



SOCIAL FORESTRY NETWORK



FORESTRY EXTENSION TRAINING IN SOMALIA

Des Mahony

Des Mahony worked in Somalia in 1985 and 1986 as a CIIR volunteer employed to develop a social and community forestry curriculum for extension trainees. More recently, he has been funded by Oxfam UK to produce a tree and seed manual for Somalia.

FOREST EXTENSION TRAINING IN SOMALIA

Des Mahony

1. INTRODUCTION

Third world populations have traditionally perceived forests as a gift from nature and have not seen it as necessary to plant and manage them. Accordingly professional foresters in the tropics have, until recently, had limited contact with the public.

Wiersum (1984) points out that because the public have always participated in agriculture and because agricultural scientists have helped them in their endeavours, there is no call for 'social agriculturalists'. Today in areas where demand for forest products exceeds supply trees, like food, are gaining an economic value. People now want to grow trees and require foresters to work with them in tree planting programmes. Shortages of poles, firewood and fodder have thrown up a need for 'social foresters'.

In tropical and subtropical countries, deteriorating economic and ecological conditions have given rise to the need for public participation in afforestation, which in turn has led to a greater need for extension foresters to work in social forestry programmes.

2. THE EXTENSION CONTEXT : SOMALIA'S FOREST SITUATION AND THE AFGOI TRAINING CENTRE

In this paper forest extension is defined as the process of involving the public in the voluntary planting and managing of trees.

Somalia is a poor non-industrialised nation with its development hindered because skilled workers leave to earn high salaries in the Gulf States. The climate is hot and arid and trees require attentive aftercare for successful establishment; about 14 percent of land area has some form of tree cover, though no natural forests are being managed.

Less than 50 per cent of the population now lead a nomadic life, and the increasing number of settled people are experiencing shortages of tree products.

Overseas funded forestry projects are finding that extension to householders and farmers is a more successful afforestation strategy than plantations. In Somalia, extension forestry training is now taking place at the Afgoi Forestry and Wildlife Training Centre (AFWTC) which is funded by various donors including the United Kingdom ODA.

The Centre runs a two year course, at certificate level, to an annual intake of about twenty male students of between seventeen and nineteen years of age. A total of forty three students graduated in the three years from 1983 to 1985. Students coming to the Centre are selected by the Ministry of Education and have had eight years of formal education.

The subjects covered in the curriculum and a breakdown of the proportion of time allocated per subject are shown in Table I. Fifty percent of all teaching time is allocated to practical work, field attachments and field trips. A fair degree of physical labour is required of students, as it is considered that unless an individual has experienced, for instance, the tedium of digging holes, he will have no idea how to supervise others in later years. It has been found that by building an exam assessment into practical work, students have become motivated to carry it out to an acceptable standard. For instance, during 1985 students did practical work on a nursery and outplanting project, for which they were individually assessed on both their approach and final results.

If an AFWTC graduate takes a forest extension job, the practical experience gained during the AFWTC course will help him demonstrate silvicultural skills; as opposed to simply talk about them. The fifty percent of the curriculum which is practical work is therefore an important and necessary training for an extension forester.

Table I. A breakdown of the Afgoi Forestry and Wildlife Training Centre two year timetable into subjects, and time allocated for each

There are 88 weeks of term time in the two years, and 30 hours teaching time per week (6 mornings of 5 hours), giving a total of 2 640 hours.

Time allocated to practical and field work

Practical work	800
Field attachments at forestry projects	330
Field trips	200
	<u>1 330</u>

Time allocated to lectures

Botany	150
Silviculture	150
English	100
Mathematics	100
Survey	100
Range management	100
Wildlife management	100
Forest management	50
Forest engineering	50
Forest extension	50
Mensuration	50
Livestock production	30
Meteorology	30
Forest utilisation	30
Supervisory techniques and workstudy	30
Agroforestry	20
Soil science	20
Soil conservation	20
General ecology	20
Forest protection	20
Public speaking	20
General science	20
General knowledge	20
Forest tools and safety	20
Forest law	<u>10</u>
	1 310

3. THE IMPORTANCE OF FOREST EXTENSION WITHIN THE CURRICULUM

Forest extension is important within the curriculum because it emphasises the connection between the forestry skills the students are learning, and the needs of the Somali people who live around them. If taught successfully the subject ought to pull their minds away from the theory of books and blackboard to the practical observation of all the ways people use tree products in their daily lives. Because of the nature of forest extension work the training must emphasise communication skills, self motivation and an attitude of respect for the public.

4. APPROPRIATE EXTENSION TRAINING

Public participation, in the form of voluntary community management of trees on public lands, requires time consuming and complex management planning. Given the limited personnel available to the forestry department these forms of public participation should, at the present, be considered beyond the scope of forest extension. Natural forest protection, sand dune fixation, community woodlots and community shelterbelts are therefore forest extension activities for which Somalia is not yet ready.

The general aridity of the country dictates that labour intensive aftercare of outplanted seedlings is necessary. The most receptive target groups to undertake this are farmers and householders. Therefore the types of forestry outplanting towards which forest extension should be directed are the same as those which were found successful in the West African Sahel:

- strip planting of windbreaks, shelterbelts and hedges around farmland
- various forms of tree planting within farmland
- shade and fruit tree establishment around houses.

Table 2 The activities of an extension forester compared with those of a traditional forester

<u>Extension forestry</u>	<u>Traditional forestry</u>
Stimulating, offering guidance and suggestions, importing techniques and carrying out training for the general public	Supervising a work force
Private ownership of trees	Government ownership of forests
Planting strips and individual trees on a small scale	Plantation and natural forest management on a large scale
The multipurpose production of fruit, fodder, shade wind protection, fuelwood and poles	Timber production and the calculation of annual increment per hectare
A varied and unpredictable work programme	A planned and structured work programme
Much contact with the public for which good communication skills are required	Limited contact with the public
The integration of trees into cities, settlements and farmland	The management of forests where no cities, settlements or farmland exist
Bringing trees to the people	Keeping people out of the forests

In developing the teaching curriculum for forest extension the marked differences between the activities of a traditional forester and his extension equivalent must be taken into account. Table 2 lists the activities an extension forester is likely to be involved in, as compared to those of a traditional forester.

In order to fulfil the activities outlined in Table 2 the extension forester must have a different set of values and attributes to those of a traditional forester. Because the work of an extension forester is flexible and varied, in terms of time and location, it is largely work that cannot be closely supervised. This means it is necessary to cultivate a sense of purpose and 'missionary zeal' in an extension forester, to ensure there is self motivation. To inspire a sense of duty in the minds of AFWTC students (to assist the public in tree growing activities) is probably the most important function of the forest extension curriculum.¹ Bearing all these factors in mind, a Forest Extension Curriculum was devised, which is presented here. It is followed, in the paper's final section, by a curriculum appraisal which comments on successes and problems with the curriculum as students in 1985 responded to it.

¹An extension forester must have knowledge of the following silvicultural subjects:

- tree nursery production
- outplanting techniques
- pruning and harvesting
- forest utilisation
- silviculture of important tree species

At the AFWTC these subjects are not included in the forest extension curriculum because they are covered in other parts of the two year certificate course.

5. TEACHING MATERIALS FOR THE FOREST EXTENSION CURRICULUM

PHASE 1 : BACKGROUND KNOWLEDGE

5.1.1 INTRODUCTION TO FOREST EXTENSION

What is Forest Extension?

Forest extension is helping the public grow and manage trees for themselves. This is an important job because trees and their products are needed by all the people of Somalia.

Why do people need trees?

Trees have many uses such as: shade, fodder, charcoal, firewood, shelterbelts, windbreaks, construction timber, construction poles, tools, furniture, fruits, livefencing, deadfencing, sand dune fixation, soil improvement, gums, tannin, string, mats, medicines and amenity.

Why plant trees?

The products of trees do not have to be imported from abroad at high cost, they can be produced here in Somalia. As the nomadic way of life declines and the settled way of life is adopted by the majority of the population, so their need for trees increases. Settled people require more from trees than nomadic people, because their houses are more permanent and they need more furniture and tools. Also they do not move but stay in the same place and so need their daily wood needs brought to them. This is why it is a good idea to plant trees in and around the villages, towns, cities, refugee camps and settlements of Somalia to help meet the future needs of the settled people.

Also the population of Somalia is rapidly increasing (it will double in 26 years) whereas the economy may not increase at the same pace. Trees can help the land produce more fuel, fodder, construction material and fruits, along with protecting the soils from erosion. In the future, with more people and less money, greater demands will be

placed on the soil. The consequences of not planting and/or managing, trees for the future will be very serious. Desertification of the soil, fuelwood shortages, health problems and famine will face the people of Somalia if they do not plant and manage trees.

Why is it necessary for the public to be involved in forestry?

The Government has not got enough staff or money to plant and manage all the trees that will be needed by the 5.2 million people living in Somalia. But it might have enough staff and money to help the people plant and manage their own trees. One good forest extensionist might teach 10 people forestry, who in turn (if what they learn is seen to be useful) can teach a further 100 people, and so on (the multiplier effect).

To grow or manage trees it is necessary to protect the land where the trees are. Even a well paid armed guard has problems protecting trees from people and their animals, unless the people living nearby want the trees to be protected. Usually people are most interested in protecting trees when they themselves receive some benefits from them. This is why it is a good idea to involve the public in forestry and this is the main job of a forest extensionist.

What are the jobs of a forest extensionist?

- 1) Finding out and listening to what the people want from trees.
- 2) Discussing with them the ways they can get these things.
- 3) Helping people grow and manage trees for themselves.

What activities might a forest extensionist do?

- 1) Distributing shade and fruit trees for people to plant around their houses.
- 2) Collecting tree seeds to distribute to the public.
- 3) Helping farmers establish windbreaks and hedges on the edge of their fields and along irrigation canals.

- 4) Helping women grow fuelwood close to their homes.
- 5) Teaching schoolchildren how to raise tree seedlings.
- 6) Establishing demonstration plantations of trees to produce fruit, poles, shelter or fodder.
- 7) Lending the public tools and equipment to enable them to carry out forestry activities.

Do the public get paid for planting trees?

Sometimes this is done so that people can afford to leave their normal work in order to plant and look after trees. Sometimes a forest extensionist will not give money but will donate or lend tools and equipment such as crowbars, shovels, wheelbarrows, water pumps, plastic pots and hand saws to make sure people can do forest work. Sometimes nothing is given at all; an example is Merri-merri (Azadirachta indica) which is so popular that people plant and look after it with no help from foresters.

How is an extension forester different from a forestry supervisor?

The job of a forestry supervisor is to make sure the labour force carry out the work decided by the managers. The job of an extension forester is to help the public manage their own work, giving advice, training and equipment when needed.

A good forestry supervisor makes sure work gets done and should be strict to ensure the labour force works hard.

A good extension forester needs to be able to listen and understand the forest needs of all the different types of people they meet. They should be able to discuss with farmers, women, children, nomads and schoolteachers and be able to understand their points of view. They should work flexible hours, be able to work alone, be enthusiastic about forestry and the benefits it can bring to the people.

The major difference is that the forestry supervisor relates with authority to the workforce, while the extension forester relates as an equal to the public.

5.1.2 SOME DIFFERENT TYPES OF FOREST EXTENSION

(i) Farm shelterbelts:

- of benefit to agriculture because they raise productivity by sheltering crops from the velocity and drying effects of winds.
- ideally should be orientated at right angles to the monsoon winds which come from the N.N.E. and S.S.W.
- ideally should be low branching and three or more rows deep.
- typical 'low' dry farming genera are Prosopis, Parkinsonia, Acacia, Commiphora, Ziziphus.

(ii) Distribution of shade and fruit trees:

- giving, or selling at low cost, trees to be planted in household compounds.
- typical genera, where water is available, are Azadirachta, Cassia, and Papaya. In dryer zones Acacia tortilis and Acacia nilotica are appropriate.

(iii) Small bush tree nurseries

- due to the problem of distributing seedlings at the start of the 'Gu' rains it is probably better to have many small nurseries rather than a few large ones.
- can be temporary nurseries designed to hold seedlings for a few weeks till the rains start.
- require water supply, protection fence, hand pump, someone responsible to weed and water.
- require technical advice and guidance from extension forester.

(iv) Tree nursery projects in schools

- potential for school children to learn about trees and teach their parents.
- typical genera would be Azadirachta, Papaya and Cassia.
- requires cooperation of teachers.
- requires protected area, water supply, pots, soil, tree seed and school time allocated to project.
- requires extension forester to supervise students.
- students can take seedlings home and plant in their compounds.
- a problem is the watering of seedlings during vacation periods.

(v) Village shelterbelts

- purpose is to shelter village from predominant monsoon winds; therefore should be planted at right angles to them.
- in Central Region they plant 5 staggered rows of trees at 4 metre intervals with Commiphora fence around the outside of the plantation.
- small shrubby species planted on the outside rows with larger species planted in the centre make a more effective shelter from the wind.

(vi) Forestry projects for rural women

- women and children collect fuelwood for cooking.
- when wood is in short supply this job can take many hours, for which no payment is made.
- these hours are then lost to caring for children.
- to improve the health and quality of life of rural women and children, it is necessary to help them get fuelwood easily.

- fuelwood production (fuelwood plantations) or conservation (distributing wood burning stoves) is intended to improve the lives of rural women.
- obviously female forest extensionists are better for this job than male ones.
- forest extensionists could work with representatives from women's organisations such as Family Life Centre, or structures in rural areas which include women.

(vii) Fodder banks for pastoralists

- Somalia's most valuable export is meat and the economy of the nation depends on livestock production.
- there are shortages of fodder at the end of the dry season.
- trees producing fodder can contribute to pastoral production, especially at the end of the dry season.
- pastoralists should cooperate with protection of fodder trees.
- trees planted in strips at right angles to the predominant monsoon winds will have the dual purpose of making shelter and producing fodder.
- likely plant genera are Opuntia, Atriplex, Acacia, Prosopis, Parkinsonia.

(viii) Agroforestry

- deliberately planting or managing trees on land used by pastoralists or farmers.
- Acacia albida is a good species as it provides fodder at the end of the dry season and fertiliser for crops during the rains.
- alley cropping, intercropping, tree legumes, fruit, fodder, mulch production, controlled shade are all relevant to agroforestry.
- extension foresters would need to discuss and assist farmers and pastoralists. Also they would

need to have contact with agricultural and forestry research centres.

5.1.3 PARTICIPATION OF THE COMMUNITY IN FORESTRY

Although it is easier to work with individual farmers or households, such an approach does not always reach the poorest people such as the landless, women and children. In an attempt to help these people and especially the fuel needs of women, community forestry projects take place, which require the community to participate.

Community participation is a process (over a period of time) by which the extension forester encourages people to realise that they themselves have the abilities, energies and some of the resources, to take initiatives to improve their lives.

Community participation is not:

- getting people to go along with and agree with a project which has already been designed for them.
- villagers contributing their labour.
- enthusiastic support of a few leaders.

Community forestry projects will fail unless

- the project responds to the peoples felt needs.
- the people think and feel it is their project.
- the people have participated and agreed on the project design.
- the people have clear long term legal rights of treeownership.

Tools, equipment and materials are usually loaned or donated to the community from a donor agency.

Technical advice, backup and training is required by the community from the extension forester.

PHASE 2 : COMMUNICATION SKILLS
(10 Hours)

5.2.1 THE GROUP PRACTICAL DEMONSTRATION

It is difficult to give a practical demonstration to more than 10 people at any one time, so try and keep your audience to less than 10. Before giving the demonstration make sure you are prepared and have tools and materials ready.

- 1) Ask if everyone can see.
- 2) Describe the task you are going to do and ask if anyone in your audience has done it before.
- 3) Demonstrate the task breaking it down into logical steps.
- 4) Restrict your demonstration to less than 10 minutes.
- 5) On completion summarise the steps carried out.
- 6) Ask a volunteer to repeat the task. Ask the audience to point out the rights and wrongs of the way the volunteer performs the task.

When explaining something to someone else remember the old Chinese proverb:

"Hear and Forget
See and Remember,
Do and Understand".

5.2.2 PRESENTING AN ILLUSTRATED TALK

Research and make notes on the subject. Think about how you would like to hear a talk, if someone else was giving it. Think of ways of explaining clearly the information you have found out.

- A formal talk is structured in the same way as a report:

- 1) Introducing - to arouse interest and explain the relevance of the subject.

- 2) Facts - main content of the talk best divided into stages.
- 3) Visual aids - this is visual material such as maps, posters, demonstrations, pictures on the blackboard, films to capture the attention of the audience and increase their understanding. Visual aids can be used at any stage during the talk.
- 4) Conclusions and questions - summarise the main points of your talk and then ask the audience if there are any questions.

- Points to remember are:

- 1) Look at the audience and keep your eyes moving around the group.
- 2) Try to be relaxed and natural in your style.
- 3) Keep some short notes with you in case you forget your place, but try not to look at them too much.
- 4) Only answer questions you feel confident you know the answer to, otherwise be honest and say you do not know.
- 5) It is a good idea to ask the audience questions to get them involved, keep them listening, and for you to find out how much they know about the subject.
- 6) Some pictures or a demonstration make a talk much easier to understand.

5.2.3 AN EXAMPLE OF AN ILLUSTRATED TALK ON PLANTING A TREE SEEDLING (Should be accompanied by visual aids)

1) Introduction

It is very important to know how to plant a tree. A tree seedling should be planted either in the late afternoon or the early morning, not in the middle of the day. The important thing to remember is to be careful not to damage the roots of the seedling, and especially not to let the roots get dry.

2) Facts

Step 1 - Dig a large hole, the deeper and wider the better and if possible put some manure or plant material in the bottom of it to act as fertiliser. The best time to dig the hole is in March at the end of 'Jilaaal'. Make a depression in the ground around the hole, about 1 metre in diameter, to act as a microcatchment for the rainfall.

Step 2 - With a knife or razor blade cut off the bottom centimetre of the plastic pot containing the seedling's rootball.

Step 3 - Cut the plastic pot length wise, but do not yet remove it from the rootball.

Step 4 - Place the seedling, still with its plastic pot, in the centre of the hole.

Step 5 - With good topsoil, and some manure if possible, carefully back fill soil around the seedling until it is supported. Then carefully remove the plastic.

Step 6 - With your heel, firm in the soil all around the tree seedling and ensure the soil is level with the rootcollar.

Step 7 - Water and mulch around the base of the seedling. Do not water directly on the leaves as they might get burnt by the sun.

Step 8 - Protect the seedling from livestock, weed the microcatchment and place uprooted weeds as a mulch around the base of the seedling. Water the seedling during the dry season.

5.2.4 DISCUSSION OF BEST WAYS TO COMMUNICATE INFORMATION

The objective of the seminar is to practice group discussions.

- 1) Students sit in a circle to encourage discussion.
- 2) Silently each student should write down the way they consider information is best communicated.
- 3) Teacher asks each person in turn to state their reasons and then records the answers on the blackboard.
- 4) Group discussion when all ideas are listed.
- 5) Individual voting on priority ideas with the group decision being mathematically derived through rank rating.

5.2.5 TAKING NOTES

- notes can be taken from a book, a teacher, a member of the public, a film or in the field.
- more is remembered later if notes are taken.
- a good extensionist takes notes when listening to the public, or out in the field observing.
- notes should be short, for your own use and only include the important points.

PHASE 3 : PRACTICE OF SKILLS
(10 hours)

5.3.1 RESEARCH PROJECT ON TREE USE IN AFGOI

One morning is allocated for students to research different aspects of wood use in Afgoi town. Students will work in pairs and collect information to be written up into a presentation plan, to act as notes, in order to give an illustrated talk to the rest of the group. Effort should be made to ensure that information collected and presented is accurate. A pencil and notebook are needed by the students to take notes on the subjects allocated for research.

When asking people questions remember the following:

- 1) Greet the person and introduce yourself.
- 2) Explain you are a forestry student trying to find out about the use of trees in Afgoi.
- 3) Be polite and relaxed. Note down what you see and hear, not what you guess:

Your talk should describe where you went, to whom you talked and what you found out. Ask all the questions you can think of which are relevant to your subject. Take special note of the things you think will interest the other students.

Subjects to be researched

Group 1 The sale of fuelwood and charcoal

Group 2 The sale of poles and timber

Group 3 Wood used in house construction and fences

Group 4 Household fuel survey

Group 5 Household trees in compound survey

Group 6 National Range Agency nursery

Group 7 Two private nurseries

Group 8 The Mango farm and Banana plantation shelterbelt

Group 9 Household domestic items survey

Group 10 The street trees of Afgoi

Each pair of students should jointly write up a presentation plan and decide which of the two will present a 10 minute illustrated talk to the student group. Each pair should prepare some form of visual aids to accompany their talk. A vote will be taken at the end of the session to decide the best talk. The presentation will be assessed.

Precise details of what questions each group should ask, and how they locate their target subject, will need to be explained to each group before they spend the morning in Afgoi.

PHASE 4 : ATTITUDES (8 hours)

5.4.1 SEMINAR - ROLE PLAY OF A VILLAGE SITUATION

The objective is for students to learn an attitude of respect towards rural people.

- 1) Move chairs into a semicircle.
- 2) Ask for two volunteers to play the roles of village elders and to come and sit down in front of the group. Give them the following cue card to silently read; tell them to keep what is written on the cue card a secret:

"You are proud village elders and think slowly and carefully before taking decisions that affect the lives of the villagers you represent. You

already know the villagers want shade trees to be planted around the village well. You are suspicious and unfriendly of young men from the city, like forest extensionists:

Unless they do the following.....

First: Politely greet you

Second: Explain clearly who they are and why they have come.

Third: Ask you to tell them what the village needs.

Fourth: Discuss with you how to achieve this.

...you will be rude to them, ask them for money, tell them to respect their elders and tell them to go away".

- 3) Once the volunteers understand their role ask for another volunteer from the student audience to play the role of a extension forester. Tell him to go out of the class and come back in, acting as if he has just come to a village to meet the elders.
- 4) The elders will be rude and uncooperative until, or unless, the extension forester approaches them in the correct sequence.
- 5) More volunteers will be asked for until the correct sequence is discovered.
- 6) Group discussion concerning the role play.

5.4.2 POINTS TO REMEMBER WHEN DOING FOREST EXTENSION IN VILLAGES

Approach

Never pretend to know something you do not know.

Never offer people things you may not be able to give.

Do not hurry, do not worry.

Relax and enjoy yourself.

Discuss rather than lecture.

Ask questions and listen.

Step 1 - Introduction

Take a notebook and pencil with you.

Tell people who you are, who sent you and what you can offer them.

Be polite. Do not be shy. Do not be arrogant.

Step 2 - Felt needs

Discuss with villagers their felt needs.

Ask questions and listen.

Questions you might ask them are:

Do you need fruit trees, shade trees, windbreaks, hedges, fodder trees, building poles, fuelwood or tree seed?

Do you need a village tree nursery?

Do your farms need shelterbelts?

Ask if they object to you writing in your notebook.

Some ideas may be silly, some may be good.

Listen and then offer your opinion.

Listen to their answers to your opinion.

If in a group try to ensure everyone can offer their opinion including women, children and yourself.

Step 3 - Planning

Record in a notebook the forestry activities in which they are interested.

Give your opinion on the difficulties likely to be involved.

Remind them that most of the work of forestry is not in planting but in aftercare.

Plan so that holes are dug, fences constructed, tree seedlings close by, and people prepared for planting at the beginning of the rains.

Who will do the work?

Will there be payment?

Who will own the trees after they are planted?

Who has the tools for the work?

Step 4 - Agreement

Decide together what the best answer seems to be and when you shall next meet.

Step 5 - Future plans

Decide what should happen next and who should do it.

Be clear who will do what.

Record decisions and plans in your notebook.

Be realistic about problems, do not agree things which will be difficult to achieve.

5.4.3 THE JOBS OF THE EXTENSION FORESTER

The extension forester must:

- 1) Be concerned to plant, protect and manage trees to prevent soil erosion and desertification.
- 2) Be sympathetic to the needs of all the people and appreciate the hardships they face.
- 3) Be willing to work in rural areas.
- 4) Have a sense of humour and enjoy working with, and talking to, many different types of people.

- 5) Remember the most difficult job is to care for and manage trees, and that the job starts when trees are planted.
- 6) Keep contact with research organisation and act as an information resource for the people.

PHASE 5 : FIELD PRACTICE AND VISITS
(10 hours)

5.5.1 FIELD PRACTICE AND VISITS

If time, vehicles, and the fuel are available; students can practice their knowledge, skills and attitudes:

- giving illustrated talks about forestry to primary schools.
- visiting villages and distributing tree seedlings.
- visiting fruit farms in Afgoi.

6. AN APPRAISAL OF THE CURRICULUM

Phase 1 : Background knowledge

The original intention was to give much of the material to students as handouts. Unfortunately the complexity of the English text was found to be inappropriate for the students. Therefore the intention during the next course is to use the material as a resource to be drawn upon, as and when needed. Because the students tend to learn written material by rote, without full comprehension, question raising is to be tried. By teaching background knowledge through question raising, it cuts down the knowledge proportion of the course, in relation to the other areas of skills and attitudes. Simplified shortened notes will be given to the students, ideally as handouts, so dictating notes will not take up teaching time.

Phase 2 : Communication skills

Communication is an essential component of an extension forester's job. The objective of this phase is to teach the techniques of communication and give different examples of methods of communication. It is necessary to stress the two-way nature of communication and that listening to the public is an important part of an extension forester's job. The opportunity to use tree planting as the subject matter of the exercise, is taken as an appropriate topic.

In 1985 students understood that demonstrations and pictures are more easy to understand than words. However they seem to consider that pictures are for children and that real, serious information comes from heavy textbooks. They responded well to seminar discussions, enjoying the fact that their ideas were taken seriously by the teacher.

Phase 3 : Practice of skills

In 1985 the research project in Afgoi proved to be a great success because it stimulated the interest of the students in how the public used trees in their daily lives and it introduced them to contact with the public. Because it was assessed, all the students put effort into the project, and hence actively participated in the learning process. They enjoyed being given the responsibility to research, prepare and present their own piece of work.

It was noted that students put a lot of effort into their own presentations, but placed little value on those of their classmates. For the next course it is intended that student listeners shall give their own assessment for each student presentation, and hence participate in assessing the technique of presenting an illustrated talk.

Phase 4 : Attitudes

Abbatt (1980) writes "Attitudes are important even though they are difficult to define, test or teach". Through the role playing exercise it is hoped students will appreciate the necessity to respect the opinions of rural people. The general attitude of the students is that illiterate persons are inferior. For instance students invariably consider nomadic pastoralists are responsible for desertification, due to their ignorance. Yet pastoralists are the most productive sector of the Somali economy and hence effectively their labour subsidises the education system. Although it is recognised as inadequate, it is felt that there is no alternative to changing attitudes other than to appeal to the Islamic conscience of the students. In Islamic culture giving alms to the poor is praised and being seen to be generous is highly regarded in Somali society.

Therefore the need Somali people have for trees is stressed. It is then pointed out to the students that if they become extension foresters they will be in the pleasant position of being paid a salary to generously give tree seedlings and technical advice to the poor. Hence they will be able to fulfil their Muslim duties. In order to do this they should be thorough, polite, relaxed and motivated. They need to be willing to demonstrate forestry skills, but also stand back and let members of the public practise them.

Phase 5 : Field visits and practice

In 1985 this was a successful phase of the curriculum, probably for the same reasons as the student project phase. That is, it took the students into the field where they were doing forest extension and not simply listening to lectures about it. It was logistically difficult to involve all the students in a practical learning experience at the same time, but the effort was worthwhile. It became apparent during 1985 that the students with the most questioning attitude performed best at this stage. Through their questioning they had come to an understanding, in their own minds, that forest extension was worthwhile and were therefore motivated to do the work.

7. CONCLUSION : HOW COULD THE CURRICULUM BE FURTHER IMPROVED?

If time allowed it would be better to convert large portions of the background knowledge and communication skills content of the course into picture form, with written text translated into Somali. This should be regarded as a long term objective towards which refinement of the curriculum is aimed. In keeping with this objective a Somali counterpart is present during the teaching of the course, and he will eventually teach the course in the local language.

Student participation in the form of projects, seminars and field visits proved to be successful in 1985 in stimulating interest and comprehension. Extension is work that is field orientated and aims to delegate knowledge and responsibility to others, therefore the teaching of the subject should reflect this. The practice and project work component of the course is undoubtedly the most successful way of teaching forest extension. But the students must first acquire the necessary background knowledge and skills.

In 1985 students made contact with villages and helped to distribute tree seedlings to them. This was a good learning experience for the students, but possibly not fair on the villagers because students were only learning and sometimes made mistakes at the expense of the villagers.

Continual assessment is recommended as an incentive to keep the attention of the students throughout the course.

The programme outlined here requires considerable effort on the part of the teacher and will cause some confusion to the students as it represents a departure from traditional teaching. However this departure from tradition is considered necessary to ensure students comprehend the subject and can relate it to the world around them.

In a wider context, it would be possible to bring in interested members of the public for short practical courses, run by Somali staff, on forestry and especially nursery techniques.

In the long-term it may be self-defeating to try and train socially mobile young men, with ambitions to get jobs in the Gulf States. The most effective extension foresters are likely to be householders (especially women) and farmers. Therefore representatives from these groups should be the students of forestry in the future.

Forest extension could be taught through the media of radio and the institutions of schools, mosques, village committees and town councils. However before this can happen there needs to be more research into appropriate tree species and silvicultural techniques. There is also an urgent need to establish a tree seed collection, storage and distribution system.

There is no problem in persuading the public to plant trees. Almost every village and town in Somalia has trees growing which have been carefully planted and cared for by members of the public. The constraint is in supplying an adequate number of seedlings of the desired species at the start of the rains. A network of small tree nurseries across the country, producing tree seedlings of species the public perceive they need, is what is required. If this can be achieved through sound logistical planning and with adequate financial investment, the objective of helping the public grow and manage their own trees is also attainable.

The Afgoi curriculum represents an important first step down the road towards these more ambitious goals.

References

- Abbatt, F R 1980. Teaching for better learning. A guide to teachers of primary health care. World Health Organisation, Geneva. Printed by TALC (Teaching aids at low cost). London.
- Wiersum, K F 1984. Developing strategies for social forestry: a conceptual approach. Department of forestry, Agricultural University, Wageningen, Netherlands.

This paper forms part of a dissertation, Forest Extension Training in Somalia, submitted in February 1986 for an MSc in Environmental Forestry at the Department of Forestry and Wood Science, University College of North Wales, Bangor.



Agricultural Administration Unit

Regent's College
Inner Circle
Regent's Park
London NW1 4NS

Tel: 01-935 1644