

NOTES TECHNIQUES

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The woodfuel and forestry situation in Togo as experienced in the "Région des Savanes"

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Summary

The "Région des Savanes" in northern Togo is experiencing a rising woodfuel problem. Population increase and lack of an official forestry policy result in decreasing natural woodfuel reserves. Projects trying to promote tree planting have difficulties in convincing local communities of its necessity. Extension services can therefore try to promote "dual" product. Through a proper species choice people will be presented trees that have a good caloric value, equal or superior to the traditionally known species. Reforestation projects must also take into account the location of the trees that will be planted, otherwise there might arise conflicts with traditional land tenure systems. The right to cut the trees by the people that planted them can be sanctioned by an official convention passed between a government's representative, the project and the person(s) who plant(s) trees. A very important point will be to involve women actively in tree planting schemes, as they are the ones that have to fetch and use the fuelwood.

Résumé

Le Togo n'a pas de vraie politique forestière. Une réglementation sévère de la coupe d'arbres n'a pas empêché les réserves de bois de diminuer considérablement ces dernières années.

Le présent article décrit l'attitude traditionnelle de la population locale envers l'arbre et la reforestation. Les difficultés rencontrées par des programmes de reboisement sont : l'absence de tradition, le rendement différé, l'ignorance sur les causes du problème du déboisement, le manque d'information sur les espèces introduites, la localisation de la plantation, le droit de terre traditionnel, le droit d'abattage des arbres plantés; la protection des arbres, le prix des arbres et le groupe cible.

Des solutions sont proposées pour tenter de résoudre ces problèmes en prenant des exemples concrets situés dans la "Région des Savanes", Nord-Togo.

1. Introduction

Togo has no well defined forestry policy. The exploitation of forests and natural vegetation is restricted by a very severe réglementation. The felling of trees and the utilization of wood products by individuals is controlled and limited. This might be a good measure in itself, if the natural reserves would be managed in a proper way. As it is, this is not the case.

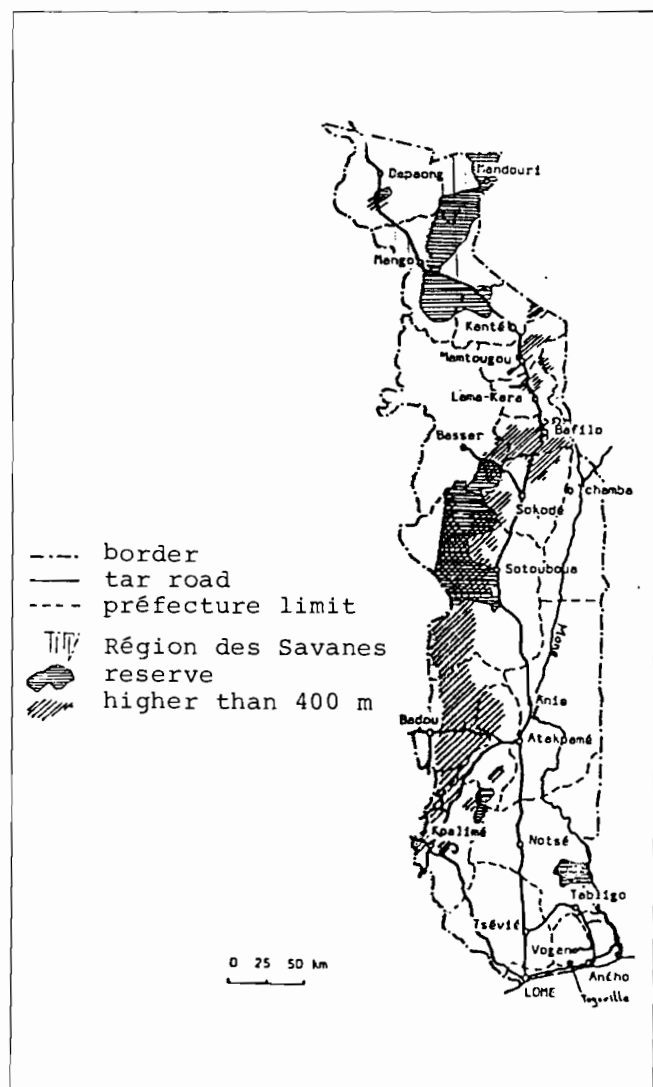
Throughout the country and especially in the north, in the "Région des Savanes", there are a few wildlife reserves and protected forested areas: Fosse aux lions, Réserve de faune de l'Oti, Parc National de la Kéran, Forêt de Galangachi. Lack of proper management of fauna and flora create a lot of problems in these reserves, but this is beyond the scope of this article.

Most of the "Région des Savanes" consists of farmland, with houses scattered in the landscape. Villages with houses concentrated round a market place or dispensary are only found near important roads. Remnants of the original, natural vegetation are found in places which are difficult to reach, or where the soil is useless for agricultural purposes. Apart from this, one can still find small fetish tree stands, which are kept intact by the local people. There are also a number of areas which have been planted with trees. The numerous *Tectona grandis* stands are worth mentioning. They have been planted in colonial times, but lack of management (it is strictly forbidden to cut branches or prune the trees) results in the teak trees' wood having only limited value for construction or furniture. In the north of the country the teak is at the limit of its ecological zone. It has become a deciduous tree there (the influence

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of a pronounced dry season) which limits the vegetative development.

In what follows we will have a look at the woodfuel problem in Togo, with a special reference to the situation in the northern region. We will also discuss some solutions to the encountered problems. The data for this study were collected during a 2 months' stay in the "Région des Savanes" (May-June 1985).



Map of Togo

2. Woodfuel shortage

As in many other African countries, wood is the most important — if not the sole — source of energy for the rural and urban populations of Togo. The wood is used as fuel for direct consumption or for charcoal production and in construction. Especially in the north of the country there has recently been a problem of shortage. The older people have been witness to the degradation of the vegetation during the last 50 years. Especially the women who have to

fetch the fuelwood are conscious of the problem. The distances they have to cover to reach the fuelwood reserves are becoming larger by the year. For Dapaong, the capital of the Savanes region, the fuelwood comes from an area more than 10 km distant from the city; 15 years ago the urban population went to fetch its fuelwood itself in the vicinity of Dapaong, this is now impossible. Now, most of the wood is sold on the market.

2.1. Alternative sources of energy

A direct symptom of the lack of fuelwood is the recent trend to use more and more secondary sources of energy.

Amongst the most popular are the sorgho (*Sorghum bicolor*) and millet stalks (*Pennisetum americanum*). Traditionally those are used to light a fire, in the first phase of the *tchapalo* preparation (traditional sorgho beer) and in pottery. In some areas, however, those stalks have become the only source of fuel "wood". They are stocked after the harvest (November/December) and used as long as possible. Once this supply is used up, the scarce wood reserves have to be used. As a rule, stalks of sorgho have a better burning value than those of millet.

In some rare instances, animal dung is also used as a source of energy.

2.2. The traditional attitude towards trees

Another characteristic illustrating the fuelwood shortage is the disappearance of certain species of trees whose wood has properties that are especially appreciated by the local consumers. In this way, a lot of valuable species are no longer available.

In this respect, it is worthwhile to mention that the local people know their trees very well. The forest, with its trees and vegetation, is an integral part of the socio-cultural organization of the society. Every clan and each family within the clan has a very specific taboo tree. This tree is designated by the traditional medicine-man (*boka*). He is also the person in the community who knows all about the properties of the local flora. These properties have been accumulated through generations of experience. The trees that are under taboo are, traditionally, completely protected. Apart from these, this is also the case for a number of other trees, whose products are used, or sold, by the local people. The shea butter tree (*Butyrospermum parkii*) yields seeds whose oil is used in making butter. The dried seeds are also sold to be used in the cosmetics' industry. The West African locust bean (*Parkia clappertoniana*) gives fruits whose pulp and seed are regarded as foods of value; in Togo people traditionally make mustard with it. The kapok tree (*Ceiba pentandra*) has been planted in German colonial times; the fibres are used to fill mattresses. The African fan palm (*Borassus aethiopum*) is locally important for its fruits.

The mango tree (*Mangifera indica*) is omnipresent. The five species which have been enumerated here are respected whenever they are present in the fields used for growing annual crops. They are, however, not planted actively by the local people. In general, they consider trees as a gift of God (*yendù*). They can have a social religious meaning or carry a special property (taboo tree, traveller's tree, the tree hit by lightning). In this context, it is clear that "to plant a tree" is a meaningless activity. This explains the lack of tradition in this field and the difficulties one encounters to promote tree planting by the local people.

2.3. The law

The least one can say about the regulations for cutting trees and getting hold of and using uprooted trees and broken branches is that they are not very "consumer oriented". Each of these activities require a permit. For each quantity of these activities require a permit. For each quantity of wood thus used, one has to pay an amount of money that is equivalent to the value of wood or the length of the stem. These sums have to be decided upon by the president, but this has not been done yet. This opens the possibilities towards "irregularities" with the controlling services.

3. Tree planting

Promotion of tree planting has recently been taken up by government agencies and foreign funded projects. Most of them try to get local communities to plant trees, but their efforts are not always very successful. The reasons are manifold:

- the lack of tradition where tree planting is concerned;
- the lack of familiarity with the proposed tree species;
- the "delayed reward" when trees have been planted;
- the absence of a fuelwood problem, according to the local population;
- the location of the newly planted trees: near the *soukhala* (house)? at the roadside? round the field?
- the social organization of the community, and the traditional land tenure system;
- the lack of certainty about the ultimate rights to the tree and the possibilities to cut it;
- absence of protection of the stands by a lack of motivation of the planter;
- in some instances: the price of the plants;
- the persons who are asked to plant the trees are not necessarily those that will have to cut them and use the fuelwood.

Through several years of practice and experience we are, however, able to make a few suggestions of how to improve on certain of these points, or how to overcome them.

3.1. Lack of tradition

In spite of the fact that the local people are not familiar with tree growing, trees for woodfuel (cfr. *supra*), they seem aware of the fact that something has to be done. This is especially true in those areas chronically hit by excessive drought. In northern Togo people are also becoming interested in tree planting. They seem to prefer fruit trees and are not inclined to plant wood species, a fact which has also emerged from a good many studies discussing *why* people grow trees (if and when they grow them): they want them for fruit, shade, timber and renewal of soil fertility. If they plant trees for these purposes, the trimmings and dead branches, however, will come as a positive surplus product, meeting at least part of their fuel needs.

When asked which species they would like to plant they mention (in order of preference): *Mangifera indica* (mango), *Anacardium occidentale* (cashew), *Psidium guajava* (goyave) and, to a lesser degree, *Borassus aethiopum*, *Parkia clappertoniana* and *Butyrospermum parkii*. Apart from these they mention one construction wood species: *Tectona grandis* and one woodfuel species: *Azadirachta indica* (neem). The above mentioned species are ecologically well adapted to the Savanes region. The mango requires a short dry season for a good fruit set. The cashew requires a rainy season with at least 1.000 mm rain; this together with a dry season of a few months gives a good production. In dry areas (500-1.000 mm rain per year), the cashew is also a good woodfuel tree.

Although people understand they have to plant trees, their choice is oriented towards those species they know already, or those they think will give them a product they can harvest regularly. They usually do not choose woodfuel trees. This might be due to the fact that the woodfuel shortage is still too recent a problem to be considered as serious. Tree planting has not been promoted since too long either. So, most of the farmers are not aware there is a problem and, as a consequence, not of a solution either.

More efforts will be needed to make people realize there is an increasing wood supply problem, and that there are means to deal with it. Initiatives such as a national "Day of the tree" (in Togo: 1 june) where every man has to plant a tree are good ways to try and get the message across. Passive "indoctrination" through posters, radio and television broadcasts, postcards, and songs are other helpful means.

3.2. Delayed reward

Most trees take a long time to develop. Therefore, the reward received for the effort of planting is sometimes long to come.

When first confronted with tree planting it will be advisable to offer a mixture of pure woodfuel trees and fruit trees. The fruit trees will start producing

after 3-5 years and thus bridge the period that farmers have to wait before they can cut the wood trees. While the trees are growing the plantations will have to be maintained. Cutting of undergrowth, thinning and pruning will give the farmers small firewood.

When *Eucalyptus* is grown, trees can be cut after 6-7 years. The coppice regrowth guarantees repeated harvests without the costs and efforts of replanting seedlings each time; these subsequent harvests are on 5 years' rotations. Projects promoting planting of trees can contract farmers to grow seedlings for them. This guarantees a revenue for the farmer (price paid per seedling). Moreover, the project will give assistance to the contracted farmers thus transferring new techniques and knowledge to them, and probably providing them with new production factors.

3.3. Knowledge about the proposed species

As described before, the farmers do not always choose the "right" tree species, when asked which (woodfuel) trees they would like to plant. Local communities, however, know a lot about their own traditionally used species, but unfortunately enough, these are often species that have hardly been studied by western science. Research should therefore be oriented towards testing native fuelwood species, confronting them with the properties of the exotic species, that are used worldwide in reforestation and planting. It will take some years, though, before good, "new" and locally adapted species will be derived from this kind of research. Moreover, some of these native trees might have limited diffusion possibilities if and when they are considered taboo by local communities.

It will, therefore, remain necessary to implement better known species that have been successful in similar ecological circumstances. For northern Togo this could mean: *Eucalyptus camaldulensis* (red river gum), *Acacia alba*, *Acacia auriculiformis*, *Cassia siamea* (yellow cassia), *Leucaena leucocephala* (leucaena or leadtree). Apart from these the following species could also be used: *Gmelina arborea*, *Albizia lebbek* (woman's tongue tree), *Prosopis chilensis* (algarroba), and *Prosopis juliflora* (mesquite).

The advantages of the *Eucalyptus* have already been mentioned. *Acacia alba* is a tree that can be incorporated in an agroforestry (agriculture and forestry combined) or agrosilvipastoral system (the previous system combined with animal husbandry), because the tree is leafless in the rainy season when agricultural crops are growing, and has leaves in the dry season thus providing shade for cattle, and enriching the soil with humus and not competing with the crops for nutrients. Its roots go down rather than sideways, drawing up nutrients and

using water that would otherwise be lost to local production. The tree produces poles, fuelwood and fodder for local needs. Moreover, agricultural practices can have a positive side effect on the growth of the trees. Ploughing aerates the soil, and makes it more permeable to water. *Leucaena leucocephala* grows well even with long severe dry seasons; its optimum lies within an annual rainfall range of 600 -1700 mm. *Cassia siamea* grows mainly in non-humid tropical climates with rainfalls from 500 - 900 mm. In drier areas, the species will only grow if its roots have access to deep soil moisture.

For all these species it will be necessary to assess the caloric value of the fuelwood that is obtained, and to confront this with the subjective appreciation of the local users: in some instances people do not "like" to use certain species because of their poor burning value. Vulgarisation and extension efforts will have to try and convince local people of the advantages of certain species over the traditionally accepted ones. For northern Togo these traditional species are: *Parkia clappertoniana*, *Butyrospermum parkii*, *Anogeisus leiocarpa*, *Tamarindus indica*, *Diospyros mespiliformis*, *Pachycarpus lineolatus*, *Sterculia setigera*, and several *Ficus* spp. and *Combretum* spp.

3.4. Location of the planted trees

There is no general rule as to where trees should be planted. It will be necessary to conform to the wishes of the local communities. The exact place and the configuration of the plantation (in a block or row, or scattered) will have to be taken into consideration.

When trees are planted to delimitate a plot, this can give rise to problems as people will use this as a means to increase their territory. When somebody plants a tree he can use all the (by)products of that tree: he owns the tree. It is but a small step to consider also the soil on which the tree stands as one's property. This conflicts with the traditional approach to land tenure, where the soil belongs to the community and is managed by a "chef de terre" — the man in charge of the community's (clan) territory. In this context, land is never a personal property. In this context, land is never a personal property. Land is never sold. The "chef de terre" allocates land to each family on a semi-permanent basis. He also distributes land for a limited period of time to people who are no member of the clan. If such persons were to plant a tree on the land they borrowed, they would more or less indicate that they own the land. This would lead to conflicts. Reallocation of land, as is the traditional practice, every few years destroys any incentive for individuals to invest in the long term enterprise of tree growing.

When the trees are planted in blocks on pieces of wasteland, there is a problem with the protection against bush fires, the maintenance of the planted

trees and the protection against damage by cattle and wildlife. This will especially be true when the plantations are at a distance of the *soukhala*.

Farmers have also difficulty in accepting as their "property" trees that have been planted at a roadside. As it is, the road belongs to everybody. This explains why they consider initiatives that want to promote the planting of trees alongside roads as coercitive. The result is that the degree of participation in this kind of set-up is often low.

3.5. The traditional land tenure system

The traditional land tenure system gives "power" to the "chef de terre", the man responsible for the allocation of land to individual farmers and their family. If land is used for tree growing it can no longer be allocated on a short-term basis. This can be a reason for the "chef de terre" to block any tree growing programme coming his way. The village as a whole will have to discuss the problem and try to find a consensus about where to grow what kind of trees, and about the ways the plantations should be tended, and how the wood will have to be divided among the villagers.

3.6. The right to cut trees

As mentioned before the Togolese laws prevent a rational exploitation of the forest patrimonium. Recently planted trees may only be cut after the official authorization has been given. There often is a great uncertainty as to whether this authorization will be given. This explains the lack of enthusiasm of a lot of local communities to plant trees. This can be overcome by passing a convention between official representatives of the government (e.g. the ministry of natural resources), the local community and a project that is promoting the planting of trees. For each planted tree the farmer receives a certificate by which he is entitled to cut the tree at maturity. The cutting will then be supervised by the local forestry agent but will not be taxed.

3.7. Protecting the planted trees

The protection of planted trees is clearly a problem of proper extension efforts. In this respect, initiatives that promote the planting of trees in schools have to be stimulated. In this way children are taught how to treat, protect and care for trees they have planted themselves.

As a general rule, it will be necessary that projects not only try to have people plant trees, but that they also organize an intensive follow up with emphasis on current maintenance problems and the appropriate solutions.

In specific cases, it will be necessary to protect plantations against termites, or lack of water at the establishment of the plantation.

3.8. The price of trees

It will be a good measure to sell the trees that have to be planted. When received for free the value attached to them is almost nihil. When farmers are willing to pay for them this shows that they are already — to a certain level — aware of the fact there is a problem that has to be (and can be) over-come. On the other hand, the price can be an excuse for the farmers not to participate in the proposed scheme. In the specific context of northern Togo, it is most probable that the uncertainty about the ultimate rights to the planted trees is the cause of the unwillingness to buy young trees. The price is then only a pretext.

Some projects give the trees for free, and sometimes add an extra bonus: for each number of fuelwood species planted, one fruit tree is added. This does not improve the quality of the plantations, though. A survey held in northern Togo, in a zone covered by a European Development Fund project gave the following results (trees were distributed for free in packages of 50 fuelwood trees + 1 mango; data by Meys & Zijlstra, unpublished).

Species	Number of trees planted in 1983-1984	Number of trees alive in 1985	Percentage recovery
<i>Acacia auriculiformis</i>	2185	973	44
<i>Acacia albida</i>	71	37	52
<i>Eucalyptus camaldulensis</i>	255	56	29
<i>Leucaena leucocephala</i>	83	42	50
<i>Cassia siamea</i>	216	45	21
<i>Mangifera indica</i>	25	8	32
TOTAL	2835	1161	41

One can also wonder whether this "give away for free" policy is not counterproductive in the long run: nothing is done to motivate the farmers, and they are not consulted in the choice of the species. Moreover, for a lot of these projects the purpose is to have a given number of trees (or a surface area) planted with trees. The chief concern is the number of trees that are planted, not the number that will eventually survive. As a consequence, all extension efforts are concentrated on the planting of trees, not on the maintenance of the plantations.

3.9. Women and trees

Traditionally, project interventions in Africa have always been oriented towards men. In the case of firewood consumption, however, it are especially women who are concerned and ought to be reached by projects dealing with fuelwood and tree planting.

Women have to go and fetch the wood. Women use wood for cooking. Nevertheless, it are men who are contacted when the populations have to be mobilized to plant trees. Women are hardly ever invited to

assist at the meetings preparing tree planting actions, and are never asked about their preferences for certain species or the possible locations for planting.

It would be advisable to involve women actively in tree planting schemes. They are the ones that have to use the final product. As they are a target group, they will be more motivated to maintain plantations than their husbands. Moreover, tree planting can be coupled with actions that aim at saving energy (improved cooking stoves). This last topic is also a rather sensitive one, especially with women: the more energy saved, the less time lost in gathering woodfuel.

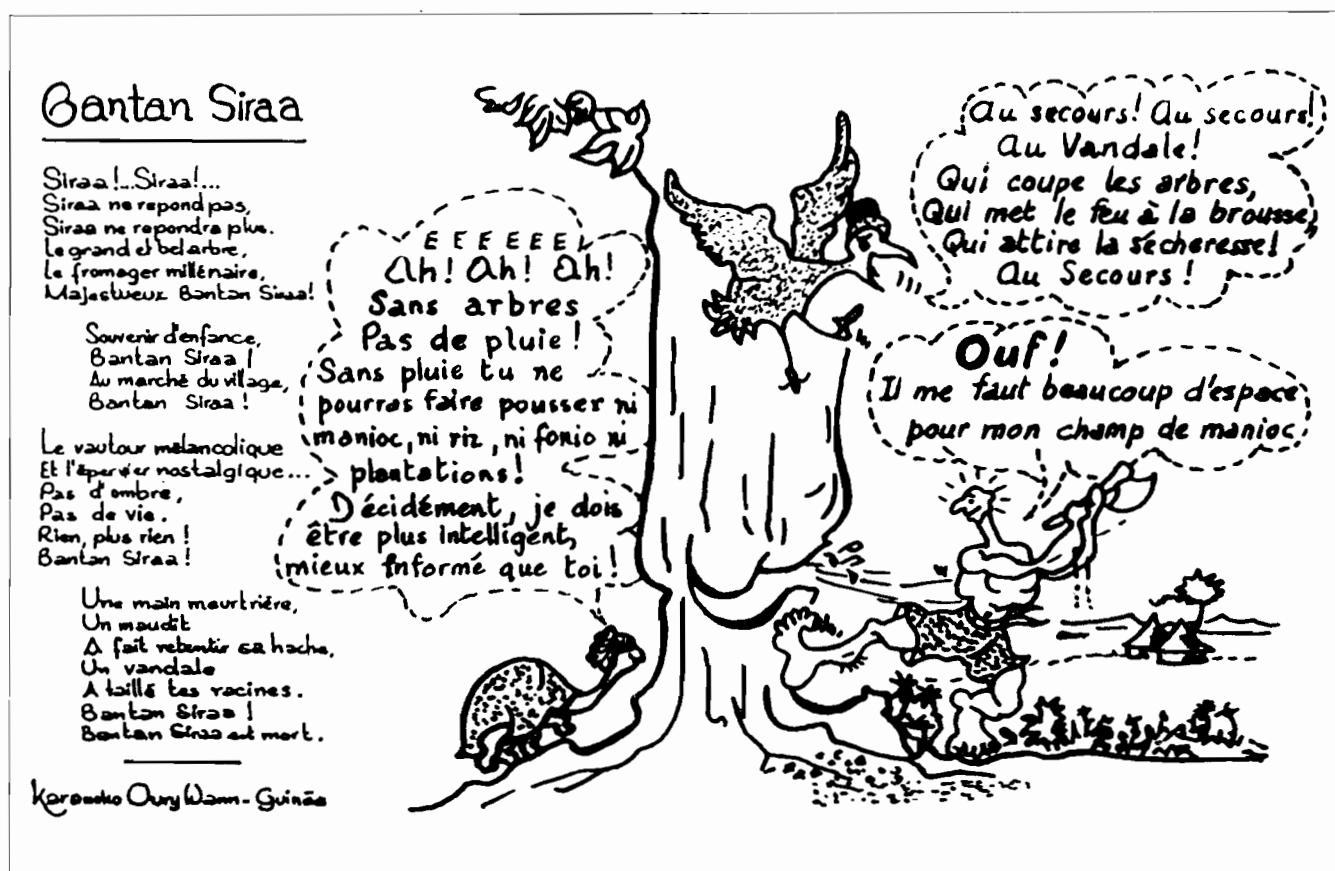
4. Conclusion

For too long, forestry projects have only aimed at having as much trees planted as possible, without considering whether those trees did actually sur-

vive, or whether the populations concerned were really happy with the project interventions.

Recently, it has become clear that the key to successful reforestation lies with the local communities. Small scale approaches may well be the long term solution to the problem of fuelwood and energy supply, and involving women in the project interventions a further step in a more integrated approach. As it is, the recent "social forestry" approach might well be the long expected solution. To meet the objective of having people plant trees, however, it will be necessary to establish a good extension service which not only start initiatives but also assures a thorough follow up once the planting has started.

The problems that have to be overcome — or bypassed — remain difficult, but recent experience has nevertheless given some insight in how to solve them!



Example of a poster used in reforestation extension (Guinée Republic)

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