

The terroir approach to natural resource management: panacea or phantom? - the Malian experience by Tove Degnbol¹

1. Introduction

In recent years the "terroir approach" to natural resource management has become increasingly popular in Sahelian countries. It has been promoted by the World Bank, while at the same time it is practised by many NGOs and praised by most governments. The first World Bank-supported project based on this approach was initiated in Burkina Faso in 1985, and similar projects now exist in several Sahelian countries including Mali (since 1990) and Niger (since 1994). Many NGOs have in the same period broadened the scope of their activities from a fairly limited focus on technical improvements such as soil and water conservation to an approach based on organisational support to the management by local communities of a wide range of resources of importance to their livelihood (UNSO 1994; Vedeld 1994; Lazarev 1993)

In the general debate about the terroir approach there has been a tendency to associate it with bottom-up grassroots initiatives implying a real transfer of authority from government structures to civil society. It has sometimes been described as the convergence of the resource management issue and those of decentralisation and democratisation. Hence, many Sahelian governments such as the Malian refer to terroir experiences as concrete manifestations of their will to redefine the relationship between the state and civil society.

In this paper, attention is called to the highly differentiated picture of terroir experiences. Based on field studies in Mali² it is argued that locally initiated activities

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² During five months of field work in 1993 and in the autumn of 1994 the author concentrated on the Sikasso region in the south western part of Mali. The main interest has been to assess the direct interaction between local populations and government field staff involved in natural resource management activities. A large government implemented environmental programme based on the terroir approach ("the test zones programme") was initially used as an entrance point to the problem. The participation as an observer in staff meetings and field visits provided the basis for the design of a questionnaire survey in a sample of villages, a series of interviews with government staff at four administrative levels (arrondissements, cercles, the regional and the national levels) and a series of interviews with representatives for national and local natural resource management projects, researchers, main donors and the various working commissions and study groups involved in the preparation of decentralisation processes.

run by local management structures represent only one among several terroir approaches. While such activities may generate valuable experience for the communities involved and important inspiration to the process of redefining relations between state and civil society, their influence on formulations of national policies seems to be relatively limited. On the contrary, Malian policy formulation processes in the field of environmental management have so far rather reflected experiences of larger donor-supported and government-implemented activities. These projects still tend to focus on technical and administrative solutions to what are fundamentally issues of power relations. Instead of approaching the problem of how to transfer authority from central government authorities to local government staff, and from government structures to local populations, large donor-funded projects concentrate on how to ensure an efficient implementation of preconceived plans through the strengthening of existing structures. Thus, in an extreme version such projects may adopt a purely technical approach in which terroir activities take the form of a traditional "extension package".

In Mali decentralisation and democratisation processes gained pace only recently. President Moussa Traoré's 23 years of dictatorial rule came to an end in March 1991, when popular unrest culminated in a coup d'état. It is still very early to assess the character of decentralisation processes, but in the paper it is argued that certain similarities seem to exist between the way the terroir approach has been interpreted in practice and the way decentralisation is understood and approached. Thus, the lack of will by policy decision-makers to take on the highly explosive questions of power relations, ideologies and attitudes of government staff and local populations may result in a situation where decentralisation processes are dealt with as purely technical exercises: a certain deconcentration of authority from the national to the regional level takes place, but power relations between, on the one hand, the bureaucratic elite and field staff at the bottom of the government hierarchy and, on the other hand, government structures and civil society basically remain the same.

The paper opens by introducing some of the conceptual differences of the various terroir approaches. Based on the observation that several of the approaches are very technically oriented, the debate about the terroir concept is criticised for being too focused on problems prevailing at the community level, whereas the fundamental problem of the role of the state in relation to terroir activities is not addressed. This is followed by an outline of overall trends in Malian decentralisation processes and of the role played by the terroir approach. Then the example of the test zones programme is used to illustrate the problems associated with an approach that emphasizes the technical aspects of resource management while ignoring the issues of power relations, interests and attitudes. Finally, the experience of the test zones programme

is compared to other terroir experiences in Mali.

2. The "terroir approach"

When reference is made to "the terroir approach" and "terroir experiences" a common understanding of the phenomenon is often taken for granted. It obviously has to do with the management of natural resources, and in the general debate the concept has acquired a sense of grassroot initiatives, democracy, the transfer of authority and the empowerment of local populations.

The concept, however, covers a wide range of different activities and approaches of which only a few address the social and political dimensions of resource management as directly as one may be led to believe by the general debate.

The *terroir* is an area of which the limits are recognised by a given local (agrarian) community and which is customarily used by community members for their livelihoods. The land is rarely the private property of individual community members rather, they have a sense of a collective claim to the area and exercise some degree of control over access to its resources (Painter 1993; Painter et al. 1994; UNSO 1994).

Although the concepts are often used interchangeably, a distinction can be made between "gestion de terroir" and "aménagement de terroir". *Gestion de terroir* refers to the management in the broadest sense of the word by local communities of their resources within the terroir. *Aménagement de terroir*, on the other hand, refers to deliberate modifications of local management practises by local communities with a view to protecting and improving the natural resource base of the terroir. This can be the establishment of conventions by a local community on rights to the cutting of firewood, but often it takes more technical forms such as the adoption of water harvesting techniques and the planting of trees. In recent years, government, donor and NGO-induced aménagement initiatives have often taken the form of preparation of a local resource management plan (*schéma d'aménagement*) defining rights and duties related to the resource management within a given area. The outside agency typically acts as advisor and donor, and sometimes a formal contract is concluded between the local communities and the external partner(s) (Painter 1993; Painter et al. 1994; UNSO 1994).

Among schéma d'aménagement-activities a further sub-division can be made between, on the one hand, an approach that emphasizes the importance of a *detailed knowledge* of existing natural resource characteristics (soils, vegetational cover, trees, etc.) and, on the other hand, a *less scientific* approach that operates with rough estimates of existing potentials. Often, relatively important differences are found between government and NGO-executed activities, of which differences in the level of people's participation are among the most important.

Another distinction is sometimes made between a *global and integrated terroir approach* and a *light and specific terroir approach* (MAEE 1992c). Whereas the former refers to an approach that relates to *all* rural development problems faced by a local community, the latter is a less ambitious attempt to establish a set of simple rules regarding access to and use of natural resources within a given terroir. A particular variant of the global terroir approach has actually left the idea of operating within the limits of a given terroir and instead a local development approach is applied (Ventre1994).

Finally, a distinction is made by some government planning authorities between the concepts of *terroir* and *territoire* (MDRE1994a). While the former refers to a land area recognised and customarily used by a given community (a village terroir), the latter relates to an administratively defined area such as a region or a district. In this line of thinking a terroir management plan is a tool to be used by local communities to manage natural resources within the limits of their terroir, whereas a territoire management plan is a planning tool used by government authorities.

2.1 The debate about the terroir approach

Notwithstanding the specific understanding of the concept may be, most participants in the *debate on improved management of natural resources stress the important potentials held by the terroir approach as a means of reversing the technically-oriented approaches used in the past*. As summarised by one of the participants in the Malian debate: past failures were produced by projects that were technically-oriented, output-oriented, sectoral or multi-sectoral but without any real integration, without any consideration of the social dimension of development and without a real concern for people's participation. The terroir approach, on the other hand, is build on people's participation and addresses both socio-economic and institutional (e.g. tenurial) issues (Dudeck 1994). In an attempt made by UNSO to present the state-of-the-art of terroir experiences it is described as an approach that focuses on the management of natural resources at the level of the village or camp, and operates in three interrelated systems: the technical system (techniques meant to improve the physical environment); a socio-economic system (organisational structures within which people live and organise their livelihoods) and the legal system (rights of access to natural resources, enforcement of rights) (UNSO 1994).

Some of the protagonists of the terroir approach go one step further: the transfer of control over the management and use of resources from government structures to local people is described as a central feature of the terroir approach and as such it is seen as the convergence of the issue of resource management and the issue of decentralisation (Dolumbia 1994; CPS 1994a, CPS1994b). As will become apparent below, this reflects the declared official Malian understanding of the concept, whereas the practical interpretation has tended to concentrate entirely on its technical aspects.

So far, no overall evaluation of terroir experiences has been made, but an increasing concern is expressed in the international literature regarding the usefulness of the approach in relation to some of the main socio-economic problems characterising Sahelian rural communities.

Firstly, it has been pointed out that the terroir approach is too focused on the agro-ecological diversity of local communities, whereas insufficient attention is paid to socio-economic and cultural heterogeneity at village and inter-village level. Differences in access to land, labour and credit based on village level power relations, gender, age groups, caste, etc. tend to be overlooked (Painter 1993, Painter et al. 1994). Similarly the usefulness of the terroir approach as a means of supporting the democratisation of village life has been questioned (Engberg-Pedersen 1995).

Secondly, the terroir approach has been criticised for its bias towards settled communities, hence the difficulties of integrating the interests of transhumant pastoralists into community-level management of natural resources (UNSO 1994; Painter 1993; Painter et al. 1994)

Thirdly, attention has been called to the risk that the application of the terroir approach may result in a rigid establishment and enforcement of tenure rights in line with a "substantive law approach" (establishment of rules of right which the courts are called upon to apply) as opposed to a "procedural law approach" (establishment of rules of procedures) (Vedeld 1994). This argument has been taken further in a fundamental critique of the idea of operating with the concept of a well defined terroir given the fact that village terroirs are only one element in a much wider "action space" in which Sahelian populations operate to manage risk and diversify opportunities (Painter 1993, Painter et al. 1994).

Although all the above points seem to be highly relevant to the debate about the terroir approach, it is a striking feature that they all tend to concentrate on problems prevailing at the community level. The role of the state and the relationship between the state and local communities are touched upon in most of the contributions but the issue is often described in rather vague formulations usually not going beyond general statements about the need for a redefinition of relations between the state and civil society³. Observing that the terroir approach is based on the assumption that a new role for government extension staff can be found, one of the contributions sums up: "they must establish a good rapport with local people and act as facilitator, catalyst, convenor and colleague" which demands that they have "certain technical and personal skills" (UNSO 1994).

³ Vedeld 1994 is one of a few exceptions.

Experience from Mali seems to suggest that the real challenges to the terroir approach lie in the relationship between the state and civil society. The major difficulty of the terroir approach is not how best to ensure that local managing structures represent all groups of society, i.e. that a certain degree of democracy exists at village level. The real difficulty is how to change the role of the state from an executing and implementing agency that sets the agenda and defines the roles of local managing structures to a set of institutions, which enjoy the legitimacy necessary to act as arbitrators and advisors when called by local communities. This again demands that internal power relations within government structures are approached and that the issues of different interests and well established attitudes are taken up.

3. The terroir approach and decentralisation processes in Mali

Mali is one of the Sahelian countries in West Africa. It is a resource poor and landlocked country with a GDP per capita of only USD 310 in 1992. About one third of the total area is covered by the Sahara desert, while the estimated 9 million inhabitants are concentrated in the southern part of the country. The serious economic difficulties of the country are mainly due to a low and erratic rainfall pattern, an annual population growth rate of 2.7%, an increasing pressure on the cultivated land, a growing squeeze on the pastoral production, declining world market prices on cotton and difficulties of finding outlets for the cattle production. Although about 80% of the population live in rural areas, the country is a net importer of food. The provision of health and educational facilities is among the poorest in the world.

Decentralisation of government administration and the transfer of authority to local populations have been among the declared top priorities of Malian development strategies for more than a decade. Whereas the Moussa Traoré regime that came to power in 1968 did little to translate rhetorical frills into practice, decentralisation planning processes gained pace after the toppling of the Traoré regime in March 1991 (Sow 1992; Mission de Décentralisation 1994). Already, the transitional regime that prepared the way for the now democratically elected government initiated a number of important planning initiatives. The various governments that have followed after the first parliamentary elections in February and March 1992 have increased the range of initiatives, and although implementation so far has been slow, current initiatives seem to indicate a will to speed up at least the more technical parts of the reform process (Sall 1993; Mission de Décentralisation 1995a; Mission de Décentralisation 1995b).

Environmental management has been a key issue in all decentralisation discussions in Mali. The overall objective of decentralisation processes is said to be a redefinition of the relationship between the state and the population with a view to "disengaging the state" and "make the rural population responsible". This new responsibility of the rural population regards all activities related to rural development and in particular the management of natural resources as a field of vital importance for the basic survival of

the majority of the population (Camopa 1994; Mission de Décentralisation 1994).

Already at the National Conference in July-August 1991, where the new Constitution was debated, intensive discussions over decentralisation plans took place. At the National Conference farmer delegates found it difficult to be heard, but when discussions continued at an Estates General ("Etats Généraux") on the rural sector in December 1991 farmers, herders, fishermen and woodcutters strongly influenced the more than fifty specific recommendations to the government. The most important outcome of the Estates General was a call for a dramatic redefinition of the relationship between the government and the rural sector. The delegates requested a real devolution of power to rural communities in order to allow rural populations to deal with land tenure and natural resource management issues (Bingen 1994).

The recommendations of the Estates General were to a large extent incorporated in the Rural Development Guidelines (Schema Directeur du Secteur Développement Rural) issued by the transitional government in March 1992. These three-volume guidelines that addressed both macro-economic and sectoral dimensions of rural development opted for a gradual change of the role and responsibilities of the government vis-à-vis the rural population. They stressed the importance of establishing a genuine dialogue with the population and of a decentralisation process initiated from below by a process of independent creation of rural communes by local communities. Concerning environmental management the Rural Development Guidelines referred to the terroir approach as a very promising approach to decentralised resource management. Although a list of important questions related to the adoption of the approach was raised and the conflictual character of all aspects of resource management was emphasized, the Guidelines left little doubt about the desirability of a country-wide coverage of terroir activities (MAEE1992c).

A closer reading of subsequent planning documents, seminar reports and a law on decentralisation approved by the Parliament in February 1993 leaves the impression that the decentralisation process is basically understood as a process of deconcentration mainly from the national to the regional level, while a fundamental redefinition of the relationship between the state and civil society has not been put on the agenda (MAEE 1992b, MDR 1993a, MDR 1993b, MDR 1993c, Camopa 1994, Loi no 93-008/P-RM).

The government approach seems to have shifted from the initially open and broad invitation to representatives of all groups in society to participate in the debate (the National Conference and the Estates General) to a largely technical and bureaucratic approach: a national working commission (la Mission de la Décentralisation) and various study and planning groups are made responsible for the preparation of laws, decrees and a number of reform initiatives to improve the efficiency of government services. The various planning initiatives are only subject to cursory information mainly in the electronic media and in the capital-based francophone written press.

Consultation with the majority of the population who are living in rural areas is apparently confined to a forced information campaign through the recent establishment of a complex hierarchy of "structures of reflection" ("groupes d'étude et de mobilisation") (Mission de Décentralisation 1995b, Coulibaly 1994).

The most important element in the decentralisation process is the law on reorganisation of the administrative division which foresees the replacement of the existing arrondissements⁴ by rural communes ("communes rurales")(Loi no 93-008/P-RM). Although the formal procedure is to leave decisions to the villages on which rural communes they want to join, the way the process is organised makes it a de facto top-down exercise with a very limited say of villagers. Thus, a complicated structure of delimiting commissions with a heavy representation of government technical services is supposed to organise village meetings and approve of the various proposals within a time schedule of only two months from May to June 1995. Municipal elections are expected to be held already in early 1996 (Mission de Décentralisation 1995). As the village and (pastoral) camps are not recognised as legal structures (territorial units) there is a serious risk that the establishment of rural communes may involve a transfer of authority *from* the village *to* a superior structure (see also Coulibaly 1994). This concern is further aggravated by the fact that a final decision on if and when the arrondissement level is going to be suspended has not yet been taken. The most pessimistic scenario, therefore, seems to be a so-called decentralisation process that implies the insertion of an additional layer into the administrative hierarchy with an inverse transfer of authority from villages to superior structures.

Among other reform initiatives, a proposal to restructure the Ministry of Rural Development and Environment deserves a particular mention. The existing "encadrement" by government extension staff of village populations is supposed to be replaced by "partnership relations" by splitting up the execution of extension and enforcement activities. A unitary extension service is expected to cover all the tasks presently carried out by a whole range of juxtaposed government services and a number of support functions will be transferred to local communities (MAEE 1992b; MDR 1993a; Camopa 1994). Although the proposal seems to represent a radical

⁴ Four administrative levels make up the present structure of the government administration. Below the national level the country is divided into 8 regions which are further subdivided in cercles which are again divided into arrondissements. Whereas each of the existing arrondissements includes an average of 30-50 villages, it is foreseen that the future rural commune will be significantly smaller (e.g. 8-10 villages or pastoral fractions per rural commune)

rupture with existing relations, the danger associated with a purely technical and administrative approach clearly looms. There is an intense aversion to the proposal at all levels of the government administration, in particular at the central level, and influential members of "the old guard" are believed to be able to obstruct the implementation of the reform if it is accepted by Parliament. The responsible planning commission is aware of the problem, but so far only a negligible effort has been made to involve the concerned staff members (and the population) in the debate about the reform. Information rather than debate seems to be the preferred way of communication, and so far information activities have been concentrated at superior levels (mainly the national and regional levels).

Natural resource management has been an integrated part of all reform plans. Whereas initial discussions referred to the terroir approach as one possibly useful approach among several, the general debate on improved natural resource management has now made the issue more or less synonymous with the application of the terroir approach. In July 1994 a national seminar was held on "gestion des terroirs villageois and decentralisation". Here it was decided to work for the preparation of natural resource management plans (schémas d'aménagement de terroir/territoires) at all levels ranging from the village, the rural commune and the cercle to the regional level with the ultimate aim of establishing a national plan for the management of natural resources (MDRE 1994b). To support the process a complex structure was proposed: terroir commissions made up of representatives of government technical services and advisory terroir commissions constituted by representatives of civil society (NGOs, socio-professional organisations, etc.) should be established at the levels of the rural commune, the cercle, the region and the national level. The administrative complexity approaches the absurd when this proposal is supplemented by plans (part of the restructuring of the Ministry of Rural Development and Environment) to establish a new government service at the regional level with a particular responsibility for natural resource management. The service is expected to work through a number of mobile teams at the level of the forthcoming rural communes and the task of the teams will be to support the preparation of local resource management plans based on the terroir approach (schéma d'aménagement du terroir)(Camopa 1994).

Many different terroir experiences were represented at the seminar, ranging from highly complex schéma d'aménagement approaches (PGRN 1994; CPS 1994b) to NGO-supported experiences based on a global terroir approach (Ventre 1994). Instead of encouraging the multiplicity of different initiatives, the seminar opted for a definition of *the* most appropriate terroir approach, which happened to be identical to the approach applied by three large projects funded by the World Bank, Germany and Norway, respectively (MDRE 1994b). This approach, which will be further described in the following presentation of the Norwegian funded test zones programme, is characterised by its emphasis on a detailed knowledge of agro-ecological conditions as a precondition for the preparation of local resource management plans.

Thus, the picture that appears is a decentralisation process, which can be characterised as a predominantly technical and administrative exercise, where limited room for manoeuvre is left to the majority of the population who live in rural areas. To the extent that the need to involve those directly affected by the various reform proposals is recognised, the standard solution seems to be the creation from above of new structures that follow the traditional hierarchy. As it is much more difficult to suppress existing structures than to create new ones, the result may easily be that new structures are added to the already complex administrative hierarchy. Problems related to differences in attitudes and interests are known but not acted upon except in the form of relatively scanty information activities.

Although official statements constantly refer to decentralisation as the redefinition of the relationship between the state and local populations, the conditions for and implications of such a redefinition are rarely discussed. At the above-mentioned national seminar on "gestion des terroirs villageois and decentralisation" the following description of the role of the state made by the national unit responsible for coordination of environmental activities remained unchallenged and unspecified: "the state should behave as a good father who assists, advises and controls" (CPS1994a).

In the following the example of the terroir based test zones programme is used to illustrate the problems associated with a purely technical approach to natural resource management, which ignores the issues of power relations within the government hierarchy and the fundamental problems in the relationship between the state and local populations.

4. The example of the test zones programme⁵

When the test zones programme was initiated in the late 1990s it was meant to be the first step in a country-wide exercise that should lead to the synthesising of local experiences with the terroir approach in the preparation of a national environmental programme. With World Bank and Norwegian funding three cercles were selected as test zones (Djenné in the Mopti region and Koutiala and Kadiolo in the Sikasso region, respectively). While the main objective of the programme was to support local communities to prepare local schéma d'aménagement de terroir, it was also part of the objective to contribute to a strengthening of local government authorities vis-à-vis

⁵ In addition to available published documents the description of the test zones programme is based on internal programme documents, interviews with government staff involved in the programme at various levels, interviews with local populations in the villages involved, the participation as an observer during staff meetings and field visits and interviews with relevant resource persons in the Sikasso region and in Bamako.

the central administration and to the adoption by government technical services of a multi-disciplinary approach. Thus, government staff at the lowest administrative level, the arrondissement, were expected to be given a fairly autonomous role as executors of the programme, and instead of the traditional division of labour between the various technical services all staff were supposed to work in multi-disciplinary teams (PNLCD 1991; Sylla et al. 1992; N'Djim et al. 1993; N'Diaye & Sogore 1994)

Already from the beginning, however, serious difficulties in the existing institutional set-up compromised the idea of a "bottom up"-initiated programme based on local experiences. Donors played a significant role in the development of the concept, and the programme did not escape the classical structure of having a programme management unit in the Ministry of Environment with a heavy hand in all decision-making concerning activities in the field. Hence, a team representing the unit in Bamako selected the villages to be included, prepared a working programme and drew up a time schedule consulting neither local government authorities nor the populations concerned. All funds were controlled by the central unit.

The level of information about the objectives and measures of the programme was (and still is) extremely low among those supposed to be responsible for its execution. Only in late 1993 was the terroir approach presented at a number of seminars to the government technical services involved. During the first two-three years of the programme activities consisted solely in a number of "incentive activities" such as tree planting, the construction of small dams, gardening activities, the establishment of bee hives etc. and even in late 1994 such activities still dominated the programme. The incentive activities are believed to be necessary to "mobilise" a hesitant population to participate in the preparation of land management plans.

4.1 A technical approach

The way government technical services go about the preparation of the schéma reflects an understanding of the "terroir approach" as a purely technical exercise meant to result in a *plan* rather than in a *planning process* undertaken by local populations. A manual forwarded by the coordinating unit to the government field staff contains a detailed description of a series of steps necessary to go through to prepare the plan. Emphasis is put on the preparation of a wide range of maps of e.g. soil characteristics, vegetational cover, bush and tree vegetation and existing land use patterns. Participation by local populations in the exercise is often confined to rather haphazard consultations with the village political leaders, while government staff or external consultants prepare the various maps themselves. The programme has opted for the creation of new programme-specific structures at village level to avoid the "undemocratic" tendencies of existing political structures. In practise, however, most villages have sought to integrate programme structures in existing structures, and villages political leaders have thus been the main protagonists the programme.

There is virtually no attention by the programme to social and cultural issues related to the adoption of the terroir approach. After the change of regime in 1991 the Sikasso region has experienced a very turbulent social development where traditional authorities are openly questioned and new alliances emerge. Village Associations (AVs), since the 1970s the backbone of local communities, are in many cases broken up and new AVs are formed by opponents to those hitherto in control (Ouattara 1993). The test zones programme ignores such tensions and blindly insists on preparing common land management plans even in extremely difficult settings such as villages with five different AVs that do not communicate together. Needless to say, pastoral problems are completely neglected by the programme.

4.2 The government hierarchy

No changes have yet been made to the government hierarchy, still based on a structure of parallel top-down lines of command where all decisions are taken in the capital and executed at the lower levels.

The government staff in direct interaction with local populations are those at the bottom of the hierarchy. They have only a limited basic education, and they are those least likely to be invited to training courses in subjects relevant to the service or in new working tools (e.g rapid participatory appraisal) meant to improve communication with the population. In Koutiala and Kadiolo many government staff at arrondissement level have still not received any training regarding the terroir approach.

Despite their limited theoretical skills, government field staff often have a very useful in-sight into social, economic and political issues influencing the everyday life of the population. It is, however, very difficult for staff at the bottom of the hierarchy to communicate this insight to their superiors, as they are not expected to have an opinion on their own, and superiors at regional and national levels do not want to be bothered by what they consider to be troubles. In the test zones programme this has meant that warnings by the field staff against the undertaking of programme activities (e.g. village information meetings) in the middle of the harvest period have been ignored. Government staff, who have tried to raise the issue of social conflicts at village level, land tenure problems and the role of pastoralists, have been told just to make sure that land management plans are prepared according to schedule.

There is no reward for individual initiatives and experiments and for bringing up issues of importance to the population, indeed, it can be fatal to the future career of individual staff members to do so. Staff at the bottom of the hierarchy are subject to punishment by their superiors for all deviation from work programmes and directions defined by the top. Those considered troublemakers and cantankerous risk being given a one way ticket to an unattractive position in e.g. Tombouctou in the North.

The combined effect of the widespread fear of the superiors and the limited level of

information about alternative approaches is a general acceptance by the government field staff of their role as executors of whatever tasks they are asked to carry out. In meetings between staff from cercle and arrondissement levels, employees from arrondissements hardly say a word and when they do it is mainly to affirm the instructions given: "it is understood", "no problems", etc.

It is evident that such circumstances do not further chances that government field staff may shift from traditional extension approaches and policing activities to a role as "facilitator, catalyst, convenor and colleague" responsive to the interests of local populations.

4.3 The sectoral approach

Support by government services for the adoption by local communities of the terroir approach demands a close collaboration between the various services dealing with e.g. livestock, agriculture, forestry and organisation of the population. This, however, goes directly against the existing structure of juxtaposed services with each their well-defined area of responsibility and virtually no horizontal communication or collaboration (see also MAEE 1991 and MAEE 1992b).

In the test zones programme the attempts to organise joint field visits and joint coordinating meetings are confronted with a whole range of barriers related to the competition and jealousy between the government services. Each of the services demands that staff members concentrate on activities traditionally considered their domain, while coordination and cross-sectoral activities are given a very low priority. All staff members have to account for the tasks carried out in monthly reports to their superiors. The serious personal risk associated with the non-fulfillment of the expectations of the service often results in a situation where the incentive activities are divided between various services and carried out in the traditional non-integrated way, while the preparation of land management plans is neglected.

4.4 Lack of resources

The general strain on resources further complicates the situation. The programme has a budget for current costs associated with its execution, but like all other funds it is very difficult to decentralise it to the lowest level where money is most needed. Thus, a considerable amount is reserved for allowances and transport for staff at the cercle level and a supervisor at the regional level, while staff from three or four services at arrondissement level have to share a worn out moped when they want to visit the villages. This, of course, makes joint field visits a serious challenge to the inventiveness of the staff, and the non-existence of transport means often provides a plausible excuse for not leaving the offices for months.

In addition to the lack of resources, rigid budgeting procedures constitute a constraint

on the reversal of the role of government staff. All field visits have to be part of a working programme approved (or prepared) by the superiors. There are no possibilities for improvising as the staff go along and possibly realize a need for further support. As expressed by a staff member at arrondissement level: "if it becomes clear that a message explained during an information meeting is not well understood, I just have to say that I will be back in three months time, when the budget allows me to spend petrol on a second visit". As mediation in continuous negotiations constitutes a core element of the support by government services for the preparation by local communities of resource management plans, such budgeting procedures obviously work against the possibilities of playing a constructive role.

4.5 The relationship between government staff and local populations

While all the above-mentioned problems relate to the structures and practices of government services as such, a much more fundamental problem concerns the relationship between government staff and local populations.

Like government staff have difficulties in changing roles and attitudes, rural populations do not all of a sudden forget past injustices. It is too much to ask that villagers should welcome the same government staff who only three years ago jailed them for having cut a green branch, as friendly extension workers or "development partners". The distrust and sometimes open hostility is very difficult to overcome, and the situation is not improved by the fact that changes in government practice are hard to detect. The general legitimacy of the state which was seriously undermined by the Traoré regime has not been repaired by the new democratically-elected government. Some have argued that it has, in fact, been even further damaged by the government-inability to tackle a number of pertinent problems such as the school crisis, the Touareg upheaval in the northern part of the country, the demands by the rural population for more influence on the marketing of agricultural produce and the deepening economic crisis caused by the continued decline of world market prices for cotton (Coulibaly 1994).

Not all government services are faced by problems of distrust and hostility to the same extent. In the Sikasso region the cotton cultivation company, CMDT, is still seen by the majority of the population as the source of most of the wealth in the region through its promotion of not only cotton cultivation but also of food crop production and through the provision of credit facilities, literacy courses and general rural infrastructure. The forestry service, on the other hand, is subject to an intense hatred after decades of high-handed repression where villages have been forced to pay exorbitant amounts of fines and protection money (McLain 1992; Brinkerhoff & Gage 1993; Lai & Khan 1989). As environmental protection has traditionally been part of the forestry service domain, the bad reputation of the service constitutes a serious problem to environmental activities in general and to government-executed activities in particular.

Although the test zones programme as an environmental programme places itself at the heart of these problems, it shows no sign of consideration of the tensions described. Instead it is based on the conventional belief that government staff "know better" and that the population just has to be persuaded by various material incentives to accept it. To the extent that incentives have not been able to remove all resistance and reluctance by the population, the standard reaction by the programme is to repeat one-day information seances to "explain better".

A look at the way the actual communication between government staff and local populations takes place removes all doubt about the importance of the aspects of trust and understanding between the two parties for a change of their respective roles.

Meetings between government staff and village populations are typically called by the technical services without prior investigations about the convenience of the date. The staff are often several hours delayed (if they arrive at all), and when the meeting begins the dominant form is a speech by the staff which the villagers are not expected to question or comment. A meeting is often interrupted by internal discussions in French between the staff sitting on the best chairs the village can offer, while villagers, sitting at some distance away directly on the ground, are cut off from the conversation.

Different reactions to the behavior of government staff have been witnessed. In many cases villagers just pretend to be interested in the idea of local land management plans in order to obtain some of the incentive activities. In other cases they refuse to waste their time on meetings bringing no other outcome than a paper plan that they do not understand. In one case the author witnessed a very dramatic reaction to the insistence of government services on the preparation of an unwanted plan. Under the pretext of celebrating secret traditional fertility rituals, visiting government staff were literally chased off by the population under threats to their lives.

Despite its good intentions the test zones programme has ended up as a traditional donor driven centrally coordinated project trying to persuade a reluctant population to adopt yet another "technical package". The relationship between government services and population is the same as ever and so is the functioning of the government apparatus (the hierarchy, the sectoral approach, etc.). Having had no magical impact on existing relations the terroir approach has instead been transformed into a version that bears little resemblance to the idea of leaving the management of natural resources to local populations.

5. Other Terroir experiences in Mali

It may be argued that the test zones programme constitutes a rather extreme example of a "technocratisation" of the terroir approach. Being among the first projects in the Sahel to adopt the approach, and caught in the political turbulence after the change of

regime in March 1991, it had a difficult start, indeed. Furthermore, it has suffered from financial constraints due to disagreements with the donors and, finally, it has been more affected than most other projects and programmes by a range of institutional changes at the central level of government administration.

On the other hand, the test zones programme is still referred to by the Malian government (and others) as one of the most important terroir experiences whenever decentralisation and natural resource management is discussed (CPS 1994b, MAEE 1992c). When in 1993 a large World Bank-funded environmental programme (PGRN) was initiated, the experience of the test zones programme was said to provide the point of departure (World Bank 1992). Also, a German-funded project (GERENAT) initiated in 1991 has applied an approach very similar to the test zones programme (Dudeck 1994). Both are executed by government technical services, both apply a highly complex terroir approach based on thorough studies of the agro-ecological resource base and both attach considerable importance to incentive activities. Since 1993 the two projects have been run by the same management unit and presently they cover more than 170 villages in four regions (PGRN 1994). The long term objective of the PGRN-programme (15-20 years) is to reach a national coverage of terroir activities. It was part of its initial objectives to provide the basis for the elaboration of a national environmental action plan (World Bank 1992). This plan saw the light of day in September 1994 (MDRE 1994c).

While PGRN, GERENAT and the test zones programme quantitatively dominate the picture of terroir activities in Mali and have been highly influential on in the development of the official interpretation of the concept, a range of other terroir experiments are taking place. Among those most often referred to is a Canadian-funded terroir project initiated in the region of Ségou in 1988 (AT/D2) and four very different terroir experiments supported by the cotton marketing company CMDT in the southern cotton cultivation zone (Doumbia 1994; CMDT 1994a; CMDT 1994b; Coulibaly et al. 1994; Jolderman & Fané 1994). To this should be added an estimated 42 national and international NGOs involved in natural resource management that apply various versions of the terroir approach (Dembele & Ventre 1994). And, finally, some more informal grassroot-initiated activities can be found in villages where inspiration has been gained mainly from NGOs working elsewhere in the area.

Donor-funded projects can generally be characterised according to their choice of one of two strategies: either they have made a point of *not* involving government structures or they have sought to establish a certain collaboration with government services in order to ensure the long term sustainability of activities. A closer look at some of the projects that have opted to the second strategy shows that they are to varying degrees characterised by the same problems as the test zones programme: they often suffer from problems related to the hierarchial structure of government services, the technical and sectoral approach, the lack of collaboration between the various government services, insufficient training of government staff, reluctance by

government staff to change their role, insufficient attention paid to social issues such as tenure problems and the role of the pastoral population and serious limitations on participation by the very population supposed to benefit from the activities.

Projects, which have sought to by-pass government structures, may have avoided many of the above-mentioned problems but the price has often been a fairly limited scope of activities and the existence of a whole range of overlapping or directly contradicting activities within the same limited area. Furthermore, such projects often have to realize that government structures feeling disregarded can be serious opponents in the field. Thus, projects, which have supported the establishment by local communities of local conventions on the use of fuel wood, have experienced a marked reluctance by government staff to assist in the enforcement of rules and regulations decided upon.

6. Whose fault is it?

The many problems associated with the adoption of the terroir approach and the decentralisation processes described originate in existing power relations in Malian society. Despite a declared will to redefine the relationship between the state and civil society, the existence of "an enabling state" politically willing and technically and financially able to encourage and support local initiatives cannot be taken for granted. Although a formal democracy has been established, the emerging political parties are still too weak and inexperienced to set the political agenda. The most influential interest groups are, therefore, still found in the government administration. Changes after 1991 have mainly affected the top of the government hierarchy, while the majority of the government staff at lower levels remain in their former positions. A young and well-educated technocratic elite has replaced the former top-level management and now sees its role as that of trimming government administration by wiping out all tendencies towards corruption, favouritism and arbitrary decision-making that have prevailed in the past. Increased government efficiency and effectiveness rather than a fundamental redefinition of the role of the state are seen as major objectives of what is understood as decentralisation processes.

Given the extremely limited resource-base of Malian society, donors play a crucial role in both policy formulation processes and policy implementation. The "government strengthening approach" of the new administrative leaders goes hand in hand with the "good governance" agenda of the most influential donors. With the World Bank in a leading role, the strategy of government top management is not being countered. Donor influence, on the other hand, is not being questioned by top-level managers, and the largely donor-driven process, therefore, seems to be met with resistance mainly at lower levels of the government apparatus. Activities of NGOs may be of considerable importance at the local level but are too scattered and uncoordinated to have a real impact on overall policy formulation processes.

If, however, there is still cause for a certain optimism with regard to the on-going political changes, it is rooted in the growing recognition by the rural population that changes cannot be expected to be induced from above but will have to be initiated by themselves. The emergence of a farmers union (SYCOV) in the cotton cultivation area in southern Mali is among the most encouraging examples of such processes. After the change of regime in 1991 farmers in the Sikasso region realised that they could not expect other groups in society to defend their interests. What was started as a movement to protest against the growing gap between production costs and producer prices for cotton has now taken the form of an emerging farmers union demanding a radical redefinition of the relationship between the government and the rural sector. Farmers' demands include a transfer of taxation authority to local administrative structures and a substitution of government extension staff by village technical teams to undertake all advisory services related to cotton cultivation, soil improvement activities and livestock raising (SYCOV 1994; Bingen 1994; Coulibaly 1994).

7. Conclusion

In this paper Malian experiences with the terroir approach have been used to illustrate some of the dangers associated with on-going decentralisation processes.

It has been argued that the terroir concept covers a wide range of very different approaches which do not all address the social and political dimensions of natural resource management as directly as one may be led to believe by the general debate. In Mali the approaches that have so far dominated national policy formulation processes are those characterised by a strong emphasis on technical aspects of environmental management, while issues of power relations, ideologies and attitudes of government staff and local populations have generally been ignored.

Decentralisation processes have only recently gained pace, and assessments of their character and possible outcome should be made with much reserve. A cautious evaluation of existing trends, however, seems to indicate that some of the problems characterising existing approaches to natural resource management can also be found in official interpretations and approaches to decentralisation. Thus, the technical and administrative orientation is reflected in a striking lack of consultation with the rural population and a marked unwillingness to address the issues of conflicting interests and differences in attitudes within government structures. The overall objective of decentralisation seems to be translated into an improved government administration (increased efficiency and effectiveness) rather than a fundamental redefinition of the role of the state vis-à-vis civil society. Based on this background, a possible outcome could well be that a certain deconcentration of authority from the national to the regional level takes place, whereas the basic functioning of the government apparatus and relations between the state and local populations remain the same.

The example of the test zones programme has been used to illustrate the difficulties

experienced in the field when existing structures are made responsible for the adoption of a new approach which *could* imply a fundamental questioning of their mere existence. Instead of addressing pertinent questions such as the lack of state legitimacy, attitudes of government staff and local population, problems related to the government hierarchy and to the sectoral approach, government structures have simply implemented the terroir approach as a traditional extension package.

The question remains whether it is not politically naïve to expect those presently in power to initiate processes of change that will imply a fundamental redistribution of authority. While donors tend to concentrate attention on national planning processes and attach considerable importance to new (project and programme) approaches, much more promising changes are taking place in the field, where local populations are now making the first organised attempts to influence the national policy agenda.

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