

SOCIAL FORESTRY IN THE PUNJAB - A MAJOR BREAK THROUGH

BY

ANWAR MASRUR
SAHIBZADA M. HAFEEZ
DR. ZAFAR IQBAL
DR. M. JAHANGIR GHAURI

1993

SOCIAL FORESTRY IN THE PUNJAB-A MAJOR BREAK THROUGH

Anwar Masrur
Sahibzada M. Hafeez
Dr. Zafar Iqbal
Dr. M. Jahangir Ghauri¹

1. INTRODUCTION

1.1 State of Forestry

Punjab inherited a small area under forests at the time of partition in 1947. It was 1.94% against the normal requirement of 20-25%. The Punjab Forest Department made strenuous efforts since then to raise more forests & succeeded to enhance the area to 3.11% which is still insufficient for a balanced economy. The total land area of the Punjab is 20.63 million hectares, out of which the productive forest area is only 0.57 million hectares. These forests produce 82000 m³ of timber and 164,000 m³ of fuelwood. The present fuelwood requirement according to Forestry Master plan is 23 million m³ for meeting 50% of domestic energy requirements. The remaining 12% are provided from commercial fuels and 38% from agriculture waste/residues. It is not possible to get the required quantity of fuelwood from state forests due to the fact that yield per unit area is actually declining because of the non-availability of requisite inputs.

It is also not possible for the Government to set aside new state lands for afforestation as it did when large irrigated tree plantations were created fifty or hundred years ago as land is needed for agriculture. Under these circumstances, a social forestry approach involving the participation by farmers in tree planting to meet their local needs for wood and to provide surplus wood for sale to the industries appear to be a plausible way to successfully increase Pakistan's production of wood. This has become a very adaptive approach throughout the developing world and the same appears to be possible in Pakistan.

1.2 Energy challenge

More than two-thirds of people in developing countries depend mainly on wood for their household energy needs. In rural areas, the forest as a source of fuelwood is fundamental to everyday life. More than 80% of the wood harvested in developing countries is burnt to cook meals, heat homes and sustain rural industries. Population growth and the continuing dependence on fuelwood have led supply to fall too far behind demand.

The fuelwood crisis is more than just an energy issue; it is an ecological issue too. Where regular fuelwood supplies do not keep up with demand, trees are cut down at random, leading to deforestation. The stability of the environment is compromised and the potential for food production is impaired. The fuelwood crisis is a social, economic and nutritional issue. Where fuelwood supplies are already short, consumption by the people most dependent on them is driven well below subsistence requirements.

1.3 Trees as a source of Food

Forests and trees are intimately linked to agriculture. They play vital role in sustaining crop yield by helping to maintain the soil and water base. They ensure environmental stability by mitigating the effects of climatic irregularities, storms and winds. They reduce soil erosion and moderate stream flows. They restore soil fertility in shifting agriculture. By slowing the wind and increasing soil moisture, they increase farm yields in arid and semi-arid areas. Finally, they provide a significant proportion of livestock feed. Sustainable agriculture, including crop and livestock production, is the corner-stone of national development in most tropical countries including Pakistan. A large variety of wild fruits and nuts are obtained from the trees. It has been estimated that around 150 tones of wild fruits are harvested every year. The fruits are mainly consumed fresh or dried for sale in the market by the local people. It has been estimated that 5000 peoples are employed in the collection and transportation of different varieties of wild fruits. Trees are the natural habitat of all the wildlife. No doubt, the habitat has been disturbed to a very great extent in the country but several kinds of wildlife such as partridges, peasant, deer, hobura bastard, duck, etc. are a very useful source of food for the people. Also there is a booming industry of exports of skins, hides and live birds.

2. HISTORY AND EVOLUTION OF SOCIAL FORESTRY

The concept of trees on farmlands actually originated from the realization that trees played a very important productive and protective role in safe-guarding the vital interests of farmlands and their produce. In Punjab, trees on farmlands have since long been making a very handsome contribution to supplement the production from the state forests. Eversince the development of irrigation system in Indus Basin, people have been planting trees of various species. However, since removal of trees has been much faster than the replacement, the inevitable result is that the resource has dwindled at a fast pace. One possibility to bridge this yawning gap between supply and demand would be to put more area under state forests. For the time being it seems to be rather difficult because of paramount claim of agriculture to feed the ever increasing human and livestock populations.

2.1 Tree Planting Campaigns

Some sort of motivation has always been provided by the government to the people to plant trees. May be it is in the form of free land grants to plant block plantation or to grow the trees on the agricultural lands in the manner they like. Regular campaigns to persuade the people to plant trees started with one-day tree planting ceremonies in a year, changing over to one-week celebrations, once in spring and again with the on-set of monsoons. The root-shoot cuttings initially were supplied free of cost and

then on subsidized rate of 10 paisa each. As a matter of fact with improved nursery techniques, planting stock is now distributed all the year round and the demand for the planting stock is always there. A net work of nurseries has been laid out in all accessible areas so that the buyers do not have to run around to get the required number of plants.

2.2 Trees for settlers in the new barrage zone.

Agroforestry assumed new directions and significance in Punjab when barren land was brought under irrigation in the Thal desert. The new settlers, of course, with the help of the forest department planted trees on their water courses, farm roads, around the fields for protection against desiccating winds. It was perhaps for the first time that shisham was planted in conjunction with agricultural crops like wheat and sugarcane. Fertilizers added to the crops made a highly beneficial effect on shisham as well and 5 m height was recorded in one season. The added advantage was that sugarcane reduce branchiness in shisham and practically straight bole trees were available.

2.3 Development of Agroforestry

a. Private land

In view of the scarcity of wood in the largest province of the country and otherwise maximum possibilities of a large scale agroforestry programme due to availability of land and water, special attention has been paid to agroforestry in the Punjab. A nucleus organization was created under a development scheme in 1975-76 called "Promotion of Tree Plantation in the Punjab". Its main object was to organize the hitherto sporadic tree planting campaigns on scientific lines and also to provide technical guidance on tree planting to the farmers. This project continued till 1984 when a larger and better conceived scheme called "Farm Forestry Pilot Project" was initiated in six selected districts i.e. Bahawalpur, Bhakkar, Multan, Jhang, Jhelum and Mianwali. Forest nurseries were raised all over the province and seedlings distributed to the farmers.

Satisfied with the performance of these two projects and because of positive response from the farming community, the Punjab government decided to launch another scheme titled "Social Forestry in the Punjab" for the period 1985-88. It aimed at establishing and maintaining woodlots and linear plantations in private farmlands in addition to raising of bed nurseries. It was followed by another project "Afforestation of Marginal Private Farmlands in Irrigated Tract of the Punjab", which lasted four years. In order to provide polythene plants to the farmers, another project "Raising of Nursery Plants for Saline and Marginal Private Farmlands in Irrigated Tract of the Punjab" was approved for a period of three years starting 1986. Under this project tube plants were supplied to the farmers at the subsidized rate of Rs. 0.75 per plant.

Social forestry received a great impetus when the Punjab Chief Minister decided to institute a series of prizes at Provincial, Divisional and District levels for the tree growers. The plan envisages to generate a competitive spirit in various groups of population for undertaking afforestation on private lands on self-help basis. The prizes to be awarded on the basis of evaluation include Suzuki Car, sponsorship for Hajj/Umra, free trips to New York and South Asia besides cash prizes at Divisional and District levels. Other incentives such as subsidized tree planting in private lands, essay, poetry and slogan competitions played a key role in invoking love for trees in the Punjab. In the subsidized tree planting campaign, active participation by the farmer was ensured. He had to bear the expenses for jungle clearance, site preparation, weeding, cleaning and pruning. The department was required to bear the cost of planting, irrigation and maintenance.

To implement various social forestry schemes a programme for training of staff was started in 1982-83 and completed in 1985-86 at a total cost of Rs. 21.45 lacs. Under this scheme, 21 Sub Divisional Forest Officers were trained in Pakistan Forest Institute, Peshawar for a period of two years and 118 Social Foresters and 91 Nursery Guards got training at Forest School Ghoragali and Bahawalpur.

b. State land

In another model of agroforestry introduced in irrigated plantation, the land is prepared by the department. The work includes removal of mesquite, preparation of water courses and trenches. The farmer is supplied with the requisite planting stock and is helped with planting on proper spacing which is usually 2 x 3 m. From then onwards, the farmer is required to maintain the plants, irrigate and remove all the weeds. He also does hoeing and applies fertilizers to his crop from which trees get duly benefitted. As a compensation for that he is allowed to cultivate the area in between the tree rows for a period of one year. Usually tomatoes, lady finger, radish, turnips, carrots and squashes are grown by him. After one year he leaves this particular area and is given some land nearby which is to be afforested according to the schedule. In this manner the department is saving the cost of maintenance for one year which comes to Rs. 2500/ha and the farmer gets Rs. 750-1000 per crop through sale of the vegetables. Almost 99% plants are there, growing vigorously due to removal of weeds, intensive soil working and fertilizer effect. Every year hundreds of hectares are being planted under this programme.

2.4 GOP-USAID Model (FEFP)

About seven years back, Farm Energy Forestry Project which is the operational phase of the Forestry Planning and Development Programme of Government of Pakistan was launched with the assistance of US AID. It is essentially a tree promotion project wherein the individual farmer families are motivated to raise trees

on their lands for production of fuel and fodder.

The model aims at involving the farmers at all stages of decision making as well as the implementation. The idea is to completely privatize the institution of forestry so that "forestry of the people, for the people" develops in right earnest. At the initial stages the government forest departments are acting as motivation catalysts and technology epicenters. The farmer is made conscious of the role the tree production can play in stabilizing his economy, fulfil his needs of fuel and fodder, protect his crops and add to overall national development.

Briefly, the FEFP model includes following steps:

- Initial contact with farmer and his education through information.
- Motivation to raise trees/grasses and optimise production of land.
- Technology transfer through training of farmers for nursery production and on-farm planting.
- Nursery production by farmer and purchase of planting stock by the project.
- Supply of planting stock to on-farm planters free of cost, for initial planting and for beating up failures.
- Provision of land-use support works such as soil conservation, range improvement, etc. where-ever necessary.
- Continuous on the job and special training for farmers at all phases.
- To aim at a stage when the nursery production and on-farm planting would be fully privatized under an economic pull through sale of trees.
- To encourage growing of vegetables and agricultural crops between the rows.

3. MAJOR ACHIEVEMENTS.

The achievement made under various development projects of Farm Forestry implemented so far are summarized below:

Name of Scheme	Period	Achievement	
		Financial (Rs. lacs)	Physical (Area in acre No. in lacs)
1. Promotion of Tree Plantation in the Punjab.	1976-77 to 1984-85	591	Bed nurseries=3471 Potted plant = 327

2. Pilot Project Farm Forestry in the Punjab.	1981-82 to 1983-84	47	Bed nurseries= 199 Potted plants= 21
3. Farm Forestry in the punjab	1985-86 to 1987-88	185	Bed nurseries=1862 Woodlots =4933
4. Afforestation of marginal private lands in irrigated tract of the Punjab.	1987-88 to 1990-91	79	Woodlots =2403 Linear plan- tation. =6938
5. Raising of nursery plants for saline and marginal farm lands in irrigated tract of the punjab.	1987-88 to 1990-91	88	Nursery plant= 161
6. Social Forestry in the Punjab	1988-89 to 1990-91	143	Bed nurseries= 266 Woodlots =6397 Linear plan- tation. =36567
7. Forestry Planning and Development Project.	1984 to 1993	8430	Woodlots/ Linear plan- tation. =32000

4. PROBLEMS

4.1 Size of land Holding

The foremost argument is that farmers do not have enough land to plant trees. Generally speaking, the land holdings are not very big and it is fairly difficult to persuade a poor peasant to part with his age old tradition and make the long term investment in tree plantations. However, it may be mentioned that no land is too small for planting at least one or two trees on it. If not on the land itself, trees can be planted on the borders. Another problem in small holdings is that one may like to plant trees on the border of the field but the owner of the contiguous field would object to it.

An important factor in this regard is that there are different categories of land with respect to their production index. Some are really excellent and highly profitable for agriculture but what about those lands which are sandy, eroded and infertile. Even some cultivated fields go out of production after sometime due to faulty agricultural practices. All such lands can be profitably put under trees and may revert to agriculture later with the resultant improvement in its production capacity due to tree growth.

4.2 Plant Competition

Rainfall in most of the areas of Pakistan is scanty, erratic and seldom sure. Trees need water to grow which the land-owners will have to spare. Canal water is a highly prized commodity for agriculturists and they are never ready to part with it at any cost. Reports of murders are not uncommon on account of such a simple provocation that some-one diverted canal water to one's field during the night.

However, this fact is conveniently lost sight of that after establishment, the trees are in a position to tap the deeper sources of under-ground water due to their very efficient root system. Also if the trees are planted in rows, they can be separated from the agricultural field by digging a half a meter deep trench in between so that the roots are not in a position to usurp water at least from upper layers of soil. Moreover there are a large number of xerophytic species requiring comparatively less water. Such trees can be planted in the water deficit areas.

Some of the farmers advocate that the agricultural crops come in a stiff root competition from the trees which take away most of the fertilizers added to field for the benefit of the agricultural crops. Here again, it may be mentioned that root zone of the trees and shrubs is much deeper than the root zone of the most of the agricultural crops and trees can only be partly blamed for that.

Regarding competition for sunlight, it may be stated that most of the trees in the plains are deciduous and shed their leaves in winter which is the main period of the year when some sort of light competition can really have an adverse effect. In summer the sun is very hot and shade would not be of a serious consequence. Moreover, there are trees which do not form a big crown. For example, shisham (Dalbergia sissoo) although casts medium shade but fixes atmospheric nitrogen also. "Saru" variety of babul (Acacia nilotica) which is suitable for planting in saline areas has practically no shade. Similarly, Populus nigra in Peshawar Valley does not have much of a crown. Other species can be lopped or pruned to permissible limit without damaging the tree itself.

4.3 Damage by insects, animals and diseases

Another important issue which has quite often come under discussion is the possibility of tree carrying some insect and fungal diseases. These apprehensions may not be entirely unfounded but a few timely sprays of insecticides and pesticides always help. Perhaps the fact that it is an established and recommended practice to plant poplars and Paulownia with wheat and other crops in Italy and China should dispel most of the doubts.

The most harmful bird is considered to be the sparrows which perch on the trees in large number and make swoop after swoop to pick up the grain. Scarecrows do not scare them away. It has, however, been seen that even if there is no tree around to sit and have rest, sparrows still eat up the crop. They sit on the stalks of wheat, sorghum, maize and then fly back to some adjacent clear

ground. Nevertheless the fact should not be lost sight of that the birds also pick up a large number of larvae so harmful to the crop, and eat them up alongwith the grain to make it a full protein diet for themselves. In the country, shooting of starlings has been banned only for this very reason as these birds are very effective in reducing the population of harmful insects.

It has been noticed that wild boars do hibernate in the wood lots during the day and come out at night to destroy the sugarcane and other crops. This, of course, happens only when the plantations are very large. Otherwise the animal is fully exposed at day time and prefers to hide in more dense thickets.

4.4 Difficulty in tilling the land.

Several farmers have complained that root system of the trees which traverses the land obstructs ploughing. With the modern machinery now available soil can be pulverized to much greater depths. The superficial root system is cut up and mixed in the soil to decay. The practice is in vogue in many parts of the country as deep ploughing is also now advised by the agriculturists.

4.5 Permission needed to cut the trees

In certain areas such as fragile watersheds, border belts, etc., special permission is required to be obtained by the owners of the trees to cut. This is primarily prescribed by the law as a precautionary measure against erosion and siltation. However, with mutual understanding such conditions can be relaxed and people encouraged to grow more trees.

4.6 Land tenure

Due to land tenure system in vogue the tenant farmers as a class do not like to work hard for someone else who would reap the benefits. The land owners also sometimes carry the apprehension that the Government may takeover the land after initial persuasion and motivation for tree planting. The legacy of hostile relations between the forestry officials and the people living around the forest areas also comes in the way.

4.7 Clash of timings of cropping and tree planting

Planting of trees and sowing the crop may come at the same time. The farmers tend to spend more time for the critical period of food crops and relegate tree planting the secondary position.

4.8 Marketing

Low prices offered to the tree farmers especially for newly introduced species like Eucalyptus and lack of marketing facilities is hampering the promotion of Social Forestry programme. In fact when the F.P. & Development Project was conceived it was thought

that whatever wood would be produced it would be consumed locally to substantiate farm energy requirements but due to its un-expected success, the project is bound to yield large surplus supplies which have to be taken care of so that the farmers do not get demoralized.

Special training in marketing is essential to be provided to the concerned extension staff. Tree farmers would also be backed-up to promote their produce through personal initiative and drive.

5. RECOMMENDATIONS

Social forestry, although it may be appealing, is not a simple process as it cuts across a wide range of needs and requirements to get it underway. There are a number of issues, concepts and constraints which have to be understood and resolved to come to successful institutionalization of agroforestry programme. Keeping in view the way of life of the rural population, several approaches are being suggested to motivate the farmer to adopt agroforestry practices as a way of life.

5.2 Firm commitment by Government to promote rural forestry

A firm commitment by government is basic to integrating forestry in promoting rural development. However, to be meaningful such commitment should be translated into:

- Reviewing and redrafting, where necessary, legislations and regulatory provision that tend to impede the integration of forestry into rural development.
- Re-examination of existing forest tenure with the aim of introduction of tenurial arrangements that allow for greater involvement of people for the management and utilization of the forest resource.
- Examination and revision of legislations other than forestry laws to support social forestry.
- Provision of necessary resources like funds, human and physical resources to implement social forestry programmes.

5.3 Provision of incentives

Considering the relatively long gestation period in growing trees and difficulty in moving tree crops for marketing, the provision of incentives and other support services to motivate people to go into tree planting cannot be avoided.

To bring forestry to the aid of the rural poor, there are many ways in which assistance can be provided to them. Among these are:

- Provision of goods or food aid to enable them to divert part of their efforts to tree production;

- Distribution of production inputs, either free or at a nominal charge, of seedlings and hand tools for tree planting;
- Construction of access roads to communal forests by the forest administration;
- Advance cash payments for future harvest return;
- Provision of marketing services including transportation assistance; and
- Soft loans may be granted to the farmers devoting sizeable chunks of their land for raising tree plantations.
- Fifty percent subsidy may be provided to the farmers for the purchase of soil working equipments needed for afforestation works.
- A subsidy being provided at present at the rate of Rs. 1,200/- per acre for raising woodlots may be continued. This facility needs to be continued and expanded on a large scale.
- Irrigation water is scarce and is a limiting factor. The subsidy on installation of tube-wells, as is the practice for agricultural crops, may also be allowed for raising tree plantations.
- In order to boost tree cultivation in private lands, canal water may be supplied in greater quantity as is in practice for horticulture purposes.
- Incentives have been given in the form of Suzuki Car, Sponsorship for Haj/Umra, Study Trips to New York and the Far East to generate competitive spirit amongst the farmers who raise tree plantations from their own resources. Award of such prizes may be continued for some period till the Farm Forestry Programme is more widely popularised.

5.1 Creation of Community Organizations and NGO's participation

Creation and strengthening of appropriate local organizations is a main concern of social forestry to foster self-reliance and to encourage people to mobilize their own resources to manage a given forestry project. A strong organization of people is not only necessary as a channel for information and other assistance but this serves as an appropriate mechanism as well for the people to think about their real needs, establish their priorities and protect their interest.

The most important criterion for the success of agroforestry programme is the association and physical and mental involvement of the local population at various tiers of community. They have to play a very fundamental role in identifying the needs which could be dove-tailed in their socio-economics, land ownership, life spectrum leading to much needed prosperity in the long run.

Nevertheless a broad-based committee would be necessary to carry the message to the non-converts and the diehards. This committee would be comprised of the following members:

- Imam of the Jamia Masjid-main Mosque.
- Medical Doctor.
- Headmaster of the School.
- Village headman.
- Forest extension person.

This composition has been suggested in view of the fact that they yield moral influence on the local population by way of their profession as well as social status.

Non-governmental organizations particularly those already existing at the community level like farmer's associations, cooperatives, tenant groups or village councils should also be tapped as their collaboration and support could contribute substantially, in the promotion of social forestry programme. The contribution of the private forestry sector like privately-owned processing firms, lumber yard owners, etc. needs also to be considered. They can contribute directly by assuring markets and by providing technical support.

5.4 Marketing

The facilities for selling the wood grown by the farmers need to be improved and enhanced. The identification of potential market demand for the value product is considered as a basic step for perpetual marketing. Once the potential consumption of a product has been assessed, the product can be introduced into the market. For effective introduction, the product has to pass through regular channels of marketing. A well organized market system not only offers better on-farm sale prices but also promotes product quality and waste reduction in processing. A well integrated rational marketing system ensures greatest return of valuable products from every part of the tree. In order to economize production from better quality and high priced material, the wood end-users try to improve upon processing and try to develop markets for by-products as well.

On one hand the wood based industry is despondent and unsure of the sustained supply of raw material. On the other hand the grower is never assured a reasonable price for his produce. Regular meetings of the producers and endusers will reduce the inhibitions which exist. Both the parties are totally interdependent. Such contacts would be beneficial to both; if the industrialist makes direct contacts with agroforester and vice versa both the parties stand to gain a lot. The social forester can do a great job and earn the gratitude of the people by acting as a bridge.

The extension foresters have to perform a job which perhaps he never visualized. This includes: (1) development of linkages between wood producers & wood users, (2) streamlining smooth flow of wood from villages to the markets, (3) easing off the rules & regulations for wood movement, (4) establishment of wood stalls on road-side, (5) finding new uses for the species being raised, (6) emphasis on growing of those trees for which a strong market exists, (7) keeping the tree farmer informed of market changes &

requirements, (8) setting up of wood marketing societies/cooperatives, and (9) providing technical help in grading of wood for better prices.

5.5 Extension and Education

The following aspects need special considerations for the extension, education and training of those involved in social forestry activities:

- Forestry extension in Forest Services must be developed and strengthened;
- The possibility of creating an extension unit at both central and field level, whether within the Forest Service or in another rural development agency or non-governmental organization (NGO), must be analysed, taking into consideration national conditions;
- Provision should be made for the active involvement of NGOs in extension, and consideration should be given to their eventual incorporation in an extension network;
- The extension Unit/Service should be involved in motivating, raising or generating greater consciousness of forestry in society.
- Forestry Institutions must influence forestry schools (at all levels) to adapt their curricula to the new orientation of forestry development;
- Continuing education and/or updating of knowledge, competence and skills of professional, technical and skilled foresters must be encouraged;
- Formal and non-formal training should be provided to rural communities;
- Technical education must be strengthened in order to have skilled staff to supervise and execute field programmes in direct relationship with rural people.

5.6 Research

In order to promote the cause of Social Forestry & to make it more attractive & acceptable to farmers, following problem orientated research in several disciplines is needed. This would include crop establishment and management, tree crop inter-face, pest management, harvesting, marketing, utilization etc. In addition, socio-economic studies are required to be under-taken with due emphasis on transfer of technology.

A. Crop establishment and Management techniques

- Establishment of seed production areas and seed orchards.
- Development of techniques for site classification and site preparation with special reference to saline waterlogged soils, and semi-arid and arid areas, eroded

- and ravined lands using parameters such as soil amendment, water harvesting, moisture conservation etc.
- Tree crop inter-face studies such as spacing designs, orientation of rows, effect of shade, species, moisture, nutrient up-take, allelopathy.
- Silvo pastoral system development for incorporating animals, trees, grasses and other fodder crops.
- Stream-lining tree-crops management techniques such as pollarding, coppicing, lopping for fodder, palatability and nutrition status.

B. Harvesting and Utilization

- Harvesting techniques and their transfer to tree farmers.
- Utilization of poor quality wood.
- New end uses of fast growing species.
- Development of pest management system.

C. Marketing and economics

- Survey of current farmers out put, transportation, sale and pricing structure.

D. Socio - economic studies

- Land tenure systems and their possible effect on the adoption of agro-forestry system with special reference to owner-tenant relationship.
- Response of women to tree planting and their involvement in the system.
- Constraints in extension of social forestry programmes and remedial measures.

REFERENCES

- Anon. 1986. Proceedings of Seminars on Social Forestry, Pakistan (PAK/83/021). FAO, Rome.
- Anon. 1993. A note on Social Forestry in the Punjab. Paper prepared by Forest Extension Circle, Lahore.
- Anon. 1993. Proposal for Project concept clearance for World Bank assistance. Forest Extension Circle, Lahore.
- Hafeez, M. 1992. Why Social Forestry in the Punjab ? Unpublished Paper.
- Masrur, A. 1989. Social Forestry in Punjab. Punjab Forest Department, Multan.
- Sheikh, M.I. 1990. Agroforestry in Pakistan. Unpublished manuscript.
- Arif, R. and G.G. Naughton. 1990. Marketing Farm Forestry Products. Forestry Planning and Development Project, GOP-USAID, Tech. Note 1.