



SOCIAL FORESTRY NETWORK



MALI AS A CASE STUDY OF FOREST POLICY IN THE SAHEL: INSTITUTIONAL CONSTRAINTS ON SOCIAL FORESTRY

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I INTRODUCTION

The current environmental crisis in the Sahel and other arid and semi-arid regions of Africa has been described as largely a man-made phenomenon: the process of desertification. The problem has many causes: over-exploitation of the natural resource base; increases in the human and the livestock population; agricultural expansion into former pastoral areas; and urbanisation (NAS 1983a). Drought has intensified and accelerated this process. These factors have led to "islands of desertification" appearing and spreading throughout the Sahel (Gorse et al. 1985). The roots of the problem, however, are even more complex and are related to policy and institutional constraints, which are prevalent in the forestry sector and impede the development of social forestry.

II FOREST POLICY IN THE SAHEL: BACKGROUND

The Sahel may be defined as a region receiving between 200 to 600 mm of annual rainfall, stretching in a broad band just south of the Sahara and transecting most of francophone West Africa. The eight member countries of CILSS (Permanent Interstate Committee for Drought Control in the Sahel) - Cape Verde, Mauritania, Senegal, Gambia, Mali, Burkina-Faso, Niger and Chad - are normally considered as Sahelian countries. Extreme variability of rainfall is characteristic of this region, with cycles of recurrent drought a prominent feature. The spatial and temporal irregularity of rainfall patterns, in combination with frequent variations in soils, topography, vegetation and land use, create a heterogenous physical environment (NAS 1983b, Taylor and Soumaré 1983).

Traditional production systems: the role of trees and forests

Trees and forests play a vital role in traditional production systems, providing a range of products such as fuelwood, wood for construction and artisanal purposes, fodder, fibre, foods, gum and other secondary products. An equally important role is that of maintaining soil fertility and stability. Throughout the Sahel, the anthropogenic retention of certain species, such as Acacia albida, lends a "farmed parkland" look to the landscape (Taylor and Soumaré 1983, Weber and Hoskins 1983).

Production systems are generally linked to the ecological gradient within the Sahel and can be classified into three broad categories:

(i) Silvopastoralism is practised in the arid north, where different ethnic groups maintain herds of varying composition and occupy specific niches. The majority are transhumant pastoralists, moving between wet and dry season pasture. Fodder from trees is critical during the long dry season and provides up to one-third of the total dietary requirements of livestock during the year.

(ii) Agrosilvopastoralism generally occurs in the less arid zones of the Sahel, where sedentary mixed farming systems have evolved, integrating crops, trees and livestock components. Here, in addition to fodder production, trees are valued for their soil enhancement qualities. The Acacia albida is extremely important in these systems and constitutes an integral element of the oldest sedentary agriculture in the region (e.g. that practised by the Serères in Senegal).

(iii) Agrosilviculture is usually found in the more humid southern portion of the Sahel, where rainfed agriculture is practised. Production is based on cereal crops, notably millet and sorghum; cash crops, such as cotton and groundnuts are also produced. Once again, trees play a vital role in maintaining soil fertility in these systems and produce a range of secondary products (Gorse et al. 1985).

Historical perspective: genesis of a forest policy

In precolonial times, traditional rulers and institutions (e.g. village chiefs and councils) established and enforced regulations governing the use of common resources such as pastures and trees. Often, laws were enacted prescribing severe punishment for the illegal cutting of certain trees; such as was the case with Acacia albida in the kingdom of Segou (Mali) and in the Sultanate of Zinder (Niger), where the offenders were punished by lopping their hands. Trees were also protected for religious reasons, as in sacred groves or burial grounds, or for more practical benefits, such as shade and fencing (CILSS 1982a, 1982b).

In Mali, the karité (Butyrospermum parkii), néré (Parkia biglobosa) and baobab (Adansonia digitata) were valued and protected because they provide food substances, which are consumed on almost a daily basis.

With the advent of French colonial conquest, greater exploitation of forest resources occurred through land clearing for the expansion of cash cropping and the creation of railroads. Prior to colonisation, agricultural production was concentrated on the subsistence food crops. Allocation of land use rights was held in trust by the elders and passed down to individuals and families through lineages. Some argue that by imposing head taxes and cash cropping, the French caused some men to migrate to neighbouring English colonies and also prompted greater individualisation of land tenure (Thomson 1983).

The problems of deforestation in the Sahel were noted as early as the 1930s and 1940s. Aubreville commented in 1947 that the disappearance of the dry forests would have a disastrous effect on soil fertility and influence the climate in years to come (Aubreville 1985).

This perception of over-exploitation of forest resources led to an evolution of forest policies and regulations. The first step toward the development of forest policy in francophone West Africa was the creation of the droit forestier in 1932, which enabled the colonial administration to create state forests (fôrets dominales de l'état) in an attempt to control exploitation and protect the forest resource. The reserves were established in forests and on other lands deemed to

be "vacant without ownership", often ignoring the existence of customary rights. The trees on this land included commercial timber species as well as species yielding fuelwood, tannin, fibre, gum and other important products. In the process, a large amount of silvo-pastoral and bush fallow land was annexed by the State, causing much resentment amongst the local populations who depended on this land (Gallais and Boudet 1980).

As Bochet (1983) concluded, these policies were primarily directed towards conservation as a means of preventing misuse of the forest and have been developed in terms of litigation. The consequence of this emphasis on punitive and deterrent aspects of forest law became an obstacle to development..."The legacy of this forest policy imposed by the French colonial administration is quite prevalent today throughout the Sahel". It is one of the strongest constraints to current social forestry efforts. The following section attempts to analyse, using Mali as a case study, the status of forest policy, how it is implemented, why it is viewed as an institutional constraint, and what policy reforms may be instituted in order to create incentives for local participation in social forestry.

II MALI: A CASE STUDY

Mali is a large (1,240,000 square kilometres), landlocked and agriculturally dependent country, located in the heart of the Sahel. The top priority for the government and the people is, inarguably, food self-sufficiency, a goal that is becoming more and more elusive as drought and desertification continue. In the face of declining agricultural production and productivity, it has become increasingly clear that trees and forests are intimately linked with, and can enhance, crop and livestock production.

There is tremendous ecological diversity in Mali; vegetation varies from the relatively dense Sudano-Guinean forest formation in the south to the barren Sahara desert in the north. In addition to its critical role in cropping and livestock systems, forest vegetation is essential to the Malian way of life and vital to the Malian economy. Forest products are used by virtually all Malians in their daily activities.

According to a CILSS (1982b) assessment, fuelwood accounts for 93% of the national energy demand. Products such as sheanut butter (karité), fruit and gum arabic are important not only in the household and domestic market place, but also in the national economy. As an export commodity group and foreign-exchange earner for Mali, forest products rank behind only cotton and livestock.

Given the importance of the forestry sector and, simultaneously, the decimation of the resource base through drought and desertification, the government of Mali has responded by according high priority to forestry development and environmental protection in its Five-Year National Plan for Economic and Social Development. As in other Sahelian countries, the Forest Service is charged with this enormous mandate. The fulfilment of this mandate is severely handicapped by two factors: 1) the meagre financial, human and material resources at the disposal of the forest service and 2) the incompatibility of existing forest legislation with current attempts to engender greater local participation in resource protection and management.

The Malian Forest Service: a historical perspective

The present day Forest Service in Mali has its origins in 1935, when the territory was known as the French Soudan. The decree of 4 July, 1935 created the Forest Service to enforce the newly enacted Forestry Code. Trained foresters were virtually non-existent, with the exception of a few colonial officers, and for a long period the service recruited most of its personnel from the ranks of former military men. Thus the paramilitary structure and nature of the service was born, with its approach to resource management based on strict conservation (Thomson and Sylla 1985).

The Forestry Code was essentially restrictive and punitive and the accompanying system of permits and fines became the normative structure within which foresters worked. Antagonism rapidly developed between foresters and villagers due to the expropriation of wood fallow land (considered vacant and without ownership) to create state forests and due to the emergence of abusive and randomized fining practices. This traditional role of the forester and the negative consequences on

forester-villager relationships is a key constraint which must be overcome if the forester is to become an effective catalyst in social forestry development. The current version of the Forestry Code, law No. 68-8 AN-RM, went into effect in 1968, but retains essentially the same elements as the Code laid down during the French colonial era. This will be examined in detail in a later section.

Structure Function and Means

The Forest Service is one of the four national administrations within the Ministry of Natural Resources and Livestock. The National Directorate (DNEF) is headed up by a Director-General and comprises seven technical divisions, which are responsible for providing policy direction and technical supervision to staff and projects in the field. The DNEF divisions are:

- projects and programmes
- environment
- soil and water conservation
- forest management and reforestation
- personnel and equipment
- fishing and fisheries
- hunting and national parks

Presently, many of these divisions are operating at partial capacity at best and most sections are underemployed; each division has a head, who supervises three or four sections. The Division of Projects and Programmes (DPP) is charged with the principal responsibility for policy formulation and implementation. In theory, this division is empowered to coordinate with the Ministry of Planning on issues of sectorial policy and planning. In practice, the DPP is understaffed and underequipped and therefore unable to adequately collect, interpret and analyse data or develop appropriate national-level policies. Furthermore, within the actual political arena, the DNEF lacks the administrative clout to pursue and develop policy on the broader inter-agency level.

Most of the current operational forestry projects (in other words, externally funded) are "supervised" at the national level by three divisions, these being: Projects and Programmes; Soil and Water Conservation; and Forest Management and Reforestation. Many of these projects are implemented through the Regional Directorates (DREF). In Mali, the Forest Service structure is parallel to that of the State Administration; hence there are seven Regional Directorates, one in each administrative region, subdivided into 46 forest cantons, one in each administrative circle.

The Forest Service has a dual mandate:

- 1) the protection and management of renewable natural resources, including forests, soils, surface, water, silvopastoral areas, wildlife and forestries; and
- 2) the implementation of desertification control measures to stabilise the degrading environment, including reforestation, soil and water conservation and public education.

Compounding this enormous mandate is the overwhelming range of the "natural forestry domaine", which embraces 91% of the Malian territory. This includes virtually all rangeland and non-cultivated lands as well as some 4.4 million hectares of administratively classified lands: 1.1 million in forest reserves, 0.4 in national parks, and 2.9 million in partial fauna reserves.

The means for attempting to meet this mandate are severely limited. In 1984, Forest Service personnel included 161 professional foresters, 352 paraprofessionals and 155 technicians. However, its budget totalled only 500 million FCFA (about £1 million) and was derived from three sources: the National Budget (201 million FCFA); the Regional Budgets (101 million) and the National Forestry Fund (212 million) (République du Mali 1985). Of the National and Regional budget allocations, over 90% went directly for salaries and personnel costs. This means that, donor financing aside, the Forestry Fund is the sole source of the operating costs of production activities.

The Forestry Fund is a special Treasury account comprising receipts of all exploitation permit fees and 75% of fining transactions (the other 25% are redistributed as commissions). It is clear why the traditional function and emphasis of the Forest Service has been protection of existing resources through the levy of repressive fines for violation of the Forestry Code. On the one hand, fining feeds the Forestry Fund, which can be used to finance equipment and transportation; on the other, commissions supplement the rather low and irregularly paid salaries of foresters and their supervisors. However, the unfortunate result is the antagonism it has bred between the Forest Service and the population, which acts as a disincentive to local participation in resource management.

The Forestry Code

The restrictive and punitive nature of the Malian Forestry Code is manifest in the systems of permits and fines, respectively.

In theory, the requirement for obtaining permits to exploit fuelwood as wood for construction or artisanal activities allows for control and regulation of where, and how much, cutting takes place. For fuelwood and for certain species such as Acacia alibda, only deadwood is to be harvested. However, owing the meagre means of the Forest Service to apply this in practice, there is little effective control of wood cutting and commercialisation.

Article 36 of the Code (République due Mali 1968) describes 10 "forest species" considered as "protected species". These include A. alibda, néré and karité, three of the most important and prevalent anthropogenic agroforestry species found throughout farmers' fields in Mali. All protected species can be legally exploited only with a permit obtained from the Forest Service, which ranges in cost from 1000 FCFA (£2) per tree for kapok (Bombay costatum) to 6000 FCFA (£12) for each cailcadrat (Khaya senegalensis) (CILSS 1982b). Aside from the large monetary burden this represents to an artisan or other user of these trees, there is the additional burden of time and transport involved in seeking a permit from a Forest Service post. For a poor peasant, these costs can be prohibitive.

In the case of fuelwood gathering and harvesting, it is generally recognised that the exploitation of deadwood for domestic consumption requires no permit. For commercial purposes, the permit price for a stère (one cubic metre of stacked wood) has been 100 FCFA (£0.20); this is soon to increase to 200 FCFA as the result of a World Bank imposed condition to double the permit and fining tariffs in an effort to generate more revenues for the Forestry Fund. This small sum should be considered a wood tax as opposed to a stumpage fee, because it represents an insignificant, almost negligible, portion of the replacement cost of fuelwood. Because a permit is valid for a period of one month from date of issue and control is so inadequate, frequently more wood is harvested than authorised by the permit.

Presently, very little commercialised fuelwood is effectively taxed. A recent study estimated that only about three percent of the fuelwood consumed in Mali is accounted for by the amount authorised via reported permit sales. Part of this is obviously due to the aforementioned limited resources of the Forest Service. However, given that most commercialised wood is transported by trucks via roads leading into Bamako, by far the largest centre of wood consumption in Mali, and that the main arteries are supposedly manned by Forest Service agents, one can only conclude that the "political will" is lacking to push effective control of wood taxation, at least for the Bamako market and its network of wood transporters.

In the case of trees in fields, the Code is ambiguous. While recognising customary tenure - that is, the tree belongs to the person who tends it - the Code still requires that the farmer obtain a "free" permit in order to exploit a tree in his field. The costs associated with obtaining a permit (even a free one) often exceed a farmer's capabilities (Thomson and Sylla 1985). The difficulties of transport, sometimes including that of assuring the transport of the forestry agent for a site inspection before permit issue, have often resulted in farmers evading this process, thus producing the classical scenario where a farmer could be potentially fined for cutting a tree that he tended in his own field.

From the preceding discussion, it is evident that both the spirit and the letter of the Code act as disincentives to farmers and villagers vis-à-vis resource protection and management. Interpretation (and misinterpretation) of the Code is usually at the sole discretion of the forestry agent in his dealings with illiterate peasants. Such a system lays wide open the opportunities for abusive and randomized fining practices.

The punitive aspect of the Forestry Code is, of course, embodied in the levying of repressive fines, which can be extremely severe. In Mali offenders can be fined up to 300,000 FCFA (£600) and/or imprisoned for up to five years, as defined in the Code (République du Mali 1968). In Niger, fines range from 1,000 - 100,000 FCFA (£2 - £200) for illegal felling of a protected species and 10,000 - 500,000 FCFA (£20 - £100) for illicit bush fires (CILSS 1981).

There is a great vested interest in maintaining the fining system for augmenting both national Forestry Fund revenues and individuals' commissions. Of all levied fines, 75% is deposited in the Forestry Fund account and 25% redistributed as commission. Recently, the division of this 25% was revised as follows:

- 10% to the indicateur (reporter of the infraction);
- 5% shared amongst all agents of the forestry canton;
- 3% shared amongst all agents at the Region Directorate;
- 4% to agents at the National Directorate (other than the D-G and his Assistant);
- 1% to the Director-General and Assistant D-G;
- 2% to the Forest Service Fonds Commun (Common Fund).

One basic rationale for the use of commissions is to discourage the incidence of "unreported fines". In practice, however, it must be conceded that unreported fines, bribes and other abuses occur (Thomson 1977), although the extent, frequency and magnitude of these practices are impossible to know accurately. Undoubtedly, this aspect of forest policy implementation has created the most antagonism between the villager and the forestry agent.

The Forestry Fund

In theory, the National Forestry Fund in Mali can be an important investment fund for production and conservation activities. It is a special Treasury Account into which 100% of permit fees (only 50% prior to 1981) and 75% of levied fines are deposited. From this account, certain operating costs for nurseries, transport of agents, etc., are provided as well as some infrastructure and equipment. In 1984, of the total non-donor financial resources available to the Forest Service, about two-fifths came from the Forestry Fund. One unhealthy trend has been the increasing proportion of fining revenues as opposed to permit revenues. This is illustrated by the selected data below.

FORESTRY FUND REVENUES IN MILLION FCFA FROM:

<u>Year</u>	<u>Fines</u>	<u>As % of Total</u>	<u>Permits</u>	<u>As % of Total</u>	<u>Total</u>
1969	7	24	22	76	29
1971	13	30	31	70	44
1976	37	34	72	66	109
1981	161	65	86	35	247
1984	90	49	93	51	183

Source: République du Mali 1985

Clearly this trend needs to be reversed so that increased receipts from permits, as a function of more effective control of wood exploitation and commercialisation, become once again the lion's share of forestry Fund revenues.

TOWARDS SOCIAL FORESTRY: THE CASE FOR POLICY REFORM

The so-called first-generation Sahelian forestry projects met with little success. Many over-ambitious projects, geared toward the establishment of large-scale plantations of exotic fuelwood species, were instigated as a response to the severe drought of the late 1960s and early 1970s. Over 160 million dollars US were expended by donors as Sahelian forestry aid between 1975 and 1982 (Weber 1982).

Many important lessons have been learned. In some cases, technical or environmental factors caused project failure. In almost all cases, social and institutional constraints were not adequately addressed and were the major obstacles to forestry development. "Local participation in resource management" is now a long standing cliché, yet it remains the key and largely unachieved element in social forestry promotion. The rigid paramilitary orientation of the Forest Service, with its restrictive and primitive approach, has been a major factor in the breakdown of traditional resource management mechanisms. (Thomson and Sylla 1985). Local communities have become divorced from the management of common property resources. With the current permit and fining systems, many villagers feel that once a permit is bought or a fine paid, they are entitled to unlimited access to the wood resource. In sum, there are no incentives for preserving or growing trees under the existing policy and legislative framework (Thomson 1983b).

Perhaps, then, the most important lesson is that a favourable forest policy environment has to emerge if "local participation" is to pass from rhetoric to reality. The burning question is: how?

Evolution of Forest policy in Mali

The Malian Government and Forest Service recognise the inherent deficiencies of an approach that emphasises repressive police functions. This recognition, with encouragement from the forestry sector donors, has spurred the articulation of a new politique forestière. At the National Forestry Round Table, held in November 1983, constructive dialogue took place on key institutional issues and constraints. Recommendations were formulated to underscore the pressing need for better training and research as well as certain policy reforms.

Among the priority areas indicated for policy revision were:

- the transition from repression to extension as the major role of the forestry agents;
- the revision of forestry legislation including the definition of the "forestry domaine";
- the necessity of involving local populations in natural

- resource management;
- the need to integrate forestry interventions with agricultural and livestock activities; and
- the importance of greater flexibility in the application of forestry regulations to reflect the diverse eco-climatic zones.

Since the landmark meeting, some - but in the opinion of many, not enough - progress has been evident. In terms of social forestry, the pivotal reform concerns the role of transition of agents in the field. There is much rhetoric and some action to suggest that agents are being guided toward assuming an extension role. However, given the animosity developed in past relationships between foresters and villagers and the strong, vested interests prompted by the fining system and commissions, this transition will be very slow unless more draconian policy reform measures are taken. Even with the most qualified, motivated and well-intentioned agents, the nature of dual roles - providing both repressive and extension functions - is often conflicting and impossible to fulfill.

Owing to very low levels of national funding, the Forest Service is dependent upon donor financial assistance for most of its programme and project development. Thus, donors have potentially great leverage in policy dialogue and reform. For that to occur, a unified donor position regarding the major reform issues would be required. At present, and by no means by accident, the major donor groups (World Bank, France, Switzerland, Holland, Germany and the United States) are each working in separate regions. This geographic dispersal renders difficult the important matter of donor coordination. While informal interchange between donors improves information sharing, formal links have not been forged either by the Government or by the assistance agencies themselves.

Strategies ahead

What, then, are the options to be pursued to create a more propitious policy environment in Mali? And how can these options be implemented in the face of certain vested interests and the desire to maintain the status quo? There certainly are no clear-cut solutions. One scenario would involve the development and experimentation of rather bold policy measures aimed at creating an effective forestry extension capability. For this to succeed, donors must assume a strong supportive position on policy reform and an effective feedback mechanism must be established to monitor experimental policy initiatives and their impact on local populations as well as forestry agents.

Bold strokes

Among potential options to be considered and tested are:

- (i) creation of two forestry divisions. The formal separation of the police and the extension functions are seen by many as the only short-term solution to the "duality" problem. This has been recently instituted in Senegal. It is envisaged that the protection division would be charged with environmental protection and the control of resource exploitation, and move from the current pattern of randomized fining to a more programmed function with specific agents responsible for specific areas, assigned on the basis of protection needs. The protection would assume an education role with the local populace and work in concert with them. The reforestation division would be mandated with the extension function and agents assigned to this division would work exclusively on social forestry and conservation activities.
- (ii) creation of a Regional Forestry Fund. Regional accounts would supplant the National Forestry Fund with the view of increasing efficiency in the deposition and mobilisation of revenues (and avoiding the "annexation" of the Fund at the national level). This would encourage more self-reliance at the regional level. Of course, adjustments would have

to be made for regional disparities in resources and generated revenues.

- (iii) suspension of commission from levied fines. This would be the most radical move but also the most essential in eliminating the vested interests associated with the fining system. In this scenario, all revenues from fines levied would be deposited into the Regional Forestry Fund; no commissions would be redistributed. Instead, a personnel evaluation system would be developed to assess the effectiveness of a given agent in carrying out his assigned protection or extension duties and the award of performance bonuses given or not given on that basis. One argument against this is that the level of unreported fines would skyrocket. But risks must be taken if meaningful policy reform is to be embarked upon.
- (iv) transfer of some resource protection and management function to local levels. The local participation component of the social forestry equation can only come to fruition when some local-level controls are restored. In view of the limited resources of the Forest Service and the problematic situation concerning recurrent costs and sustainability, much more responsibility must be shouldered by local population. The modalities for engendering greater local involvement are not well-defined. Nonetheless, a range of options appears worth trying. Contractual arrangements may be appropriate in some cases between villagers and the Forest service, as in the case of controlled farming or grazing access in forest reserves or villager participation in exploitation activities within reserves. Some villagers have expressed the desire to form "village forest police brigades", which would be responsible for enforcing regulations surrounding natural resource usage. Successful application of these types of initiatives could result in the Forest Service and village working in partnership.

Donor leverage

Resistance to change is particularly strong where vested interests are involved. For this reason, the reforms suggested above would probably only be tried if steady, unified and insistent leverage is applied by donors in the sector. This presents another problem: how to effectively promote donor coordination? Although most donor representatives are supportive of this action, no practical forum has yet emerged. Ideally, an international or multi-lateral aid agency would assume the lead (e.g. UNDP/FAO or the World Bank) with the active participation of bilateral and non-governmental organisations. The creation of a regular forum for Government-donor consultations (e.g. an annual round-table on forestry sector issues) would facilitate dialogue and coordination.

Concerted donor pressure, in combination with support of policy studies and formulation of realistic policy options, could lead to dramatic improvement in the policy environment.

Feedback mechanisms

The testing of policy reforms on an experimental basis would require careful monitoring of how these reforms affect villagers, forestry agents and social forestry interventions. Feedback from all levels is essential for proper evaluation and revision of policy initiatives. It is clear that for policy reform to proceed, a gradual, iterative and flexible process must be fostered.

V PROSPECTS AND OUTLOOK

The road ahead, like the trail behind, for forest policy in the Sahel promises to be rocky and fraught with pitfalls. Policy evolution, and to a certain degree, policy revolution, must be pursued with one eye on the types of policy reform that are sorely needed and the other trained on the political realities at hand (la politique actuelle as Sahelians are fond of saying). And somehow the political will to support these reforms must be tapped.

As suggested, donors in the sector have a vital role to play in this process. They must be able and willing to surmount past preoccupations with turf battles and scrambling over each other for projects. Like anything else, good policy is dependent on good information, which, in view of its current short supply must be encouraged or partially supplied by the donors. Levering is a delicate business.

Finally, a more realistic view of policy reform needs to be presented. The forest police function must be viewed as an essential one, which needs to be improved and made more effective, not eliminated. Correctly structured, the police function will complement and support forestry extension efforts. Policy reform, like social forestry, is a gradual, long-term process. Only through sustained and long-term commitment from Governments and the donor community can this process work.

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