Gazettement, punitive taxes and cutting licences to outsiders, in combination with confiscation, fines and corruption did much to destroy forests and weaken participatory forest management in the Sahel during the twentieth century. In the 1990s, however, decentralization offered a new chance for local forest management.

All field case studies demonstrate that community institutions are capable of guarding their forest according to their own standards. They have discussed and proclaimed rules, and they monitor their forests and pursue infractions in local ways. Fines are much milder than they are under the Forest Service, but guarding is infinitely more efficient. This tends to be an unwritten rule and is hardly protected by law, since law reform itself is just beginning. The economics of this management depend on local priorities; livestock production and land appropriation are often more important values than wood production, for example.

The two key constraints for broad replication are internal conflict and repression by powerful outsiders. A minority of communities are internally divided, which inhibits effective management. The more important constraint is abuse by Forest Service units or other powerful outsiders.

The following recommendations are made:
- Unions of local management institutions should be promoted to defend their interests.
- Innovative projects should actively inform the decentralization process.
- Institutional alternatives to the Forest Service should be developed.
- Regional and Africa-wide networking and expert assistance should be reinforced.

**Introduction**

This contribution is based on a programme of Sahelian research, networking and communication, which was started in 1996 with a geographical emphasis on Mali, the Niger, Burkina Faso and the Sudan (Kerkhof, 2000). Four woodland management projects provided a basis for field research, and experiences from many other projects has been incorporated.

The initial questions centred on the nature of local institutions dealing with woodland management and the tasks performed by them. Despite the conventional view of government administrations that local communities have neither the will nor the skill to manage their local woodland resources, it was clear that many of the local woodlands have always been managed, in one way or another, by local communities without the use of conventional forest management tools. Given the opportunity, local communities take charge of their natural resources. How do they manage, what are their constraints and how can policies and laws be improved to make management work better?
History of forest management in the Sahel

Since the early days of the colonial period, the generally accepted view among Sahelian governments has been that the local people of the region are not capable of managing local woodland resources rationally. The outlook and objectives of local people is regarded as being purely short-term, and they are seen as lacking the skills and knowledge required for the complex tasks of scientifically based long-term woodland management. Until the 1990s, forest management was essentially seen as the responsibility of the Forest Service.

The Forest Services in the French-speaking Sahel always included a strong militaristic streak that persists to the present day. These services were set up and run in accordance with the traditions of the French Forest Service, the Office National des Forêts, in which foresters still carry firearms and are organized on the lines of a military hierarchy. With independence, the role of the Forest Service was generally reinforced and extended.

Forest agents are entitled to a percentage of the fines imposed, the sales of confiscated goods and the taxes collected. In the case of fines, 25 percent goes to the Forest Service, of which a proportion goes to the agent concerned, with the remainder distributed to the various levels in the service (Madougou, 1999). The forest agents who collect taxes take a commission of 10 percent on the amounts handed to the tax office. From an economic point of view, it makes more sense to fine and confiscate than to collect taxes. But it makes still more sense to do this and keep the proceeds, a practice that is facilitated by the military nature of the Forest Service.

During the twentieth century, forest agents created a tradition of punitive raids, which have instilled fear in rural people and against which they are largely defenceless. One of the results is a high level of animosity towards the service on the part of local people. Meanwhile, the Sahelian forest resource has steadily regressed.

Case studies of local management today

It is now evident that woodland management by the state is neither effective in meeting its declared objectives nor sustainable without far larger external inputs than are likely to be available. It follows that if large-scale management of woodland resources in the Sahel is to take place, it will require a sharing of responsibilities and a new social contract between governments and local communities. The encouraging fact is that the ingredients of such a contract are becoming increasingly clear. The research case studies demonstrate how local forest management works, if it is allowed to become a reality.

Communities can only manage woodland resources over which they have some degree of effective long-term ownership. Generally, landownership is claimed by a community that has inherited the spiritual ownership of the first cultivator. It is often necessary for newcomers to recognize the spiritual ownership through culturally appropriate mechanisms, while for all practical purposes the forest resource is used by the village situated in or near the forest. Alternatively, socio-economic and ethnic differences may equally require sharing mechanisms. Strategic decisions may have to be negotiated among the various groups, whereas day-to-day management may be the responsibility of a specific user group.

In the case studies, local communities tend to have sophisticated and effective means of forest protection, and the woodland is usually well protected. Guards may be employed by the local community to protect the whole forest, or areas that are not easily monitored by the village population in their normal daily activities. The guards’ salary may be paid from fines or from community revenues derived from sales of forest produce. Alternatively, guards may receive goods confiscated from illegal exploitation; they may also be given the right to harvest certain forest products or be released from other community work.

Alternatively, there may a community forest committee that has overall responsibility for protecting the woodlands. The number of people involved in this case will tend to be higher than in the case of salaried guards, but they will tend to visit the forest on a less regular basis. In other cases, the whole community may share responsibility for monitoring forest exploitation and informing village leaders of irregularities. When an arrest is to be made, several male members of the village community may be recruited. In addition to deterring violence on the part of the offender, the use of a team means that
witnesses are present. In the absence of witnesses, it is difficult to verify contradictions between the culprit and the person making the arrest.

In most cases, protection is a mixture of these mechanisms. During the cropping season, for example, most villagers are occupied with cultivation, and women may bring lunch to those working on the land. Wild woodland products tend to be plentiful at this time, and women and children may collect fruit and flowers throughout the forest. During this time, the village forests are well monitored by the whole village population.

In the latter part of the dry season, however, few villagers walk in the forest. Many men may have migrated in the search for work, and there are no wild foods to be collected. This is also the peak construction season, so that the risk of illegal tree cutting is high. Hay has a market value in some areas and exploitation may have to be deregulated. Forest protection may then be the task of specially assigned guards who may themselves be allowed to engage in certain forms of forest exploitation at the same time.

Local communities have various ways of dealing with infractions of their rules. These tend to be milder, though no less effective in protecting their resources, than the much harsher approach used by the Forest Service. They also tend to be more precisely and justly applied. Unlike some of the Forest Service bodies, local communities sue only if there are no ambiguities about the identity of the culprit. In the most typical case, the culprit is given a warning and may be required to apologize to local leaders.

The application of sanctions and taxes may be poverty-indexed. In the cases of Mali and the Sudan, for instance, poor members of the community may be pardoned for a forest infraction if it is felt that they have no other options as a result of extreme poverty. In other cases, locally imposed taxes may be poverty-adjusted, whereby families known to be very poor do not pay any contribution at all.

A higher level of sanction for breaking the rules is confiscation of produce and possibly arrest. Fines can sometimes be quite significant when the offence is on a large scale. Nomads who set up camp in a protected area of village forest and cut a large number of trees in the village of El Ain in the Sudan are reported to have been fined £75 000 (US$48). Unauthorized commercial fuelwood harvesting in N'dounkoye village, Mali, is severely punished with fines of up to CAF 50 000 (US$81). Three agropastoralists who were living in land belonging to El Goz village, the Sudan, were found to have cut a large number of Acacia seyal trees to feed their livestock inside the forest and were fined £140 000 (US$90).

When the culprit refuses to accept the ruling of the local village leadership, recourse will be made to a higher authority or a council made up of the leaders of several neighbouring villages. In cases where local law is not accepted, state institutions such as the Forest Service, the police or the court may be involved. In these cases, if the accused is found guilty, the fine is often higher than in the village.

In extreme cases, the highest available community sanction may be applied. In Kordofan, this means complete social exclusion, under which all other villagers will refuse to communicate with the person concerned. Migrants who have settled in the village, such as agropastoralists, may be forced to leave. In Bankass, Mali, the fetish may be applied as the ultimate sanction, and in neighbouring Kelka, an entire village was socially excluded in 1995 by 12 neighbouring villages for poor respect of agreed management rules.

Outside the area covered by formal forest management projects there is little codified or formal forest planning in the Sahel. The fact that there is no written management plan, however, does not mean that no management plan exists. In practice, most woodland areas are under some form of local management, making it the predominant but least recognized form of forest planning.

Formal management plans, in fact, are not necessary for the actual management of woodland areas, and they are not necessarily a form of progress. In some regions in France, for instance, barely 1 percent of all forest estates have a written management plan. This does not imply that 99 percent of the forest estates in such areas are not managed.

In the Sahel, the traditional topography and toponomy are often adequate for forest delineation. Local people generally know the traditional units of land, their limits and their names. The informal management plans developed by local communities reflect their own priorities in dealing with the resources available to them. Grazing, establishment of cattle camps, hunting, fruit collection and artisanal wood production may be higher on the planning agenda than fuelwood. Such local planning tends to be effective but is poorly appreciated by law.

This contrasts with the performance of Forest Service management planning. North Kordofan State, the Sudan, for example, has a total of 160 forest areas gazetted or in the process of gazettement, but only one has a management plan. Many of the gazetted
forest reserves in the Zinder Department of the Niger, in another example, no longer exist on the ground and none has a management plan prepared by the Forest Service.

The basic unit of local forest management is the village, or a group of villages. The detailed organizational arrangements vary widely, which is not surprising, given the range of environmental, socio-economic and political conditions found in the Sahel. In the Kelka area in Mali, for example, each of the 13 villages has its own committee that deals with rule-making and day-to-day management of the local woodlands. Above the village committees is the *Walde Kelka*, which has two representatives from each village and meets twice a year or at any time of need. It deals with problems that cross village boundaries and serves as a recourse (Diallo and Winter, 1997).

In neighbouring Bankass, the leader of one management institution covering ten villages is now blind and old, and he is assisted by young and literate members. This has modernized the institution. It now has written accounts, and a town-based radio station is used to communicate important messages to members. In most cases, however, modern features such as written accounts do not exist.

In the Sudan, the law stipulates that forest committees elected by the citizens of the village are in charge of local woodland management. This is a well-defined status in comparison with West Africa, but the actual practice is quite different from statutory arrangements, and the way in which village committees operate depends more on the authority and effectiveness of the leadership than on the formal legal framework.

In the Niger, management of the Takieta Forest is coordinated by a large committee that represents the 12 villages and the pastoralists who traditionally pass through the forest (Vogt and Vogt, 2000). They felt that if the forest had been divided into small units, powerful traditional chiefs might dominate the management and use the forest for their own benefit. This shows that a larger institution may also prevent abuse by powerful individuals.

The common denominator of legitimate organizational arrangements is the right response to power relations and to the human resources available in the community. It contrasts with the blueprints that many projects and laws pursue. Legitimacy was achieved in the majority of villages in case study areas, but a number of communities were divided to the extent that effective forest management was not possible.

**Rural fuelwood markets**

The rural fuelwood markets developed in West Africa since 1992 are a big step forward from the era of central control by the Forest Service (Foley et al., 1997). The markets have allowed village institutions to take charge of forest management and increase local incomes. The model developed in the Niger has been adopted in Mali since 1996, and more recently other countries have started using it. But research has demonstrated that if the market model does not evolve rapidly and adjust itself to the era of decentralization, it will not achieve the intended objectives (Kerkhof, Madougou and Foley, 2001).

One constraint is the basic objective of the rural fuelwood market, which is fuelwood production for urban markets, whereas the forest is a resource with many different values. The organizational blueprint of the fuelwood markets is such that fuelwood cutters have a dominant voice in the local institutions, while those who depend on the forest for game, food or fodder tend to be poorly represented. Yet economic values other than commercial fuelwood are more important in many Sahelian forests.

Another constraint is that the Forest Service has monopolized the key management tools, including the annual fuelwood harvest quota. These tools are poorly adapted to local conditions and are hardly understood by the local users as the ultimate forest managers. Continuing domination by forest agents has also left plenty of scope for abuse of power in the Niger once the projects are terminated (GTA, 2000).

Conflicts between local forest management institutions and powerful outsiders, such as the Forest Service and town-based traders, are very instructive. The following examples demonstrate the potential of unionism by local forest management organizations:

- In 1997, forest agents seriously abused fuelwood markets in the Torodi area of the Niger, where they more or less plundered the market treasuries. Twenty-two markets joined together as a union, stated their case in a newspaper and approached their Member of Parliament. The corrupt forest officials were removed by the administration. As recently as October 2001 these unions marched to Parliament to claim funds that had been stolen from them.

- Over the period 1992 to 1996, several conflicts between village forest institutions and powerful outsiders were mediated and resolved by the *Walde Kelka* union of 13 villages in Douentza, Mali. Village organizations were unable to overcome them.
In 1998, forest agent patrols in Bankass, Mali, seriously abused their power by entering villages and cattle camps in search of money and livestock. Poorly organized communities lost a great deal of money and animals, but many others were organized in the Alamodiou forest management union and resisted until the agents gave up. In 1998, the sale price of fuelwood was very poor for village-based producers in Burkina Faso. Forest management organizations in the villages joined together, halted production and presented their case in Ouagadougou. They broke the monopolistic price structure of the town-based traders and greatly improved producer prices (Delnooz, 2000).

**Recommendations**

The following four recommendations for action are made:

1. *Diversification of actors in forest management.* Instead of the classic situation with a very powerful Forest Service and the presence of influential town-based traders and weak local communities, decentralization should achieve a diversification of actors in forest management. Private operators, non-governmental organizations, legitimate local government and unions of local institutions should assume roles that were previously monopolized.

2. *Development of unions.* The development of unions of local forest management institutions appears to be essential. Recent experience in the Niger shows that such unions are easily “captured” by powerful outsiders, in particular Forest Service agents, unless the union leaders are legitimate in the eyes of members. Such unions should pursue their own objectives, which tend to be different from those of outsiders.

3. *Development of the right regulatory framework.* The formulation process is important; many administrations find it difficult to involve the civil society fully in the process. Questions of secure access and effective sanctions should be included in an effective framework for local forest management. Local institutions should be able to sanction minor forest infractions instead of relying on the ineffectual justice system of the state.

4. *Networking and exchange of expertise.* A scaling-up of experimentation, learning and policy adjustment that cross national borders is required. There is still considerable resistance to learning from neighbours, sometimes because of self-interest, sometimes because of ignorance. The pool of regional experience and expertise is rapidly growing and should be better exploited.

**References**


