Project has managed to establish tree nurseries in all villages: which are under the villages' management. Apart from established tree nurseries, four water tanks were constructed but only 3 of these water tanks are functioning to date. Due to lack of water sources at Gongali village the constructed water tank is not in use (*Appendix 6, b*). Due to this problem, to date there is no active nursery in a village; village residents collect tree seedlings from other villages. To avoid the problem the project should emphasize establishment of small individuals / household nurseries that will be easy to water. Initially in these village nurseries, the project engaged paid labourers, covered transportation costs, purchased nursery materials including polythene pots, fertilizers, seeds, pesticides, watering cans etc. But to date the Village Natural Resources Committees covers the costs of labourers for nursery activities. The project continues to assist them with potting materials, fertilizers, pesticides and seeds.

Due to project intervention, individuals have started their own tree nurseries. Other sources of seedlings are from district council nursery, some people collect from the wild and others buy in the markets.

The tree seedlings raised and planted mostly were exotic tree species, the most common are *Eucalyptus*, *Grevillea*, and *Senna*. These are fast growing species and were targeted for fuel wood, timber, poles and boundary demarcation (Ogweno et al, 2001), indigenous trees such as *Acacia* and *Croton megalocarpus* and fruit trees such as *Citrus*, *Papaya*, *Guava* and *Avocado* were also raised and planted (*Appendix 5*).

#### **4.2.3 Tree farming practices:**

Most farms in TAF project area were smallholdings with the average farm sizes ranging between 0.5-8.0 hectares. Thus are appropriate for adoption of agroforestry practices as describe by Jaetzold and Schmidt (1983).

Eight main tree farming practices are undertaken in the project area, namely; home gardens, scattered trees in crop land, shelter planting in public places, food crops and erosion control vegetation plantation as described by Rocheleau *et al* (1988).

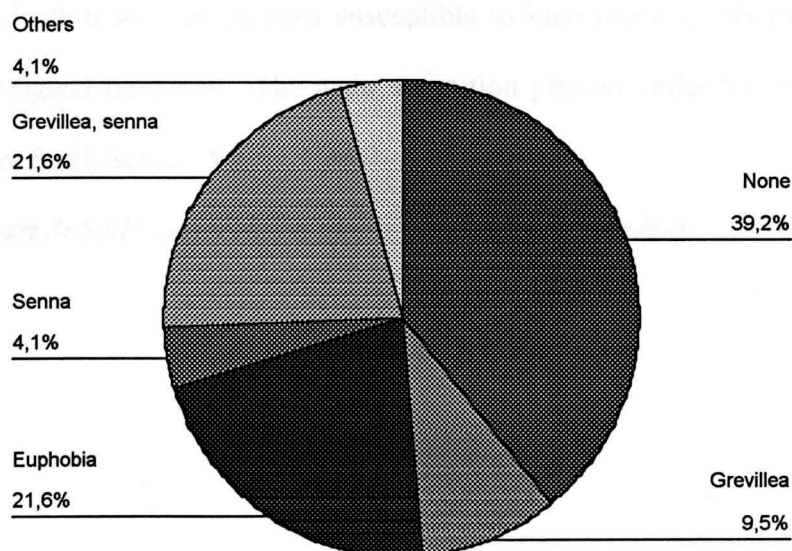
The house gardens (i.e. an intimate, multi-storey combination of various trees and crops around homestead.[Rocheleau *et al*, 1988] ) although with varied levels of diversity and richness. The home gardens in the project area had a characteristic of opened multilayered structure with the mixture of few bananas, shade trees mainly with *C. megalocarpus*, *Schinus mole*, *Casuarina spp* and *Grevillea robusta* occasional passions vines and fruit trees (mainly avocado, *citrus*, *guava* and mango trees) forming the upper



strata, the middle strata were dominated by maize together with fruits like *Annona* and *Guava*, while the lowest strata had vegetables. Most of these home gardens were not protected from animals, as they graze free. Few compounds have planted *Dovyalis caffra*, *Hakea saligna* and *Euphobia tiriculi* as live fence.

Some farmers had planted trees in woodlots (i.e. section of the farm is set aside exclusively for tree growing (Tejwani, 1987) mainly of exotic species such as *Eucalyptus* and *Senna*. These woodlots were managed mainly for fuelwood, and poles. Boundary planting with *Grevillea*, *Euphobia tiriculi* and / or *Senna* (i.e tree growing along farm / homestead boundaries) was observed being practiced by all the farmers.

**Chart 2: Boundary trees planted by respondents**



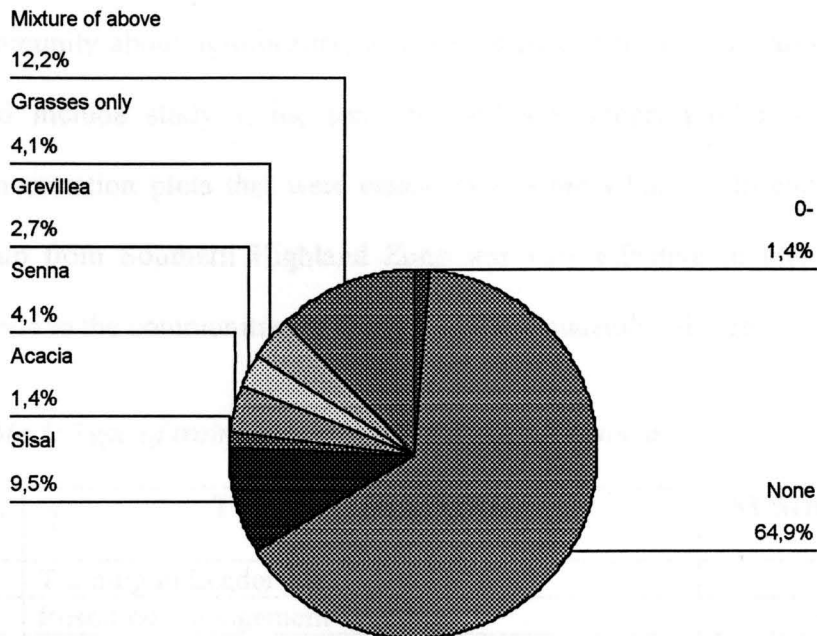
Source: Project's Evaluation Survey 2005.

Leaving scattered indigenous trees species such as *C. megalocarpus* *Cordia abyssinica*, *Albizia Spp*, and *Rauvolfia caffra*, also Grevillea as an exotic species in crop land was noted as the most common practice. Apparently, a significant number of farmer contacted dislike trees in croplands due to shading effects on crops. Apart from that also claimed that trees reduce cropland area size.

Therefore, proper species selection for crops land, their arrangement and management would help to make the practice more attractive hence encourage the adoption of the practice, the project should also focus on this.

Multipurpose tree gardens (multispecies, multilayer dense plant associations with no organized planting arrangement (Young, 1997) were located in agriculturally less productive sites or on sites susceptible to high erosion, this plays an economic and ecological functions. The main vegetation planted under this system of agro-forestry were Sisal, Senna, Acacia, Grevillea and grasses

***Chart 3: Soil Conservation plants planted by respondents***



Source: Project's Evaluation Survey 2005.

Farmers contacted during the survey revealed that soil erosion has been reduced by almost an average of 80% to date as compared before the project was initiated; this is indicated by eroded area recovered in the villages observed. Apart from planting vegetations in eroded areas, village by-laws have been enacted in all project villages to protect the area to allow natural regeneration to take place (Appendix 6 a).

#### **4.2.3 Interventions strategies used by the project in awareness creation:**

The evaluations has found that the recorded achievements of the project was mainly due to committed-professional-capable staffs the project has though few in number to deliver the services as appreciated by all survey respondents.

The project for the past 18 years has used various strategies that created awareness to the community about agroforestry, which is important for its adaptation. The approaches used include study visits, seminars and workshops, public meetings and use of demonstration plots that were established in the villages. In addition, use of drama group from Southern Highland Zone was very effective in increasing participation morale to the communities of Gongali and Kilimatembo village.

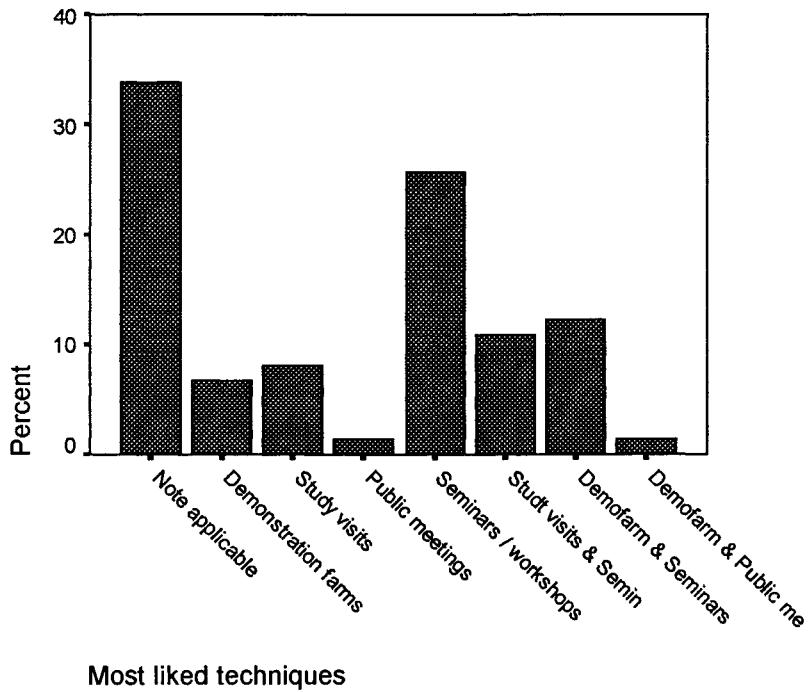
**Table 3: Type of training and number of people trained.**

No.	TYPE OF TRAINING	NUMBER OF PEOPLE TRAINED
1.	Training in Leadership	70
2.	Resource Management Training	1875
3.	Study tour	31
4.	Leaders Sensitization	87

Source: Project 1986 - 2004 Quarterly Reports.

The survey found that seminar and or workshop was most preferred training techniques by many respondents followed by use of demonstration plot and study visits, Use of public meetings was the least preferred by farmers.

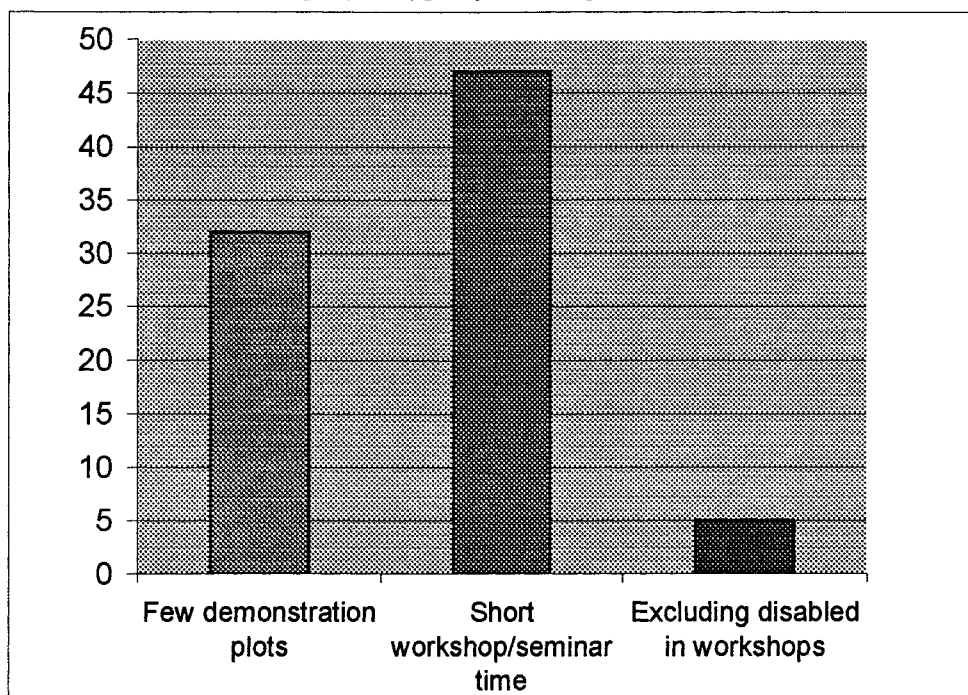
**Chart 4: Training techniques used by the project.**



Source: Project's Evaluation Survey 2005.

When asked why they prefer seminar/workshop, they stated that it is easy to learn, save time and allows for discussions. Through in-deep probing, the Evaluator found that provision of foods during the seminar was another reason why they prefer it. Few respondents (8.1 %) have stated that the project has a bias of not inviting disabled people in their trainings; hence they feel that they are not part of project beneficiaries

**Chart 5: Dislikes about project type of trainings**



Source: Project's Evaluation Survey 2005

Most of respondents have an opinion that the project should establish demonstration plot at sub-village level, this will enable many people to visit and learn from it. Currently the project has established six Agricultural demonstrations plots and organized annual farmers' day in which farmers and extension agents from different villages meet and exchange knowledge.

#### **4.3.4 Resource use conflicts:**

The Project has highly managed to reduce conflicts over resource use and land encroachments as boundary tree planting clearly demarcates individual, household,

community or general lands. For the past 3 years there is no reported case on land encroachment in Village Governments or Wards Authorities.

Farmers complained about boundary trees extending branches to neighbouring farms and affecting its crops. Proper management practices of boundary trees and species selection for planting should be instituted to avoid future conflicts.

#### **4.2.5 Formation of Income generating groups:**

Through TAF- Karatu Agroforestry Project initiatives communities in the five project villages have formed nine income-generating groups as a means of fighting poverty.

These groups are engaged in various activities such as raising tree in nursery, clay bricks making, diary business, handicrafts business, running of butcher and formation of Savings and Credit Cooperative Society (SACCOS) schemes.

***Table 4: Number of income generating groups per village***

VILLAGE NAME	NUMBER OF GROUPS	GROUP NAME	GROUP'S ACTIVITY
Changarawe	1	Mkombozi	SACCO and handcraft
Tloma	3	Siasa ni Kilimo	Tree Nursery
		Kujitegemea	Tree Nursery
		New Millenium	Tree Nursery
Bashay	1	Taaluma	SACCOS and Butcher Business
Gongali	3	Upendo	Diary
		Manyafi	Environment Conservation
		Juhudi	Diary
G/Arusha	1	Nguvu kazi	Clay bricks Making

Source: Project 1986 - 2004 Quarterly Reports.

The evaluator is of the opinion that the project should encourage also the formation of the woodlot farmers associations / societies (especially for Eucalyptus trees woodlots owners) as the newly constructed tarmac road enabled the Fiberboards factory from Arusha town to start buying trees in bulk in the project area, these associations will function as an important linkage between the farmer and the potential wood market (i.e. Fiberboards factory etc) This will motivate farmers to plant trees as an economic venture apart from ecological and domestic purposes.

#### **4.3 Project Efficiency.**

Project Efficiency is the measure of the outputs of the project, Qualitative or Quantitative in relation to the total resource inputs. In other words, it is a measure on how economically the various inputs of the project are converted into outputs. Though project efficiency was not assessed, but going through the project reports and discussions held with functional officers showed that it could be difficult to assess efficiency. There is a weakness in Monitoring as most activities done in field lacked recorded data, furthermore the existence of inconsistency of data between field office and headquarter in Moshi, subject their credibility in doubts. Therefore, Monitoring of the project activities should be strengthened.

#### **4.4 Project Effectiveness.**

Project Effectiveness is the extent to which the project objectives have been achieved or can be expected to achieve. Assessing effectiveness presupposes that the project



objectives have been unambiguously and operationally defined with clear and appropriate outputs/indicators so as to make verification possible.

Going by the above definition, the evaluation found that the TAF – Karatu Agroforestry Project recorded positive effectiveness as about 3,800,000 seedlings planted against target of 4,478,000 seedlings which is achievement of about 79%.

Also it was observed that the project areas are greener than before, as a result of forest tree growth. Due to this at least 80% of eroded land and gullies in villages has been ameliorated (*Appendix 6 a*). Field observations shows that project has achieved most of its objectives, but the problem is that not sufficient information have been reported on these activities done due to weak monitoring.

Few ambiguities in defining project targets were observed, this lead to difficulties in measuring of progress. For example with respect to project's target 2 – Markets Flooded with a variety of fruits and vegetables from local farms in the project area. The Word “flooded” is difficult to measure in really terms at the market.

#### **4.5 Project Relevance.**

This concerns whether the rationale behind a project coincides with priorities of the local community and society in question. On the other hand is a matter of the direction of the project in relation to its purpose. On the other hand it means looking at the societal

changes that may have taken place while the project has been in operation and asking to what degree this may alter the rationale for the project. Then among others, at certain level it is a question of how well the project has succeeded in reaching the target groups and whether it is directed towards areas to which the involved parties have given high priority.

The Project progressive reports have confirmed that TAF Karatu Agroforestry Project has great relevance to the target communities in line with Tanzania Government priority areas of poverty reduction and sustainable environmental conservation (Planning Commission 2000). This project is also in line with the TAF objective (a).

Through TAF Karatu Agroforestry Project awareness raising programs, the majority of Villagers (90.6 % of respondents) in the project area are aware about the importance of tree planting and environmental conservation for poverty eradication. Only few people (30.1 % of respondents) have realized an average income of Tshs. 10,000.00 from the sale of seedlings and building poles. Villagers are working in closely partnership with district natural resources and agricultural officials at moment than before.

Local communities are deriving almost much of their forest produce needs particularly firewood, medicines, fruits, timbers and building poles within or closely to their homestead.

The Evaluation found that villagers in the project area mostly planted trees for firewood, shade, and boundary demarcation and for fruits as their initial interests in practicing agroforestry.

Communities' future tree planting preferences is on fruits and timber trees species. This is due to fact that up to date villagers adopted agroforestry practices, did not realized significant direct financial gains from the practices apart from meeting household needs. Fruits and timbers have high potential of financial generation in the future as they have an increasing demand within the area. Therefore the project in the future should emphasize agroforestry practices that will have direct financial gains to villagers.

#### **4.6 Project Sustainability..**

Project sustainability is an overall assessment of the extent to which the positive changes achieved as a result of the project can be expected to last after the project has been terminated. In many cases this is a question of the relation between the necessary use of local resources and how recipients view the project. Sustainability is the final test of project success.

In regard to this project, sustainability is built on three pillars namely, the resource base, Institutional aspects and livelihood.

In terms of resource base, currently the six project villages meets their needs based on agroforestry produce and services, hence will continue to supports villager's livelihoods as long as people develop tree planting and Environmental conservation culture.

Among the factors that show sustainability character is the presence of knowledge in tree rising, tree management and conservation among villagers as the outcome of projects interventions as found during the survey as reported before in this report

Apart from above knowledge, the project has imparted communities with knowledge on crosscutting issues especially on Good Governance, Human Rights, HIV/AIDS Prevention, formation of SACCOS and Animal Husbandry (diary cattle management). This improves communities' peace and economic development situation as part of the necessary conditions for sustaining of agroforestry practice.

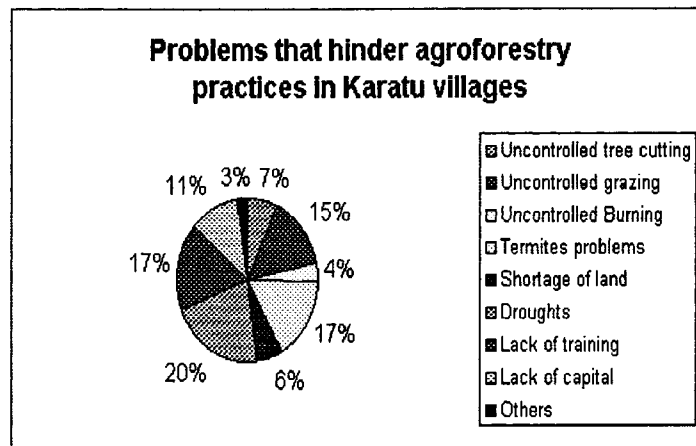
The presence of income generating groups in villages ensures the sustainability of the interventions advocated by the project. It was noted that there is element of community ownership of the project as the presence of Forest committee in each village, which are able to pay their village nursery attendants. Apart from that there are existence of private tree nurseries in villages as noted at Tloma village where there is three individually owned nurseries.

The existence of spillovers, whereby project interventions crossed project boundaries such as the case of tree planting practices in Ayulaba, Rhotia, Gerkum Lambo and Endomeranek villages is a strong sign of sustainability.

The evaluator has also noted that the project has involved Karatu District Officials in execution of project activities, this is the good indicator of sustainability.

However, it was noted that the existence of droughts, termites, uncontrolled animal grazing, and lack of training to many village residents are some of major problems that threatens the sustainability of the project.

**Chart 6: Agroforestry problems in TAF project villages as perceived by respondents.**



Source: Project's Evaluation Survey 2005

Another problem reported by respondents is lack of source of capital for financing private investment in agroforestry activities such as establishment of tree nurseries, beekeeping and so on. Further more lack of record keeping practice by villagers due to lack of training though majority of villagers are literate is another problem as record keeping acts as activities progress point of reference.

The Project and Community members should continue to cooperate in obtaining a reliable permanent water sources for nurseries in villages. Training should continue to

community to promote awareness and increase knowledge in resource management, record keeping and in all aspects related to project. District authority and community members should consider TAF Karatu Agroforestry Project contribution as temporary support; as such they should not develop a dependency syndrome on the TAF, this affect the sustainability of the project interventions. To, avoid the dependency syndrome the TAF project should facilitate the district authority and 6 project village communities to build their manpower and financial capacity through institutional strengthening and accessibility to source of funds to take over activities that are currently supported by the project to enhance sustainability.

#### 4.7 Strength, Weakness, Opportunities and Threats (SWOT) Analysis.

The table summarizes Strength, Weakness, Opportunities and Threats as perceived by the Focus group participants and individual contacts.

<b>Strength</b>	<b>Weakness</b>	<b>Opportunities</b>	<b>Threat</b>
Communities in the project villages are aware and supportive to the afforestation activities	Limited resources in terms of personnel and funds to cover adequately the project villages	Existing of supportive policies, district Authority and other development projects on afforestation activities	Poverty
Existence of strong Village Natural Resources Committees in the project areas	Low level of understanding of new policies related to land-use, forestry and environment and relate them to poverty alleviation initiatives at local level	Donor support on agriculture and Water supply projects	Political affairs conflicts
High level of literacy of local people	Inadequate participation of community in monitoring of project activities		
Existence of hard working behaviour of villagers	Agroforestry practices introduced mainly is biased to tree as product excluding other practices of economic and social benefits e.g. beekeeping, fish farming, fruits, vegetables etc.	Potential market available due to improved communication and expansion of tourism sector in the area	Drought
	Low incorporation of Soil fertility improvement measures within the project	Low Soil fertility	

## **4.8 Lesson Learned.**

### **4.8.1 The need for private tree nursery.**

The efforts of project's awareness creation and trainings have enabled individual Villagers to start raising tree seedlings from their own nurseries for their own use and for commercial purposes. This practice should be actively more encouraged and supported as it build less dependable community and sustainable sources of tree seedling in villages.

### **4.8.2 Agro-forestry conflicting interests.**

Besides the fact that villagers with full-spirit accepted and adopted the tree planting, the negative impacts such as shade effects, reduction of crops and grazing lands, boundary tree problems and so on if not well mitigated at a right time may discourage villagers to adopt tree planting and / or sometimes may be source of social conflicts.

### **4.8.3 Lack of Commercial aspects of the Agroforestry practices.**

The project has managed to make people adopt tree planting to meet their basic tree needs such as firewood, building materials, shade, wind break etc. but the practices failed to contribute significantly in terms of direct financial income to the people, hence decreased some villagers interests in tree planting. Therefore, the agroforestry practices to be introduced to the people should deliberately planned in advance to meet local peoples' both domestic needs and income generation.



#### **4.8.4 Project Spill-over.**

Successful project interventions at local level have crossed the project boundaries. For example people in Ayulaba, Rhotia, Gerkum Lambo and Endomeranek villagers have reported to adopt agroforestry practices as a result of visit to the project villages.

#### **4.8.5 The importance of institutional capacity building in community-based agroforestry program management.**

Institutional capacity building is an essential step in the effort to develop a more effective and sustainable foundation for community based agroforestry program management. The establishment of strong functional natural resources committee in project villages is the evidence of this effort done in Karatu villages by TAF Agroforestry Project.

#### **4.8.6 Preferences for farm tree species.**

Although the project has introduced various tree species that are suitable to the area, the local people have their own tree species preferences according to their own use experiences. For example local people prefer mostly the indigenous tree *C. megalocarpus* for firewood than Eucalyptus trees planted.

#### **4.8.5 Lack of soil fertility improvement package in project's program**

Introduced tree planting practices didn't consider the improvement of soil fertility to increase crop production as a result people perceived that tree planting is among the factors that contributed to decline in crops production as trees compete for nutrients for the crops.

## **4.9 Conclusion and Recommendations**

### **4.9.1 Conclusion.**

The TAF Karatu Agroforestry Project is now well known to both project and non-project villages and has positively influenced local communities tree planting and environmental conservation practices to a large extent.

Although majority of farmers have planted exotic tree species (Eucalyptus and Senna) probably because of their high growth rate for the purpose of quick provision of fuel wood, poles and boundary demarcation, the integrations of these trees in crop lands was however, poor because of their negative effects of crops.

The emergence of private tree nurseries seems the right approach to sustainability of tree planting practices. Unfortunately majority of villager are faced with the constraints of lack of capital for investing in tree nursery,

The formation of Village Natural Resources Committees and income generating groups ensures true community participation. Therefore the TAF Karatu Agroforestry project has been instrumental in driving the agenda towards local control of tree planting and environmental conservation program in Karatu district. Now, it's time for TAF to consider scaling up the project in Karatu.

## **4.9.2 Recommendations:**

### **4.9.2.1 Introduce tree that improves soil fertility and fruit production.**

Local communities after attaining wood based needs such as poles, firewood's etc. In the future, their main concerns are generation of income and improvement of soil fertility for production of crop. Therefore the project should focus and emphasize planting trees that improve soil fertility and fruit production for health as well as income generation. This should be synchronized with planting purpose for production of timber, poles, fuel wood and other benefits..

### **4.9.2.2 Facilitate access to financial sources.**

Local people lack funds for investment in agroforestry practices (from nursery establishment to marketing of products and services), the project should consider to facilitate the local communities to access to financial institutions such as Microfinance Institutions, donors and banks. This will build up local financial capacity that is important for the promotion of agroforestry practices.

### **4.9.2.3 Increase of demonstration plots.**

The demonstration plots are “true example” in training; has high positive impacts to the farmers, as they believe what they see and touch. Therefore it is the right time now for the project to establish more demonstration plots up to sub village level to enable more farmers to have an access and opportunity to learn from them.

#### **4.9.2.4 Agroforestry project should facilitate introduction of commercial aspects of the agroforestry.**

Currently, insignificant number of people have benefited directly financially by adopting agroforestry practices in the project area. This discouraged its adoption. Project should deliberately emphasize the commercial aspects of the agroforestry to enhance adoption of agroforestry practices within the area such as beekeeping fish farming, handcrafts making, ecotourism, establishment of camping sites, linking of woodlot farmers to potential markets and related activities.

#### **4.9.2.5 Facilitate Community Human Resources building capacity.**

The project has struggled to enable local people to establish their management institution, the insufficient knowledge local people have in performing various activities associated with agroforestry practices threaten the efficiency and effectiveness of these institutions in implementation of the program. It is emphasized that local community should be trained in Organizational Management, Record Keeping, Simple Book Keeping, Entrepreneurship, Farm and Boundary tree Management. etc This is important gear for sustainability of the institutions and the program itself.

#### **4.9.2.6 Strengthening Monitoring and Evaluation System**

The contemporary seemingly constraints associated with data acquisition and management could be solved by, strengthening monitoring and evaluation system for TAF Karatu Agroforestry project. The project should develop a data management system and train people on data acquisition and management at all levels.

*CHAPTER V.***5 IMPLEMENTATION OF ASSIGNMENT**

The completed evaluation document was used as the basis in designing Outputs and Activities that will be part of the project phase two-implementation plan document (2006 –2008). The Logical Framework Approach was used to obtain outputs needed and their intervention activities. This Logical Framework Approach exercise was carried out at TAF office in Moshi by a team of people comprising of; the evaluator himself, TAF Karatu Field Officer, TAF Executive Officer, Karatu District Planning Officer, District Agricultural and Livestock Officer, Community Development Officer, District Cooperative Officer and Four Karatu farmers.

The activities have been designed to attain a particular output as recommended in the project evaluation report.

**5.1 Phase Two Outputs:****OUTPUT 1:**

**Capacity of TAF strengthened, to implement Karatu Agroforestry Project Phase 2 ACTIVITIES.**

1. Awareness raising to leaders and civic institutions
2. Skill development to staff & leaders
3. Study Visits for TAF facilitators
4. TOT for TAF facilitators

5. Methods documentation.
6. EC /SCC Quarterly Review meetings
7. Monthly facilitators meetings
8. Backstopping for field activities
9. Organise the formation of a net work forum for development support agencies in the  
   . Agroforestry and environment related areas.
10. Networking & collaboration
11. Project evaluation
12. Facilitate OD process for TAF
13. Purchase of equipments
14. SCC Coordination

## **OUTPUT 2:**

**Improved capacity of 41,500 farmers in agro forestry production, food security  
and management of natural resources**

## **ACTIVITIES.**

1. Carry out baseline survey farming systems
2. Train farmers
3. Sensitize farmers on gender issues
4. Sensitize farmers on impact of HIV/AIDS to dev.
5. Facilitate linking HIV/AIDS victims with existing support service providers

6. Production of information materials
7. Train farmers and leaders on participatory environmental. Planning, monitoring and evaluation
8. Train farmers on national policies, laws and strategies on poverty reduction
9. Training on strategic planning/ record keeping
10. Facilitate learning through Study circle
11. Facilitate learning through Study Visits
12. Facilitate learning through Demonstrations
13. Facilitate the communities of Karatu to prepare, familiarize, and enforce bye laws for environmental conservation

### **OUTPUT 3**

#### **Community based organisations are effectively promoted**

#### **ACTIVITIES.**

1. Carry out baseline survey on community based organisations and Village Environmental Committees
2. Prepare an inventory of community based organisations working on agro forestry, environment hiv/aids and gender issues in project areas.
3. Facilitate group formation
4. Consolidation of groups into farmers' organizations.
5. Conduct TOT Courses for identified members of cbos, village environmental committees
6. Train Village Leaders on effective leadership and community organisation
7. Facilitate linkages of the community based groups, villages with market outlets and other

institutional service providers in project areas

#### **OUTPUT 4**

##### **Promotion of markets and marketing of Agro forestry product**

#### **ACTIVITIES**

1. Sensitize on marketing
2. Sensitize on bulking & linkages to available storage facilities
3. Facilitate formation of marketing organizations
4. Facilitate provision market information points
5. Provision of market information
6. Promote value addition
7. Facilitate market research and survey
8. Facilitate attendance of farmers to trade/farmers shows
9. Carry out Evaluations (Mid and Final Evaluations)



## **5.2 Promotions of markets and marketing of agro forestry products**

### **5.2.1 Introduction.**

Though there are four outputs that should be attained in phase two of the project life as identified by the logical framework approach exercise, the exercise team deliberately gave higher priority on output number four: **“Promotions of markets and marketing of agro forestry products”**. This is because, very few people have been benefiting directly financially by adopting agroforestry practices in Karatu villages, this discouraged its adoption. In order to enhance its adoption, **commercial aspects of agroforestry should be incorporated and emphasized in the implementation of the project** as recommended. Promoting markets and marketing of agroforestry products does this. Recognizing the importance of this output, a detailed description of the activities under this output is given below.

### **5.2.2 Activities description**

#### **1. Sensitize on marketing.**

The marketing awareness creation meetings and seminars will be carried out in the villages. Farmers will be sensitized on the importance market information; how to use market information to access / penetrate markets, price setting, trade negotiations etc. with the aim of increasing profits.

#### **2. Sensitize on bulking and linkage to available storage facilities**

The project will facilitate the identification of storage facilities available within and outside the project area and disseminate this information to farmers and link to them.

Further more farmers will be taught how to collect and compile yields (quantity) data per village or per group basis and its importance in marketing (especially for large buyers).

### **3. Facilitate formation of market organizations**

The project will encourage farmers to join and form market organizations. Also, the formed organizations will be assisted and facilitated in the process of constitutions drafting and registrations at relevant authorities. The organization managements will be strengthened through training in simple bookkeeping, leaderships and group dynamics, entrepreneurship etc.

### **4. Facilitate provision of Market Information Points**

The project will facilitate the farmers to locate the site that is accessible to majority of its members to be market information points. These information sites will be equipped with facilities such as notice boards, files, file cabinets, tables and chairs. Telephone and fax will be installed at one point.

### **5. Provision of market information**

The project in collaboration with district council authorities and other business community will collect from within and outside district market information and disseminate to farmers. Also data on farmers' products in terms of types, quantity and quality will be submitted to potential buyers by the project. The information will be available at market information point notice boards.

### **6. Promote Value addition**

Farmers will be trained in primary processing products, packaging and labeling such as;

- Pressing of oil seeds to produce cooking oils

- Packaging of honey into small containers and labeling.
- Processing wild fruits into juices, jam and wines
- Processing of milk into ghee, cheese and butter
- Medicated soap making from oil pressed from *Jatropha* seeds.

The value added products have higher profit margins.

#### **7. Facilitate market research and survey**

The project will facilitate market research and survey exercises that will identify existing and new potential markets for farmers' products. This will broaden farmers' products outlets.

Farmers will know the market location, entrance conditions and their constraints; these information will be used in designing a winning marketing strategies.

#### **8. Facilitate attendance of farmers to trade/farmers shows**

The project will facilitate farmers to attend trade / farmers shows each year such as Dar es Salaam International Trade Fair, Nane Nane Arusha Agricultural shows, Small Industries Development Organization fairs, Karatu Farmers' day etc. These events are important as they enable farmers to learn and share experiences with other participants, also open new outlets for farmers' products.

#### **9. Carry out Evaluations (Mid and Final evaluations).**

The project will carry out two evaluations of its activities. One evaluation will be at the mid of the phase two and the other one at the end of the phase two. The Consultant will be hired to facilitate the evaluation exercise in a participatory approach. The project stakeholders' representatives will participate in both evaluations.

### 5.2.3 Logical framework

To keep implementers in achieving this very output (Output 4) below is the Logical framework Approach matrix detailing the necessary monitoring indicators / processes.

**TAF Karatu Agroforestry Project 2006 – 2007.**

**Output: *Promotion of markets and marketing of agroforestry products.***

Activities	Indicators	Means of Verification	Important Assumption	Resources
1 .Sensitize on marketing	i. Number of public awareness meetings and group seminars conducted  ii. Number of people attended in the seminars and meetings	<ul style="list-style-type: none"> <li>Quarterly progress reports</li> <li>Marketing awareness campaign reports</li> </ul>	Beneficiaries attend the meetings	-Transport -Facilitator -Stationery - Allowances
2. Sensitize on Bulking and Linkage to available storage facilities.	i. Number of people contacted ii. List of types and location of storage facilities identified in the project area available.	<ul style="list-style-type: none"> <li>Quarterly and Annual Progress reports</li> </ul>	Quantity and location of agro-forestry products known in advance	- Transport - Facilitator - Stationery - Allowances.

3. Facilitate formation of marketing Organizations	i. Number of Marketing Organizations formed and functioning.	<ul style="list-style-type: none"> <li>• District Council Organizations registration record.</li> <li>• Number of Marketing Organizations' constitution prepared and adopted</li> <li>• Annual project progress reports</li> </ul>	Political will to support small farmers organizations.	<ul style="list-style-type: none"> <li>- Transport</li> <li>- Facilitator</li> <li>- Stationery</li> <li>- Allowances</li> </ul>
4. Facilitate provision of market information points	i. Number of Information points establishes ii. Type and number of communication facilities procured and installed in the information points	<ul style="list-style-type: none"> <li>• Quarterly and annual progress reports.</li> </ul>	Community members voluntarily provide office spaces	<ul style="list-style-type: none"> <li>- Stationery</li> <li>- Communication equipments.</li> <li>- Allowance</li> </ul>

5. Provision of market Information	<p>i. Farmers aware of price, quality and quantity needed by the markets.</p> <p>ii. Existence of uniform price and pricing mechanism among the farmers.</p>	<ul style="list-style-type: none"> <li>• Village market survey reports</li> <li>• Quarterly and Annual progress reports.</li> </ul>	Communication and Information facilities effectively functioning even after end of project.	<ul style="list-style-type: none"> <li>- Allowance</li> <li>- Stationers</li> <li>- Money for communication service charges</li> </ul>
6. Promote Value-Addition	<p>i. Number of people trained in value-addition</p> <p>ii. Number of Trainings done in value-addition</p> <p>iii. Types of value-added-products produced for market and/or home use.</p>	<ul style="list-style-type: none"> <li>• Training reports</li> <li>• Project Quarterly and Annual progress reports</li> <li>• Market survey reports</li> </ul>		<ul style="list-style-type: none"> <li>- Allowance</li> <li>- Stationary</li> <li>- Consultant.</li> <li>- Transport.</li> <li>- Equipment.</li> </ul>
7. Facilitate market research and survey	<p>i. Market research and survey document.</p> <p>ii. Linkages to potential markets established.</p>	<ul style="list-style-type: none"> <li>• Market research and surge Document</li> <li>• Project Annual reports.</li> </ul>		<ul style="list-style-type: none"> <li>- Transport</li> <li>- Consultant</li> <li>- Allowance</li> </ul>

8. Facilitate attendance of farmers to trade/farmers shows.	<ul style="list-style-type: none"> <li>- Number of trade/farmers shows attended.</li> <li>- Number of farmers attended Trade/farmers shows.</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly and Annual progress reports</li> </ul>		<ul style="list-style-type: none"> <li>- Transport</li> <li>- Allowance</li> <li>- Stationers</li> </ul>
9. Conduct Mid-Term Evaluation	<ul style="list-style-type: none"> <li>- Mid Term Evaluation report available</li> </ul>	<ul style="list-style-type: none"> <li>• Mid term evaluation report.</li> <li>• Annual project report</li> </ul>		<ul style="list-style-type: none"> <li>- Transport</li> <li>- Allowance</li> <li>- Stationers</li> <li>- Consultant</li> </ul>
10. Conduct Final Evaluation	<ul style="list-style-type: none"> <li>- Final evaluation report available</li> </ul>	<ul style="list-style-type: none"> <li>• Final Evaluation report</li> <li>• Annual project report</li> </ul>		<ul style="list-style-type: none"> <li>- Transport</li> <li>- Allowance</li> <li>- Stationers</li> <li>- Consultant</li> </ul>

#### 5.2.4 The Action plan activities schedule 2006 – 2008.

No.	Activities	Year 2006				Year 2007				Year 2008				Responsible
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
1	Sensitize on Marketing													Project Field Officer
2	Sensitize on bulking and linkage to available storage facilities													Project Field Officer
3	Facilitate formation of marketing organization													Project Field Officer, District Community Development Officer
4	Facilitate provision of market information points													Project Field Officer, Villages Executive Officers
5	Provision of market information													Project Field Officer, District Executive Director, Marketing Organizations Chairpersons
6	Promote Value Addition													Project Field Officer, Villages Executive Officers
7	Facilitate market research and survey													TAF Programme Officer
8	Facilitate attendance of farmers to trade / farmers shows													TAF Programme Officer, Farmers
9	Conduct Mid Term evaluation													TAF Executive Officer, Farmers
10	Conduct Final evaluation													TAF Executive Officer, Farmers



### 5.2.5 Activities budget

**Project Name:** TAF Karatu Agroforestry Project – Phase II. **Period:** 2006 – 2008 **(In Tanzanian Shillings).**

**Item:** Promotion of markets and marketing of Agro forestry products.

No.	Activity	Acc. No.	Target	Units	Unit cost	Budget			Total
						2006	2007	2008	
1	Sensitize on Marketing		6	Villages	88,234	352,936	529,404	529,404	1,411,744
2	Sensitize on bulking and linkage to available storage facilities		6	Villages	150,000	900,000	900,000	900,000	2,700,000
3	Facilitate formation of marketing organization		6	Villages	312,240	1,248,960	1,873,440	1,873,440	4,995,840
4	Facilitate provision of market information points		6	Villages	60,000	180,000	180,000	0	360,000
5	Provision of market information		6	Villages	25,000	150,000	150,000	125,000	425,000
6	Promote Value Addition		6	Villages	600,000	3,600,000	3,600,000	3,600,000	10,800,000
7	Facilitate market research and survey		1	District	2,025,000	2,025,000	2,025,000	2,025,000	6,075,000
8	Facilitate attendance of farmers to trade / farmers shows		6	Villages	700,000	2,800,000	4,200,000	4,200,000	11,200,000
9	Conduct Mid Term evaluation		1	Project	6,450,000	0	6,450,000	0	6,450,000
10	Conduct Final evaluation		1	Project	7,500,000	0	0	7,500,000	7,500,000
<b>Total</b>						<b>11,256,896</b>	<b>19,907,844</b>	<b>20,752,844</b>	<b>51,917,584</b>

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