Land tenure systems and forest policy

FAO
LEGISLATIVE
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FOOD
AND
AGRICULTURE
ORGANIZATION
OF THE
UNITED NATIONS

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FOREWORD

A proper understanding of the impact that the different types of land ownership can have on forest and forest management is essential for those with administrative responsibility for drafting forest policy and for managing forest resources. For land tenure, perhaps more than any other factor, will determine the main lines of government policy and the techniques available for the implementation of that policy. The basic distinction, of course, is between public land ownership and private land ownership. But within this broad classification there are many variants and factors having an influence on the exercise of owners' rights, with the result that the distinction becomes less clearcut. Customary ownership of forest land, as met with in South Pacific countries and in Africa, and the communal forests are two examples. In many cases the land tenure regime not only provides the framework within which forest policy will operate but may on occasion create an obstacle to its proper implementation. The difficulty arises, for example, when forest land holdings are fragmented.

It is hoped that the present study, by an author who has been adviser to several African Governments on these problems, will be of interest and useful for students of forest policy and legislation and for administrators who have to deal with the practical problems arising in the conception and implementation of forest policy.

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INTRODUCTION

The human race is not a forest-dwelling one. Few of us adapt to a way of life perfectly attuned to the forest such as that of the Indians of Amazonia or the Pygmies of Africa. Each successive thrust in population growth has led, wherever it has occurred, to a shrinking of our woodlands. The major clearances of history remain synonymous with the bringing of land under the plough, with progress, with the wellbeing of society. Conversely (if one excepts the case of contemporary western Europe), it is in the periods of population regression that the forest has been able to reconquer terrain left behind by the farmer. Whatever the case, we have ever been conscious of our dependence on the trees of the forest as material supports for our existence, if only for the timber we obtain from this source.

The areas of land given over to cropping or grazing have expanded too, along with a humanity increasing and multiplying, and to the detriment of the forest 1/. The share taken by wood in satisfying man's basic needs continues to be largely due to his failure to diversify his sources of raw materials and energy which progress made possible in Europe.

The need therefore arises to develop forest policies capable of dealing with the shock that the natural environment has sustained as a result of the population explosion. The “capital” existing in countries that possess vast forests must be conserved and reconstituted in the other countries, in such a way as to restore equilibrium where timber needs are concerned and to reestablish ecosystems favourable to human existence.

That being so, the legal regime governing land takes on a particular importance. And for two reasons:

In the first place, the land tenure regime determines the type of land management; and attitudes weigh heavily on the future of the forest. Private ownership, for example, will be conducive to investment in forests only if security of tenure over a long enough period of time is guaranteed;

1/ According to an FAO paper: Forest Resources, Rome 1985, the disappearance of the forest, in 1980, was to be put at 1 250 000 ha in Africa, 1 137 000 ha in Asia, 4 115 000 ha in Latin America and 679 000 ha in Oceania.

and certain forms of investments, where the fruits can only be enjoyed by future generations are more easily sustained by the State or the Church than by private persons. Oak plantations exemplify this point.

Secondly, land ownership, whether private or public, determines the point at which forest policy measures must be applied. Whether it is a question of simple incentives or of obliging the owner to do this or to refrain from doing that, in the last analysis it is the will of the owner that is being stimulated or restricted; and it is his ability to respond and to carry out the directives that have been decided upon that condition the success of forest policy. To be sure, forest policy must equally take into account the material and economic environment of the forest. The protection of the forest against acid rain calls for measures affecting gas emissions, for example from automobiles. Timber imports, the dissemination of novel techniques and energy saving can help to slow down local consumption of trees. Efficient market organization for forest products acts as an incentive for land-owners. Increased farm incomes make forest planting possible. In short, there are many spheres of activity that indirectly condition the forest equilibrium. But it remains no less true that direct action in favour of the forest necessarily implies an encounter of some sort with land ownership.

Land ownership, however, does not exist specifically to promote the interests of the forest. The land tenure regime of a country is the outcome of the historical development of prevailing ideas regarding the family, the social order or the organization of the political powers that be; and among them one hardly ever finds adaptations designed to secure the safeguarding of the forests.

The way a forest policy is conceived must accordingly take into consideration the land tenure regime if the instruments available for intervention are to be geared to that regime. Comparative law offers a range of solutions afforded by the diversity of the legal regimes governing land tenure. The chapters that follow illustrate these regimes, beginning with a selection representative of the different systems, and attempt to set out the responses to problems arising from the modes in which land comes under one or other form of ownership.

With this approach, it is necessary first to review such conceptions of the forest and of ownership as can be used as a common denominator in the different legal systems here analysed.

In scientific terms, the forest is a plant formation in which trees predominate to the extent of modifying the ecology of the terrain. In order to form a specific community of this kind, the trees must occupy a sufficiently large area of land and at a minimum level of density. The law uses this notion but subtracts from its scope here and broadens it there.

Where it subtracts from the basic notion, this is due to the need to distinguish fruit trees cultivated in orchards, which come under the agricultural law, and species referred to as forest species, to which the forest laws will be applied. Some laws define forest stands by referring to them as "plant formations where the principal products consist of timber" 1/, to the exclusion of any other plants that are not otherwise agricultural products 2/. Other provisions, such as those contained in the French Forest Code, are silent on this point, though in actual fact their enforcement relies on this very distinction. It must be said that the "main purpose" criterion - food products for agricultural trees, industrial products for forest trees - is not very convincing. Many trees, the walnut for instance, may provide as their main purpose both edible products and timber. Thus, the legislation will at times name such dual-purpose species where the intent is to bring them within the purview of the forest laws. In Switzerland, for example, one finds, following the definition of the forest (any land area covered with forest trees or bushes), the express inclusion of chestnut plantations or walnut stands 3/. When all is said and done, therefore, it is the purpose assigned to trees that makes the forest what it is.

1/ Mauritania, Ordinance No. 82.171, Article 2.

2/ Niger, Act No. 74.7, Section 2.

3/ Ordinance of 1 October 1965, article 1.

At the other end of the scale, the law brings within the scope of forest enactments certain elements making up the natural milieu which are alien to the scientific notion of forest. These additions to the concept - and they vary considerably from one country to another - have their origin in considerations that can be grouped under five types.

There is the concern to guarantee the status of the forest. Thus the legislator will in the first place ensure that forest land will continue to be classified as such, even if not a single tree is standing on it, for as long as no clearing has been authorized by administrative act and the land has not been reclassified by law. This makes it possible to control “indirect” clearing by fire, the encouraging of rodents to multiply there, or resort to any other expedient, when the intention is to erect buildings or put the land down to crops.

The second type of extension of the forest concept concerns the protection of the land by placing it under a statutory forest regime. Land threatened by erosion will be declared forest land in order for reclamation or conservation to proceed - usually, though not exclusively, by means of afforestation. Such a measure may be a temporary one, as when the land is closed to entry for grazing animals. Or it may be a permanent one, as when the law brings within the definition of forest domain any land having specified characteristics such as degree of slope in excess of a stated percentage, or the banks of watercourses 1/.

The third possibility lies in bringing under the forest regime forest stands associated with crops and grown in the form of coppices or hedgerows with the twofold purpose of protecting the soil against erosion and augmenting the production of timber and associated products. Historically,

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1/ For example, Niger's 1974 Act deems the following to be “reclamation areas” and accordingly to come within the forest domain “those portions of bare land with insufficient wooded cover comprising: 1) mountainsides where placing under reserve is deemed to be essential; 2) sandy or unstable banks of streams and rivers; 3) land where dangerous gullying or slumping may occur” (section 6).

bocage country - where crops are intermingled with trees aligned in hedgerows - has been taken as a substitute for the forest 1/, for, like the forest, it can supply wood for domestic needs, provide tree cover to protect the soil from the wind, or regularize water systems. Whether under this or other forms, the presence of forest species intermingled with cropland seems to be a development designed to compensate for the reduction of wooded stands. Some forest laws accord them a place apart. Cape Verde has a "tree planting regime" side by side with its "forest regime" 2/. The most frequently encountered situation, however, is the silence of the enactments, which is tantamount to an exclusion; though exclusions are sometimes expressly contemplated by the legislator 3/. This does not mean that the law has no regard whatever for such plant formations but that these may come under a different aspect of the legislation such as that dealing with nature protection or soil conservation 4/.

The fourth kind of extension of the forest concept by statute is to be seen in the declaration of nature reserves and nature parks. These may amount to full-scale forests, but may also include steppe, savannah or wetlands. Some countries retain these under their forest laws, where they appear as a category of forest endowed with a particular status. Spain has specific provisions in their regard, while retaining the competence of the Forest Services 5/ for their management. Separation is complete when they

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1/ Thus with bocage country in Europe. In Africa this type of terrain has developed as a defensive systems and as a means of channelling the wanderings of livestock. Cf. C. Seignolo: Des fortifications végétales dans la zone soudano-sahélienne, in L'Arbre en Afrique tropicale, Cahiers ORSTOM No. XVII, Paris 1980, pp. 192 to 222.

2/ Cape Verde, Legislative Decree No. 156, 11 August 1928.

3/ Switzerland, Ordinance of 1 October 1965, article 1.

4/ For example, in France, Decree No. 77-1295 of 25 November 1977 enforcing Act No. 76-629 of 10 July 1976 relative to nature protection empowers the prefects to make rules for the conservation of such biotopes as hedges and coppices (article 4).

5/ These are constituted in the Nature Conservation Institute (ICONA).

house a government department exclusively given over to them, as in the National Park System of the United States or the Rwanda Tourism and Nature Protection Board.

Fifth and last in this list is the tendency in African legislation to embrace all nature areas under the forest concept. The aim is to provide a basis in law for the administration by the forest services of uncultivated areas whether forested or not and to reserve over them land ownership rights of the State. Most enactments from the African countries make a distinction between forests "classified" as forest domain, consisting of those recognized as such by administrative act, and as non-classified domain, under which come by reference to natural criteria all areas bearing plants other than agricultural ones which have not yet been classified 1/. In this sense, too, the Spanish law has as its criterion the concept of "monte" which may here be translated as forest land. Such forest land may include maquis or heathland or, again, grassland and even farmland on steep slopes 2/.

All in all, then, it will be seen that the commonly held concept of the forest constitutes the core of its juridical counterpart but that different considerations will sometimes mean that the law will extend that concept to encompass land with little or no forest cover. Clearly, it is this broad connotation that will be best followed here, as marking the outer limits of our area of enquiry, since it alone enables one to understand the realities of the legislative context.

The greater, or lesser, diversity of content in the term "forest" nevertheless overlaps the widely resorted-to distinction between production forests and protection forests. Every forest has an ecological role but some forests are clearly assigned more specific purposes, when they will be

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1/ Cf. Niger's Act No. 74-7 of 4 March 1974, section 5, or Mauritania's Act No. 82-171 of 15 December 1982, sections 1 to 4.

2/ Forests Act, 8 June 1957, section 1; cf. also Salvador Grau Fernandez: Les forêts et le droit de l'environnement en Espagne, in Forêts et environnement, Paris, P.U.F. 1984, pp. 41 f.

subject to restrictions on their working - from prohibition on clear felling, which temporarily removes the entire forest cover, to prohibition on any harvesting there. The classification of land as protection forest amounts to freezing or, at the very least, reducing its economic possibilities. In this connection, it is possible to consider as being like a protection forest any form of plant cover assigned a legal status of greater rigour than that under the general law of forests, notable among such forms being the nature parks and erosion control plantings. The presence of a forest always entails some limitation of the landowner's rights; and the limitation is at its greatest in protection forests.

Whilst it is relatively easy to keep pace with the extensions given by law to the forest concept in order that the most comprehensive form may be retained, it is a hazardous undertaking to try to define ownership in such a way that the term will fit in with all patterns of land tenure.

In some legal systems, the ownership concept has acquired a degree of precision such that the learned writings occasionally deny that precision to other systems. This is the case, for example, when the concept of ownership as derived from Roman law, with its threefold attribute – usus, fructus, abusus - is being considered. Certain authors, when analysing landed rights in traditional Africa, find that these do not carry with them a freedom to dispose of the land. No abusus, therefore. Hence they conclude that these rights cannot be considered as a form of ownership, and are at pains to find a fitting qualifier for them by resorting to the concept of sovereignty or dominium 1/. It is with no disregard for the logical rigour of attempts of this kind if the point is made here that the theses described cannot be endorsed here, for they would make the present study impossible. It is absolutely necessary to have a common denominator to express the powers that persons exercise over the land irrespective of any exercise of political authority. The doctrinal discussion on the concept of ownership brings into relief two main elements used in order to characterize it, namely, the power of disposal and the exclusive nature of ownership.

1/ Cf. Guy Adjété Kouassigan: L'Homme et la terre, Berger Levrault, Paris, 1966; Michel Bachelet, Systèmes fonciers et réformes agraires en Afrique Noire, Pichon et Durand Auzzias, Paris, 1968.

Power of disposal implies, by common agreement, a sort of sovereignty over things. But it is also a power limited by law, and the content of law fluctuates with the statutes and the customs that succeeed one another in time.

On the other hand, exclusiveness is a sign of ownership, universally recognizable at all latitudes and in all periods. For, irrespective of the way in which the law organizes the content of the right of ownership, it always designates the holder of that right. The owner is that person who receives the monopoly of rights constituting ownership. He may at all times - and this is the essential point here - exclude all other persons from the exercise of the rights that he is acknowledged as possessing. Nor is the owner necessarily an individual. The owner may be the State, or the heirs to a joint estate, or a group of persons or even a tribe or, again, a village. And so on. There is no any need, either, to go to the point of constituting corporate status, for it is sufficient in order to acknowledge community ownership to note that the right gives the possessors of land the right to exclude outsiders.

For the purposes of the present study, therefore, ownership will be defined as that legal title whereby the holder is able to exercise in an exclusive manner the powers over things that the law attaches to it.

There remains the question of determining the types of ownership that it is necessary to distinguish in terms of their interaction with the forest. The alternative between public ownership and private ownership fails to satisfy because forests belonging to public communities are considered as property coming at least to some extent under private law. Accordingly, it is preferable to speak of ownership by public persons and of ownership by private persons.

Some owners exercise over their land simply the powers that they hold by virtue of being owners, whereas other owners may accumulate in their hands the powers of owners and the powers conferred on them by the fact that they are vested with political or administrative competence or, if one prefers, with the prerogatives of public authority.

In the one case the property is managed by the owner in his own interest, and in other cases in the name of the owner in the general interest. The private person's freedom to manage is limited by law. The freedom of the authorities managing in the name of the State is regulated by the rules that they themselves lay down. And yet these authorities do not enjoy absolute powers since their rulemaking competence is determined by law, which is itself subordinate to the country's Constitution.

It remains to assign ownership by subordinate public entities - commune, region, self-governing agency - its correct place. On the one hand, these accumulate, or may accumulate, just as the State can, ownership rights and the prerogatives of public authority. It will be noted, however, that their competence as public authority is much less extensive than that of the State and is delimited by the administrative ordering of affairs that the State determines and may modify. On the other hand, in management matters they are as subordinate as are private persons, if not more so, to the rules and controls prescribed by the State. In an extreme example, they can lose their autonomy in management matters almost completely. This is the case in France, where a forest belonging to public persons that is subject to the forest laws is directly managed by a State agency, the National Forests Office. The power of owners in such instances reduces to deciding whether or not they wish to sell the trees that the Office has declared may be felled and to what purpose they will assign the proceeds of the sale.

One has here a case of ownership which is indeed public but has characteristics that are sufficiently distinct for a special category to be set up in its regard; and in the end one finds that forest policy will be applied no longer at two but at three “points”, namely ownership by private persons, ownership by the State, and ownership by local governments and similar autonomous entities.

CHAPTER I

FOREST POLICY AND PRIVATE OWNERSHIP

The definition of private ownership retained for our purposes covers land tenure situations which vary widely both from the legal viewpoint and with regard to the formulation of forest policy. Logically, we should try to identify the various subsets included under “private ownership”. To save time, however, we shall take it for granted that there is a type of private ownership under which the easy implementation of forest policy is possible.

As long as the private owner retains the right to manage his property, he will be the vehicle for the implementation of forest policy, whether this policy relies on encouraging or on obliging him. The final outcome will depend on how he responds to ways of implementing that policy that are suggested to or are imposed upon him. The favourable response is likely to be forthcoming from an individual who has sole control over his land. He will be more highly motivated to undertake work on the forest or invest in trees if he is assured of reaping the fruit of his labours. This presupposes that no one else has right of access to his land, e.g. for unauthorized grazing of cattle, and that he would be guaranteed ownership titles and the right to transfer these to his heirs. In view of the considerable time-lag between planting and harvesting, a landowner is obliged to work for the future and, once he has passed a certain age, for the future of his children or other heirs. Finally, it is obvious that there is a certain minimum size below which a forest may not be viable. This minimum size varies depending on the species cultivated and the use for which the forest is intended. Attention will therefore be focussed on the simplest type of land tenure system, i.e. one in which landowners are the sole holders of undisputed and guaranteed titles ensuring them the exclusive right to manage reasonably-sized holdings.

We shall first of all examine forest policy instruments in the light of this simple system of land tenure. We shall then group together under the heading 'complex land tenure regimes', all the cases where difficulties are being encountered in implementing forest policy either because of the land tenure patterns in use or the size of the land area involved and the way the holdings are distributed.

SECTION I - FOREST POLICY INSTRUMENTS IN A SIMPLE LAND TENURE SYSTEM

In the system under consideration, there is no impenetrable barrier between the public law body - the State or local authority or other subordinate public body formulating forest policy - and the reception of that policy by the landowner. The latter must be encouraged, or obliged, to adopt certain practices and manage his land in line with the forest policy.

This does not mean that once the landowner has become the main vehicle for the implementation of such policy the authorities have no further role to play. They are still responsible for determining the general lines of approach and following up compliance. Furthermore, the fact that the landowner is best placed to implement forest policy is no guarantee that he will perform his task properly. Should he be unwilling or incompetent or lack material means, the authorities may be justified in taking over the working of some or all of his land either temporarily or on a permanent basis.

The different roles of private and public management are therefore clear, the former representing a principle and the latter being either a matter of providing assistance and professional guidance or taking over from the owner.

1 - Private forest management objectives

Forest policy may assign a number of very different objectives to private forest management. These may include timber production, the establishment of reserves or national parks; soil conservation to prevent erosion and the preservation of wooded areas in the vicinity of towns. The means used to achieve these objectives are all basically the same, so that one cannot say that they are geared to a particular purpose. That being so, the simplest solution would be to examine the general approach to private forestry on the basis of the following: the preservation of wooded areas (which has to do with the purely quantitative aspect of forest policy), timber production and protection forests.

A - The preservation of wooded areas

The expression “the preservation of wooded areas” may be interpreted in two ways. If wooded areas are considered in the aggregate from the national or regional viewpoint, then it refers to achieving a harmonious balance between deforested areas that have been cut over and those that have been reforested. This purely statistical way of looking at the question is hardly adequate, even if the whole is indeed the sum of the parts.

For economic, social or ecological reasons it is essential to have forests on certain lands. Land exposed to erosion, the outskirts of towns and areas where forest exploitation is likely to be particularly profitable must all have tree cover. Preservation measures could also be applied to existing forests case by case. Indeed, forest land tenure regimes usually offer some measure of flexibility. For instance, fellings at a given site can be quite easily offset by reforestation of similar magnitude elsewhere. These two approaches are therefore not contradictory but complement each other.

It will be recalled that protection forests are being treated here as a separate item. Our task, therefore, is to ascertain the legal means available to ensure that wooded areas which do not come under any particular legal regime can be maintained in their present state. The means themselves may be direct or indirect. Some of them focus on operations likely to lead to deforestation. Others are designed to protect the forest and prevent theft of forest products through the establishment of a system controlling the movement of timber, and the meat and skins of wild animals. These first will be dealt with since they have an immediate bearing on landowners' right to manage their property.

Direct deforestation control includes provisions concerning land clearance and, in some legal systems, rules governing different types of forest clearance operations associated with farming and pastoral activities, such as burning over or livestock grazing 1/.

1/ Example: The 1977 Gambian law does not refer specifically to the question of land clearance, but regulates the removal of forest products and the setting of bush fires.

(a) - Land clearing

Most legal systems nowadays deal with land clearing and even those that do not do so directly cater for it implicitly in provisions relating to felling. By general agreement land clearing means removing from the land trees and other natural species in order to change the use to which it will be given over. Some African legal systems have retained a somewhat narrower notion of land clearing, using it to apply exclusively to the clearing of forests for agricultural purposes 1/. The attitude behind this definition was prevalent at a time when the major reason for clearing land was that shifting cultivators could plant crops (at that time, human settlements and facilities occupied little space). However, it is not consistent with a way of life which has seen more and more land encroached upon by factories, thoroughfares, dams and other things that take up space. For example, over 5,000 ha of forest 2/ had to be destroyed to make way for the trans-Gabon railway (600 km long).

Clearings, for agricultural purposes only or for any type of land conversion have been the focus of a wide range of legislative measures. They have been banned outright and made subject to taxation, controls or authorization. The law, however, cannot prohibit them in all situations, but only on certain types of land when the aim is to prevent the type of deforestation likely to cause erosion on slopes, along river banks or the seashore. Also, the special status granted to privately-owned lands which have been declared protection forests means that they will not be cleared.

Most frequently, a special permit has to be issued by the forest authorities. The law may vest the latter with unrestricted powers in the matter of granting land clearing permits. On the other hand, they may

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1/ In passing it may be noted that this was the original meaning of the word. Europeans in Carolingian times, who coined the term, had a rather low opinion of the forest. The word “défricher” means to remove spontaneous vegetation from idle land and convert it into cropland. Of course, forests were plentiful in Carolingian times'.

2/ Jeune Afrique, No. 1284, 14 August 1985, p. 99.

have only limited powers and be obliged to refuse the permit in cases that the law specifies. Of course, one can hardly draft a law which leaves virtually no power whatever to the authorities. They must be allowed to exercise a certain measure of judgement. When the French Forest Code prescribes that a permit may be refused on the grounds that clearing would endanger the biological balance of a region 1/, or when under Swiss law for a permit to be legal the building construction for which the land needs to be cleared can only be erected on that particular site 2/, the authorities are required to state whether the reasons submitted are valid and render their decision accordingly. There are few cases where the authorities' decision will be entirely dictated by statute, and their powers will be systematically restricted only when the law prohibits land clearing outright. This does not mean, however, that the legislator's wishes are mere guidelines, to be given a broad interpretation by the administrative authorities. Since administrative acts can be reviewed by the courts any mention in the law of specific criteria for the refusal or approval of applications for permits to clear land merely serves to tighten the judge's control over the authorities' decision. For, in the final analysis, it is the judge who decides whether or not the law has been broken.

The actual content of the conditions prescribed by the legislator will depend on the forest's intended functions. Thus, when clearing is likely to undermine the forest's ecological role (that of ensuring the biological balance of a region, stabilizing water systems and controlling erosion), its productive function, its social function (forests on the outskirts of town used by the inhabitants for recreational purposes), or its role in national defence, permission should be withheld. Under Swiss law, constructions for which a permit application has been submitted cannot be erected at any other site. Before the authorities can give a ruling on an application for a clearing permit, a full-scale impact study must be undertaken to ensure that clearing operations will not affect the region's biological or hydrological

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1/ Article L 311-3.

2/ Ordinance dated 1 October 1965, article 26.

balance or cause erosion. Sometimes the legislator goes one step further and explicitly states that decisions on land clearing have to be based on the findings of impact studies. A new bill in Rwanda has been drafted along these lines 1/.

The rules just mentioned are aimed at preventing unnecessary clearings when the forests it is proposed to cut down would best be preserved. However, attention should also be paid to preserving the country's forest wealth as a whole. In some legal systems a permit holder is required to reforest an area equivalent in size to the one he destroys. Switzerland was one of the first countries to introduce this practice. In the XIXth century its forests were seriously depleted and catastrophic flooding occurred as a result. It was therefore decided to adopt particularly strict Federal forestry laws 2/ to ensure their forested areas would not be further reduced 3/. That being so, it is not unreasonable to oblige the holder of a land clearing permit, which, at any rate, is issued only in special cases, to establish a compensatory plantation in the same region 4/.

Other countries have passed similar laws. In Rwanda the clearing of land must be followed by the reforestation of an area equivalent in size to the one that has been felled 5/. In Senegal, reforestation is compulsory only if, as a result of clearing operations, the forests of the department concerned are reduced by at least 20 per cent 6/. The reforestation work need not necessarily be done by the clearing permit holder himself. He is not always competent to undertake planting and may be even less skilled when it comes totending the growing trees. It is therefore preferable to provide

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1/ Draft Forest Code 1983, op. cit. article 98.

2/ Loi référendaire of 11 July 1987 extending Federal powers to forests (Article 24 of Federal Constitution); Federal Forests Act, 1902.

3/ Act, 1902, section 31.

4/ Ordinance of 1 October 1985, article 26 bis.

5/ Draft Forest Code (FAO document TCP/RWA/2305, Rome 1983), article 99.

6/ Decree No. 65-078, articles D 11 and D 27.

alternative solutions: the permit holder may be authorized to undertake the reforestation work under the supervision of the forest authorities, or he may be allowed to discharge his obligation by paying a reforestation fee. This fee is used to finance the operations which are then carried out by the authorities. This second alternative can only be effective (a) if the reforestation fee is used for reforestation purposes, (b) it is sufficient to cover reforestation expenses, and (c) the work is done without delay.

It may be argued that in the long term this obligation to reforest an area equivalent in size to the one deforested may become intolerable. If it is strictly complied with, it could result in the gradual expansion of forested areas. In 1863 forests covered some 18.6 percent of Swiss territory; in 1983 they accounted for some 31.8 percent 1/. It is rather unlikely, however, that this practice will lead to our having too many forests in the foreseeable future. Coming generations will, if necessary, be able to change the law before that happens.

Another measure designed to discourage the practice of forest clearings is the requirement of a clearing fee. The aim here is not to finance reforestation, but to increase artificially the cost of forest land, which is, in principle, considerably lower than that of agricultural land, not to mention building or built-up land. It is in fact a disincentive to deforestation (which has become a serious problem in Europe, where houses, including weekend houses, in forested areas, particularly on the outskirts of towns, are in great demand) and is seen as a means of curbing appetites for forest land. However, the fees must be sufficiently high to be dissuasive. France adopted this technique in 1969 but, until the Act of 4 December 1985 was passed, the rates were too low, and the measure was not fully effective 2/.

1/ In Forêts et environnement, op. cit. p. 125, Anne Petitpierre: Forêts en environnement en droit suisse.

2/ The fee is calculated on the basis of 1 franc per square metre for land intended for agricultural use and 3 francs per square metre for other uses (Forest Code, article L 314-6).

Of course, there is no reason why the money collected in this way cannot be paid into a forest fund and used to finance reforestation. The clearing regulations mentioned above cannot always be applied to all forested areas. The constraints they represent for the landowner, not to mention the charges payable to the authorities thereunder, would not be justified unless a certain minimum size of forest were involved. In France, under the Forest Code, no permit is required in order to clear forest areas of up to four hectares. And the Code also recognized the landowners right to remove trees planted by himself or those which have sprung up naturally, as long as they are less than 20 years old 1/. This last-mentioned provision is met with in all countries where forest species are allowed to grow on fallow land which, after a period of rest, will again be used for agriculture.

(b) - Deforestation brought about by fires and associated with cropping and grazing practices

European landowners may be tempted to circumvent the law on forest clearing in a number of ways, which are usually referred to as indirect land clearing. One such way is to allow animals to graze on the young shoots in a forest which has been destroyed by fire or in a clear-felled area and thus prevent natural regrowth. Another is to allow rodents, such as rabbits, to proliferate in the area. The legislator's answer is to punish practices of the sort or compel the owners of forests which are destroyed in any way whatsoever to reforest their land; and in any event, land classified as forest land will retain this classification and remain subject to forest law even though there may not be a single living tree on it 2/

Legislators in tropical countries have had to cope with firmly established agricultural and pastoral customs, such as burning over and the practice of allowing animals to wander freely. The former is of course an easy, not to say economical, way of preparing land for planting. In Africa, this practice has long been part of the system of shifting cultivation,

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1/ Forest Code, article L 311-2.

2/ Cf. French Forest Code, article L 313-1.

and it presented no problem as long as there was no limit to the space available. As that continent's population grew, bush fires led to deforestation or, at the very least, the degradation, of all except the dense rain forests. In the normal course of events, population growth should put an end to shifting cultivation through lack of space. However, the rural populations often continue to burn even when there is no new land to sow. They burn the bush to obtain a second crop of hay for their animals, to facilitate hunting, to remove high grasses which, because they obstruct the view, are a potential source of danger to man, etc. Legislators have resorted to a number of techniques in an attempt to put a stop to this practice, but these have so far met with little success. Some laws prohibit burning and require farmers to obtain permits even to burn crop residues. Others attempt to restrict the setting of fires to the start of the season in the hope of reducing the harmful consequences that repeated burning can have on plant cover and soils. Attempts have also been made to claim civil liability when fires set on one property damage the property of third parties. One of two problems arise here. Either the offender is insolvent, or the peasants prefer to come to an agreement among themselves rather than go to court 1/.

However, not only in Africa do forest fires pose a serious problem for the legislator, the Mediterranean coastal region and the Iberian Peninsula are particularly vulnerable in this respect, and every year whole forests are destroyed. Careless tourists and arsonists have been blamed for these fires, but there is no doubt that many of them are started by stockmen who want grazing land for their animals. It is as difficult in Europe as it is

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1/ Togolese law clearly illustrates the type of problems encountered in forest fire prevention. The 1938 Forest code contained very liberal provisions on the subject (articles 22 to 25). Then in 1973 an ordinance was passed prohibiting fires in all seasons and throughout the Territory (article 1). To strengthen prevention, this enactment makes the village headman liable under criminal law if the person causing the fire is not found (section 6). However, a decree dated 17 October 1974 reverted to the system of allowing burning subject to rules by allowing fires to be set at the start of the season for specified purposes. This system proved no more successful than previous ones, and a decree dated 23 March 1984 substantially increased the penalties for the illegal setting of fires (up to five years' imprisonment for an unintentional fire) and introduced a scale of fines for third party liability to make the system work and turn it into an effective instrument of prevention and control.

in Africa to arrest the offenders and put a stop to these practices by legal means. In view of this, forest authorities are taking steps to reinforcetheir firefighting methods (through the use of air tankers and early warning systems) and to promote fire precaution measures, such as the clearing of the undergrowth or, again, strip-cropping to create firebreaks within the forest. As a result, private landowners are required to clean their forests of undergrowth to reduce the risk of fire. But operations of the sort are costly, especially when the forest is not a very profitable undertaking. It is particularly significant that for decades fire has spared the highly inflammable pine forests of France's Landes region. The lie of the terrain is such that these forests can easily be worked and landowners have no difficulty in financing highly effective means of fire prevention. The forests of the Alpes-Maritimes region, on the other hand, are not very profitable, the relief of the land making timber removal difficult. As a result, prevention has not been on the same scale as in the Landes, and fires break out regularly every summer. The number of forest and bush fires could be reduced considerably if a means were found to turn clearing operations to profit, e.g., if the plant matter removed could be used as the raw material for making compost or be fed to animals.

In Africa, some measures (banning grazing or fodder gathering) are expressly designed to protect forest land from damage by animals. In addition some areas are having land closed off to grazing altogether. This type of measure has been incorporated into the laws in the Sahelian countries where there are large herds but little vegetation due to the arid conditions prevailing there 1/.

Even though the measures prescribed by forest laws to control deforestation are extremely strict, they focus only on the effects of the negative changes taking place in the forests not the causes of such changes. If European forests are in better health today than in the XIXth century, it is because population movements from the countryside to the towns and the significant increase in crop yields have made this possible. In Africa, on the other hand, crop yields have declined and population figures have soared.

1/ Example: Niger's 1974 Act, sections 14, 15 and 17.

Even if some towns have grown alarmingly, population pressure in the countryside has continued to rise. Unless these trends are reversed, more and more land will have to be given over to agriculture to offset food deficits and provide work for the next generation of peasants.

The situation is further aggravated by the fact that large areas are given over to the cultivation of cash crops such as tea, coffee, groundnuts and cacao. The Rwanda Government requires farmers to set aside one quarter of their land for coffee. Even if this requirement were abolished, however, food production could not be expected to increase by that one quarter. Nevertheless it cannot be denied that if land now given over to cash crops were to be used for growing food crops, pressure on the forest would be eased. The answer to these problems lies in the type of economic policy the country chooses rather than in forest law, which can do little more to enhance control than provide, in addition to deforestation control, for reforestation and forest management planning.

B - Reforestation planning and improving private forestry

In forest laws, reforestation planning and the improvement of private forest management will normally be dealt with in separate chapters. They are nevertheless inseparable since reforestation serves no useful purpose unless it is well managed, and good management obviously implies reforestation to ensure continuity in the working of the stands. These topics will therefore be examined jointly. However, forest stands and agriculture in association with forestry must be dealt with separately. The reason for this is that different management methods are used in the respective cases.

(a) - Forest stands

Our task here is to determine how the legislator can encourage landowners to plant forests and manage them properly. Authoritarian methods would appear at first glance to be of secondary importance here. Of course, the law can always enjoin landowners to engage in silviculture, but this is unlikely to produce satisfactory results. The best way would be through

a system of incentives. A number of different types are available, but the economic incentives have been found to be most effective. Once the landowner has made his decision, but not before, a system for the dissemination of silvicultural know-how could be introduced and only then technical assistance provided. Forceful advertising is unlikely to persuade a landowner to invest in planting trees rather than in some other activity. Substantial economic incentives are absolutely essential to compensate for the drawbacks inherent in making any capital outlay in forestry. When restricted to silviculture alone, these incentives must be sufficient to offset the low rates of return, deferred revenue and insecurity of investment.

Cultivated forests bring in little revenue. The average figure quoted for France is 3 percent. For the Italian poplar groves it is 5 percent 1/. Of course, revenue will vary considerably depending on the species, the quality of timber obtained and the logging and transport facilities available, but these figures give an idea of the low rates of return in forestry investments. This is so in most industrialized countries, to judge from the financial assistance States have seen fit to grant their forest sectors.

Again, returns on capital invested in a forest are very long in coming. In temperate countries, about half a century elapses between planting and harvesting. Poplar can be harvested in less than twenty years, and so can teak, but fine European species are hardly workable before they are one hundred years old. It takes two hundred years to obtain very high quality oak. Of course, with stands of different age classes, it is possible to obtain a money income more rapidly. Under such conditions one could perhaps manage to have one harvest a year. But this would imply that the proprietor had inherited or purchased a forest already managed along such lines and merely had to follow in the footsteps of the previous owner. There is no doubt that investing in forests is not as profitable as investing in agriculture.

1/ Raymond Viney: l'Economie forestière, P.U.F., Paris, pp. 20 ff.

During its long growing period the forest is also exposed to a number of destructive agents - fire, of course, but also storms 1/, disease, degradation by animals and, nowadays, acid rain.

That being so, if the intention is to encourage private landowners to take an interest in forestry, it would be to everyone's advantage to provide them with economic incentives and so compensate for the drawbacks inherent in this type of activity. In countries where the income tax system is of general application, incentives involve reductions in and exemptions from income, land and transfer taxes 2/.

Subsidies, in cash or in kind, are another type of economic incentive widely used in western Europe. They are financed either out of the State budget or through special accounts, such as France's National Forestry Fund or Britain's Forestry Commission 3/.

Measures can be taken to ensure that the subsidies are put to the use for which they are intended. In France the recipient is required to obtain certain results. If he fails to do so, he has to pay back the subsidy, which in this way is simply converted into a loan. Subsidies are most frequently granted in kind (e.g. in the form of young plants from State nurseries) rather than cash.

1/ In 1983, a storm flattened forests representing one third of France's annual timber consumption. The selling off of this enormous windthrow caused a sharp decline in prices of a number of different grades of timber.

2/ In France, the Sérot-Monichon Act of 1942-1959 exempts anyone who undertakes to maintain a forest for a period of at least 30 years from three-quarters of death duties and conveyance taxes otherwise due. The forest thus becomes a safe investment and all the more attractive for being the only one to benefit from a tax advantage of the kind in a country whose tax regime is one of the most onerous.

3/ Cf. Viney: l'Economie forestière, op. cit. pp. 109 f.

As a further incentive, forest authorities may provide technical advice and guarantee the quality of the genetic material made available to the forester. The latter point is particularly important in a sector where errors come to light tardily and cannot easily be put right. Nowadays, the law often requires the forest services to control imports of genetic material as well as the quality of plants produced locally.

Finally, incentives could also be used to focus attention on secondary features of the forest, particularly hunting. In Kenya, the law prescribes the establishment of an agency, managed by the authorities, to bring together hunters and landowners who wish to organize hunting on their land. This sort of measure would be of no use in Europe, where hunting in forests has developed of its own accord, and has reached the point where the balance between the two - the forest and hunting - is now at stake. The reason for this is that too high a forest game population density presents a danger for the trees. Rather, game ranching should be encouraged in tropical national parks which are unsuitable for both crop and domestic livestock farming.

Legislators may resort to coercive measures to prevent private landowners from making serious mistakes. Some laws accordingly require the forest owner to prepare a management plan for submission to the competent authorities. The purpose of this is to enable him to be given advice, at least once, from a qualified expert and to oblige him to use a rational approach when making decisions about the future of his stands 1/. Some laws, particularly in countries where deforestation is a serious problem, require private landowners to obtain a logging permit and also prohibit clear felling. In special circumstances, the forest services may take over from the private owners in matters relating to planting. This rather extreme measure is met with in Cape Verde. There, private landowners have no experience in forestry, while reforestation, even on privately-owned land, is vital for the survival of the nation. Furthermore, because of the arid climate, only a few days in the year are suitable for planting.

1/ Cf. French Forest Code, articles L 222-1 to 222-4.

In areas where it would not be appropriate to encourage landowners to develop woodlots to meet all timber requirements, the current trend is toward forestry in association with crop and animal husbandry.

(b) - Forestry in association with crop and animal husbandry

In some ways, forests always associated with crop and livestock farming. When not used for shifting cultivation, they protect farmland from various forms of erosion and provide grazing and fodder for the animals. So much so that many forest protection measures prescribed by legislators throughout the world exclude crop growing and pastoral activities. However, the contrary is also true, in that significant numbers of forest-type trees grow on land given over to these very activities. The relationship between the forest and agriculture may take various forms. Trees may be planted in hedgerows encircling fields as one sees in bocage country; and they may follow the contour of the land or grow here and there among the crops. These practices imply a carefully designed system combining forest species and cultivated strips. The trees are skilfully chosen, disposed and tended so as to ensure that the crops receive sufficient light and nutrients.

Quite apart from their use as windbreaks and for erosion control, trees in the agricultural environment may also provide a source of timber and thus supplement the contribution of the true forest, or even take over from the forest altogether. The development of bocage country in Europe is explained by the need to provide timber in regions where forests had suffered considerable decline.

The thought which immediately comes to mind is how useful this system would be in countries where demand for wood for domestic requirements is high but where reforestation cannot be attempted on an extensive scale for lack of space. Where population density is high and crop yields low, private land- owners cannot be allowed to opt for planting forest stands. The population's survival depends on continued food crop growing. Nor can the State expect to extend the forest domain without making the food

deficit worse. The ideal solution here would be to ear-mark State-owned or community forests to provide constructional and other timber for the urban population and to have the farmers meet their own domestic requirements for wood. In terms of positive law the instruments for implementing a programme of this kind would be based on obligation rather than encouragement. New laws therefore provide for tree planting schemes under which a certain quantity of various prescribed forest species must be planted, maintained and perhaps disposed of as the authorities see fit 1/. This sort of measure must be exercised with caution, in one commune at a time and only if the forest services have the means to implement and control it. Planting material will need to be provided free of charge, for example. Here the obligation is one of achieving results specifically to be able to show the forest warden that the beneficiary has produced a given minimum number of trees. But he is also encouraged to exceed the quota (planting material is provided to enable him to do so) and the surplus trees he may dispose of as he wishes. The success of a system such as this depends on (a) the forest warden being particularly tactful in presenting the idea to the farmer and (b) the farm plots being sufficiently large to allow food production to increase rather than decline 2/.

Gambian law provides similar possibilities. It stipulates that agricultural land located in a wind erosion area must comprise a minimum of twenty adult and six young trees per hectare 3/.

Whether the task at hand is to develop forestry or forestry in association with crop and animal husbandry, it is certain that offering incentives will give much longer lasting results than imposing obligations.

1/ Cf. Rwanda's “regime d'arborisation” (1983 Bill, op. cit., articles 113 to 120).

2/ Under the tree planting scheme two conditions must be met: (a) only arable land measuring half a hectare and over and belonging to a single holder is eligible (article 114); (b) the obligations imposed upon the farmer must at result in a reduction of his cultivable land area unless this can be offset by higher crop yields (article 115).

3/ 1978 Regulations, reg. 11.

The best possible incentive would be to have satisfactory timber prices - the major condition here being that it will no longer be possible for people to “help themselves” from State-owned forests; and, unquestionably one of the best ways of encouraging farmers to adopt the system is to show them results. Changes in the rural world are brought about by those who succeed. Only when farmers have seen with their own eyes that the new system works will they be likely to try it.

In any event, incentives are most effective when applied to production forests. In the case of protection forests, the enactments call for the prescriptive approach most frequently in terms of restrictions on ownership rights.

C- Protection forests

Considered in the widest sense of the term, protection forests are required not so much to provide timber but rather to fulfil a protective function with respect to other constituent elements of the environment. Considered from the viewpoint of the objectives assigned to them in the various enactments, they fulfil three major functions.

First of these is soil conservation, which the legislator often considers the primary role of the protection forest. Conservation provides a biological answer - ground cover - to questions as diverse as dune stabilization, watercourse control, slope stabilization and protection against wind or marine erosion 1/.

Next come protection of the landscape in the vicinity of cities and the preservation of forested areas located within easy reach by city dwellers - the vaunted “green belts” (which are in many cases little more than small patches of green). Their legal regimes are often similar to that governing

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1/ The “biological” answer may be used in combination with “mechanical” - agricultural or marine engineering - measures such as torrent control works, breakwaters and dykes.

conservation forests whose main purpose is soil conservation, but they do not derive from the same legislative premises: the latter fall within the scope of forest laws, whilst the former come under town and country planning laws.

The third function is the protection of the wild fauna and flora, whose survival depends on the forest. The means used to achieve this end range from blanket interventions, such as the establishment of parks and reserves, to individual measures coming under the heading of biotope protection.

Laws governing parks and reserves vary according to the degree of protection they offer. It is difficult in densely populated regions such as Europe to prescribe one single set of laws governing national parks. Environ- mental protection demands that there should be a wide selection of legal instruments to cater for the varying economic and social situations. National parks can only be established in sparsely populated forest or mountain areas. Elsewhere, protected areas must be smaller, or must be governed by more flexible laws, as in the case of nature reserves; or these areas must be compatible with ongoing economic activity as in the case of regional nature parks 1/. The latter, in principle, have no influence on whether or not privately owned land is given over to forestry. They are established to meet the needs of both the environment and the economy and, as a result, place restrictions on construction or polluting activities and on the establishment of industries in general. Under parks and reserves will be considered only those areas whose legal regime clearly favours nature protection over other interests - and only parks and reserves comprising privately-owned land, where it has not been necessary to surrender ownership rights or require the inhabitants to leave - European parks and reserves in other words. Indeed, these alone can be classified as “privately owned land declared to be a protection forest”, since American or African national parks tend to be under public ownership.

1/ A “nature reserve” is not simply a miniature national park (no law prescribes a minimum size for either of these). However, the essential feature of nature reserves is the flexibility of approach that they provide with respect to their establishment procedure and administrative organization and to protection standards. In particular, unlike national parks, they need not be open to the public.

Protected biotopes, or “wildlife sanctuaries” in the current terminology of the English-speaking countries, are yet another instrument of environmental protection. They tend to be small, and their purpose is to protect a specific habitat, such as copses, hedgerows or marshland. French law delegates the power to establish them to the local authorities. Given the size of these habitats, they are little more than a source of irritation for the landowner, who is obliged by law to leave standing copses or hedgerows that he would have liked to remove. In juridical terms they constitute a servitude obliging a person to do or refrain from doing something - as is the case with parks and reserves 1/.

Management of all these types of forests is based on the prescriptive approach, which however does not mean that the law may not sometimes provide for incentives and thus leave room for voluntary environmental protection measures.

(a) - The protection forest as a mandatory measure

Although there are many different types of protection forest, the problems to which they give rise are similar in so far as the private landowner is concerned. They are all subject to a classification procedure involving a restrictive legal regime and perhaps a system of indemnities or countervailing advantages.

The complexity of the classification procedure will normally be proportional to the restrictions to which the private property will be subject or the importance of the rights that will be curtailed. This procedure provides an ideal opportunity for assessing the land rights that will be affected, for determining the degree of opposition to which the project will be subject and, if possible, for striking a compromise between the two considerations.

If the classification as a protection forest merely involves a ban on land clearing or clear felling, the owner may continue to work the forest

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1/ France, Decree No. 77-1295 of 25 November 1977, article 4.

in ways that are compatible with maintaining the stand in being. His losses suffered in that case are limited, so that the classification procedure need not necessarily require that he be consulted first.

The situation is very different, however, where the preservation of forested areas on the outskirts of towns is concerned. Here, the owner may have no wish to exploit the forest, and the law may prevent him from obtaining a profit out of his land by giving it over to building development. In such cases, French law stipulates that these areas must be marked on town planning maps (land use plans) following a public enquiry 1/. When parks and reserves are to be established on the land, the interested parties may come together to discuss the matter. Owners of forested areas cannot have the law impose upon them identical conditions with those operating in parks and reserves estab- lished exclusively on State lands. Separate provisions must be drawn up for defining the exact scope of the restrictions to which the private property will be subject and the amount of compensation payable. This is the reason why procedures are so slow in countries where the population is consulted before a park or reserve is established.

One may of course consider such consultations a waste of time and elimi- nate them from the procedure of declaring the park or reserve (a number of Italian parks were created without prior public hearings). However, if this approach were followed, one would forfeit a method for dealing with many of the problems that are likely to arise. Time will have been saved, but a much stricter system of protection will perhaps have been established than would have been the case if consultations had been held. Opposition to the park or reserve may also be left smouldering which otherwise might have been eliminated through negotiation 2/.

1/ Code de l'Urbanisme, article L 130-1.

2/ The slowness of the procedure and the publicity that this sort of action attracts are the best ways of preventing hasty reclassifications. In accordance with the legal principle that, unless there is a provision to the contrary, the same procedure must be applied to reclassification. This would give the groups who wish to present their arguments against such decisions time to organize themselves and exercise pressure whenever the law allows them to.

Protection forest laws always include restrictions on ownership rights. These restrictions usually take the form of obligations to refrain from doing this or that, but sometimes obligations to take action (e.g. closing off certain areas to grazing when it is necessary to rehabilitate degraded land). The tree or other ground cover may revive spontaneously provided that no planting or grazing is allowed on the land involved. It must be allowed to rest for a few years. However, some reforestation or rural engineering work may be necessary, in which case the law shall designate the person responsible for implementing it. This may be the landowner or, if he fails, the authorities, who may take over from him without any further formalities being necessary. Alternatively, the authorities may be designated, with the landowner being given the opportunity, if he so desires, to carry out the work himself.

Otherwise, the obligation to refrain from doing this or that diminishes owners' rights to a certain degree. At the very least, land clearing and clear felling are prohibited. At the other end of the scale, in parks and reserves, the owner would retain little more than the right of access to his property unless a special derogation from the protection regulations were obtained. Whilst they vary depending on the park or reserve in question, these derogations concern the presence of domestic animals, plant gathering, hunting, fishing and activities associating cropping and livestock raising with the forest and with the forest as such 1/. As a general rule, traditional farming practices do not appear to run counter to the aims and objectives of parks and reserves. Even so, the landowner's freedom to decide what he will do with his property will be severely restricted. The number of head of cattle per given area of grazing land will be limited and the use of certain types of mechanical equipment prohibited. A felling permit will have to be obtained from the park warden, and so on.

Indeed, under the protection forest system, private landowners bear the brunt of heavy charges in the general interest. It is only reasonable that

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1/ In the interest of environmental stability and preserving a balance in nature, some of these activities must continue. Grazing, for example, plays a vital role in preserving alpine pastures, which would otherwise be taken over by the forest.

ways be found of restoring the balance. The simplest of these is a system of compensation: payment of a sum equal to the total amount of loss or damage sustained by the landowner. But this is not necessarily the most satisfactory solution for the Treasury or for the landowner himself, and some other possibilities have therefore been developed. In France, the owner of land which has been declared a wooded area to be preserved - under the Town Planning Code - can transfer ownership of his property to the commune authorities in exchange for a plot of building land one tenth the size of the forest with a preservation order on it 1/. In Spain and Portugal, owners of land situated within a national park may be given a share of the profits obtained by the tourist organizations and hoteliers operating in the park or be allocated a percentage of the park's receipts 2/. The laws also offer collective compensation in the form of programmes for the establishment of amenities and the provision of Government loans to develop the areas abutting the parks and reserves 3/.

Despite the frequently negative reactions to which the establishment of national parks has given rise, landowners are not necessarily hostile to the idea of their land being earmarked for nature protection measures. It is therefore no idle proposal that the law should also take account of voluntary protection forests.

(b) - Voluntary protection forests

In most cases the authorities impose protection forest status upon privately-owned land. However, some landowners may even wish to keep their land in its natural state. In principle, they are completely free to manage it as a de facto nature reserve if they so desire. The difficulties they are likely to counter along the way, however, will be rather discouraging.

1/ Code de l'Urbanisme, article L 130-2.

2/ In Portugal, Act No. 9/70 of 19 June 1970, Chapters VI and VIII. In Spain, Act No. 15 of 2 May 1975, section 14.

3/ This applies to the areas abutting France's national parks (Act No. 60-705 of 22 July 1980, section 3).

They will be unable, either in law or in practical terms, to prevent people from hunting on their land, or stop them walking through, with all the damage that that can cause. Conceivably, taxation laws designed exclusively to encourage crop production will penalize any landowner who fails to develop his land; and the law should provide support if he wishes to take measures to protect the environment. In this connection, French law recognized the concept of réserve naturelle volontaire 1/, which operates on a contract basis. The landowner undertakes to observe certain conservation rules in exchange for which the State assures him of the protection of the law and provides material assistance. These reserves are established for an initial period of six years, but the contract is renewable without limit. To avoid discouraging some landowners, it is advisable not to insist on too lengthy contract periods. Since the State's outlay, in the form of aid to landowners, is never very great, the authorities are taking no major risks with contracts coming up for renewal every six years.

A similarity may be seen in donations made by landowners to organizations whose purpose is to protect the country's natural or cultural wealth. The National Trust of the United Kingdom is the best-known example of this type of organization. Where nature protection is concerned, this system would appear to be more effective than the French. Ownership of the property is transferred to a body corporate whose sole function is to ensure the conservation of that property. The National Trust is also authorized to declare the property immune from alienation unless Parliament passes a law to the contrary. In this way, a forest will retain its protection status permanently. However, it is clear that these donations rest on a tax system which strips the large landowners and their heirs. The expedients are often dations in payment in disguise. When the tax burden becomes too onerous for the landowners, they arrange to donate their land to the National Trust. This enables them to avoid tax and enjoy the use of their assets in exchange for handing over their title deeds.

1/ Act of 10 July 1976, section 24, and Decree No. 77-1298 of 25 November 1977, articles 17 to 25.

But non-institutional means of nature protection may also be used. It is always possible to draw up contracts with the landowners as a means of encouraging them to take certain nature protection measures on their land. Hunters set the example in this respect through a type of contract under the terms of which the landowner undertakes to set aside a particular parcel of his land to provide cover for game. In exchange, the hunters' association agrees to pay him a sum equivalent to the value of the crops forgone. Through contracts of this nature the protection forest could become a profitable undertaking for the landowner. These contracts lend themselves to a wide range of options. The State, though not using it itself, could act as a catalyst for the promotion of the system. The nature protection authorities could try to bring together landowners and groups interested in making use of protection forests.

2 - The role of the authorities

The methods used to enlist the collaboration of private landowners are the traditional ones, such as law enforcement regulations, servitudes and incentives. In some cases landowners are obliged, in others encouraged, by the granting of tax benefits or by other means, to do or to refrain from doing this or that. However, for the system to be successful, the authorities must intervene. First of all - and as an absolute minimum - to make sure that the regulations are obeyed, which implies forest wardens keeping check on the landowners; and, then, the authorities may also be required to assist the private landowners or, in some cases, take over from them.

A - Assisting private landowners

Private landowners may be given technical or financial assistance. Technical assistance will involve providing equipment, management advice, know-how and various other services.

The forest authorities must control the quality of the equipment provided and, if necessary, supply the planting material. The former task is absolutely essential, since only through quality control is is possible to prevent the introduction of diseased or poor-quality specimens.

The time-scale for the correction of these deficiencies will depend on the inherent rates of growth of the species concerned. Landowners are at even greater risk now that it has become normal practice to acclimatize fast-growing exotic species and import genetic material. Forest laws must vest the forest services with the authority to control the quality of material whether produced in local privately-owned nurseries or imported into the country and seize and withdraw from circulation diseased or poor quality specimens.

Nurseries managed by the forestry services could, furthermore, provide landowners with planting material, either against payment or free of charge. The latter solution would be the most appropriate in cases where the law requires landowners to keep a certain number of forest trees on their land, as in Rwanda under the tree planting scheme.

The dissemination of technical knowledge and the provision of advisory services could, at the very least, consist in demonstrations by extension workers and the distribution of posters or technical leaflets. If more substantial funds were available, all forest landowners could be given the opportunity of receiving expert advice on establishing forest management plans. The French Forest Code 1/ requires the owner of a forest of twenty hectares and over to draw up a “basic management plan”. This is done with the assistance of a member of the national forestry services and submitted by the owner. Although the authorities monitor the implementation of the plan, the owner is given considerable freedom in carrying it out. What is important here is not to keep a close watch on the landowner, but to encourage him to think about how he will develop his forest and seek expert advice. The forestry services (Office National des Forêts) do not themselves approve the management plans. This is done by the “Centres Régionaux de la Propriété Forestière”, government agencies specialized in providing assistance to the private sector. These centres bring together representatives of the landowners and the people whose work is in forestry activities as well as officers of the national forestry service.

1/ Articles L 221-1 ff.

Financial assistance will consist of loans or subsidies earmarked either for reforestation or management operations, including fire prevention measures, the opening up of roads or the various silvicultural tasks. When prescribed by the forest laws, this financial assistance is administered not by the forest services, but by a separate entity, usually a Forestry Fund, which may be a body corporate, or again under the State budget. It is sometimes questionable whether loans and subsidies, particularly in Third World countries, are indeed effective. State funds invested in this way would appear to be less productive than funds allocated directly to public reforestation operations. As mentioned earlier, there are ways of preventing funds allocated to privately-owned forests from being squandered. But, even so, it is not possible to eliminate all the risks. Even if the forestry services provide and plant the seedlings, the success of the reforestation operation will depend on how well the landowner looks after them. When all is said and done, the ultimate guarantee that the credits will be put to good use depends on the authorities being able to seize the land should the owner fail to honour his commitment. It is here, of course, that the system is weak, for in poor countries landowners possess nothing to compensate for losses suffered and it is not easy for them to recover seized property.

B - When the authorities take over from the private landowner

The private landowner may be obliged, or choose, to have the forest services take over from him either for certain operations or for all management tasks.

When this is forced upon the landowners, it is, in principle, an administrative penalty, applied when he has failed to carry out some operation required by law, e.g. reforestation of a parcel of land. It is done without any further formality being required, and related costs are payable by the landowner. The latter most certainly considers it a penalty, but it is in fact a forest and soil conservation measure. The practice of closing off land to grazing is an excellent example of the latter.

Under Cape Verdean Law, the authorities may without further formality being required assume responsibility for forest tree planting operations even though the landowner's competence may not be at issue. The country's situation is serious enough to warrant a measure of this nature. On the one hand, it is severely understocked and the reforestation programme is of vital importance; on the other, the rainfall pattern is such that planting is possible only a few days each year. To ensure that the stocking of land under the forest regime is successful, the legislator has chosen to have the forest services intervene directly rather than run the risk of the reforestation operations being jeopardized (a) due to a shortage of manpower, or (b) because the land had not been prepared in time or, again, (c) because planting material had been lost as a result of being left too long in their bags in the sun 1/.

1/ Cape Verde, Draft Forest Code 1982, article 53.

SECTION II - FOREST POLICY INSTRUMENTS IN A COMPLEX LAND TENURE SITUATION

We have so far been examining of set purpose situations which lend themselves particularly well to forest policy management. The holdings considered were of an appropriate size to be given over to forestry and belonged to a single landowner. Attention must now turn to situations where these conditions do not apply, i.e. where the land has been subdivided to the extent that the parcels are now too small to be given over to forestry or where, by tradition, land tenure patterns preclude the assigning of land rights to individuals.

1 - Minifundia

There is a certain minimum size below which a forest stand may not be viable. For instance, it may not be possible to open up the necessary roads due to lack of space and the revenue yielded may not even cover management expenses. Its only interest from the forestry standpoint would be an ecological one or that of providing wood for the owner's requirements. Further down the land division scale, there is the small plot where the planting of a single forest-type tree or hedgerow could reduce the food output there. In such cases there can be no question of any policy of farmer self-reliance with respect to fuelwood or erosion-control contour strips. The situation is particularly difficult in the latter connection, as the land has been sub-divided in a most disorderly fashion. Erosion control strips usually follow contour lines, whereas land will be divided equally among heirs and it is a mere stroke of luck when the boundaries of these parcels coincide with the contour lines. How, therefore, can farmers be obliged to plant hedgerows or strips which would divide a field in two, with each resulting plot too small to be used for agriculture?

Basically, situations such as these are brought about by population pressure in the rural areas. If further proof were necessary, land tenure patterns in Europe in the Middle Ages are a case in point. In times of agricultural prosperity, the rural population increased to the extent that the land available for cultivation no longer sufficed to provide work and food for everyone. Famines and plagues then struck, land once again became

available and a new era of prosperity commenced. Similarly, the population drift from Europe's countrysides in the twentieth century meant that field patterns could be adapted to farm mechanization and to the planting of new forests.

However, population pressure is not the only factor determining whether or not land is subdivided. The best known factor is unquestionably the principle of equality among heirs. This principle contained in the French Civil Code has been likened to a “machine for chopping up land”. The consequences of adhering to such a principle vary depending on the degree to which landed property can be “mobilized”. If the owner of a holding which has become too small to support himself and his family is able to sell that holding and set himself up in some other occupation, the purchaser is likely to be a more fortunate neighbour now able to extend his own holding. The fact that there is a land market tends to counteract the effects of equality of succession among heirs. However, the landowner must be legally entitled to dispose of his property, buying and selling must be a common practice in the society and the seller must be able to find another means of earning his living. In any event, the fact that property can be “mobilized” will not necessarily halt the trend to small-sized holdings. One landowner could own several small non-adjoining parcels, which from both the forestry and farming standpoint would be as awkward as if each parcel belonged to a different owner.

Another reason for the existence of minifundia is that too large a proportion of land is in the hands of too few owners. These owners may be the State or the Churches (whose land never changes hands - no succession mortis causa being possible - thereafter) or the landocracy, which will have taken legal steps to ensure that their large estates are not divided among their heirs. The third type of large landowner is the one who, by fair means or foul - legally or through the use of violence, will have been able to take advantage of periods of unrest, e.g. the early stages of colonial wars, the struggle for great agrarian reform and political agitation to obtain and retain large tracts of land. In these pages the matter of interest is not the social or political aspects, but solely the fact that minifundia are a hindrance to the implementation of forest policy. There is no doubt that a big landowner may indeed manage his forest very well.

However, it may happen that by reducing the amount of land available on the periphery of his forest, he forces local peasants to divide smallholdings among themselves. This in itself would be a setback to any afforestation policy. However, this is a purely theoretical question. In practice, the large landowner may well provide better management and obtain higher yields than the smallholder, which means that more egalitarian land disitribution does not necessarily result in a greater equilibrium in forest affairs.

Finally, land fragmentation in mountain areas is sometimes an indication that the people have had to adapt to very difficult climatic conditions. By farming plots at different elevations they are able to diversify their production and reduce the effects of an uncertain climate.

The law provides a number of alternatives to offset the effects of land fragmentation - irrespective of any political and social reform motives that may be at work. Such alternatives may be resorted to in very distinct cases depending on whether the matter at hand is the subdivision of a forest stand or the promotion of reforestation in an agro-pastoral environment. The differences lie in the conditions in which institutions can be brought to bear. These institutions are basically the same in both cases. They may be distinguished in terms of three objectives: putting an end to the practice of sub-division, re-establishing farms of an acceptable size and promoting cooperation among landowners. The examples that follow have been taken from French law, which contemplates precisely these three objectives.

A - Putting a stop to the practice of land subdivision

The logical reaction to an inheritance system causing widespread fragmentation of holdings is to try to halt the practice. Efforts could be addressed to the inheritance rules on the one hand and, on the other, to the situation of property inherited under law.

The procedure for handing down property to heirs should avoid sub-division of land into equal parts. One of the heirs should be allowed to claim that the entire property be assigned to him on a preferential basis. In return, if necessary, he could be obliged to pay his co-beneficiaries

a compensatory amount 1/, and there will be a minimum size of the holding below which this procedure becomes compulsory. If any co-heir who has helped develop the property has received no payment for this, he will be entitled to a "deferred salary". This means that he can claim from the estate an amount equivalent to the total sum he did not receive 2/. The "deferred salary" will be deducted from the compensatory amount due to him.

The law offers two ways of dealing with inherited property. The first is a departure from the rule which states that no individual is obliged to be a party to joint ownership. At the request of one of the heirs the competent courts may order that the property remain undivided. However, this is only a temporary solution, unless all the heirs agree otherwise 3/. If the property remains undivided indefinitely, problems could arise and militate against the aim of keeping it in one piece. French law accordingly has devised the société civile to allow heirs to circumvent an enforced joint ownership, yet to keep the property intact. Under this arrangement, the sharing among heirs does indeed take place, but in the form whereby the beneficiaries set up a company, each share of the inheritance representing a share paid into it. In this way, the holding is not subdivided. When their assets comprise wooded stands, and are set up in accordance with the rules of the Civil Code, these companies go by the name of "groupements forestiers". The Rural Code offers a similar facility for cultivated land under the name of "groupements agricoles".

B - Re-establishing parcels of acceptable size

The French legislator did not intend these groupements agricoles forestiers solely for the benefit of the joint heirs of a single estate. Anyone can set up these companies. Thus, owners of very small parcels could very well form a single holding large enough to be given over to agriculture or forestry. The société civile has therefore not been devised

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1/ French Civil Code, articles 822 f.

2/ French Civil Code, articles 815 f.

3/ Decree-law, 29 July 1939, relative to the family and the birthrate in France, articles 63 f.

exclusively as a means of preventing the fragmentation of inherited property, but it should also help consolidation into reasonably-sized holdings. Experience has shown, however, that it fulfils only the first of these functions to any significant degree. Landowners are reluctant to relinquish control of their holding in exchange for a share in a company even when this would mean an increase in income for all of them. In practice, other methods and institutions, namely the recognized land agencies (opérateurs fonciers) and land consolidation, are used to reconstitute holdings.

In general terms these land agencies, acting on behalf of the authorities, buy land as it comes up for sale. Once a holding of a reasonable size has been formed it is conveyed back to farmers. One thus has a land fragmentation correction mechanism operating on a continuous basis. To make the task of these agencies easier, they are vested with a right of pre-emption in subrogation of the original purchaser in matters relating to the sale of agricultural land. They have the same status as the Sociétés d'Aménagement Foncier et d'Etablissement Agricole (SAFER) 1/, capital for which is provided by the local authorities and farming associations. Their boards of directors include representatives of both the authorities and the associations. They enjoy a monopoly with respect to the service they provide to the public within the area to which they are assigned and, finally, come under the supervision of the Prefect.

Consolidation of holdings offers much less scope. It involves the exchange of parcels of land of equivalent size but in no way alters the amount of land held by each owner. Its usefulness is twofold: it enable an owner whose land consists of scattered parcels to reconstitute a single holding or, is a mechanism for rounding off farm boundaries so that farm machinery can be used on the land. It also opens the way for land management in that it gives the local authorities control over the roads system and any new public facilities. Plans are drawn up at department level, but the work in each community is supervised by a special commission. The procedure obliges landowners to transfer their property,

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1/ The Sociétés d'aménagement foncier et d'établissements agricoles were instituted by the Loi d'orientation agricole of 5 August 1960.

it provides a number of guarantees for those landowners: one of the members of the commission must be a magistrate, and the commission's decisions can be taken to a higher court of appeal 1/.

C - Legal framework for cooperation among landowners

Since landowners are reluctant to transfer their rights to a company, it would seem only logical to offer them an alternative, e.g. by allowing them to retain ownership of their holdings but to have them participate in a joint management scheme or, on a more modest scale, to carry out certain tasks for the good of the community as a whole. This system of cooperation may be operated on a voluntary or non-voluntary basis. In the first case, the law plays an incentive role by providing a legal framework which the landowners could not have devised alone. The scheme could be made all the more attractive if certain benefits (subsidies, tax exemptions) were built in to the legal structure. In the second case, landowners are obliged by the authorities or by a group of other landowners to set up a cooperative system.

Through the groupements de gestion forestière under the Forest Code and the groupements agricoles d'exploitation en commun under the Rural Code cooperation on a voluntary basis is extended to all aspects of forestry or farming. Those concerned may moreover set up associations syndicales libres (voluntary syndical associations) when they wish to restrict the scope of their cooperation to certain aspects of management, such as warden tasks. In all these cases, the association consists of only the voluntary membership of the owners; and the statutes must be approved unanimously.

Under French law unanimous approval is not required for either “authorized” or “compulsory” syndical associations 2/. The former are set up by landowner groups which can oblige other landowners to join, should their holding be needed for the association to operate effectively.

1/ Consolidation (introduced in 1918) is currently governed by an Act of 11 July 1975.

2/ Established under the Act of 21 June 1867 - amended on a number of occasions.

They are termed “authorized” associations because official approval is required to establish them and to compel landowners otherwise hostile to the idea to join. Compulsory or non-voluntary associations are established on the initiative of the authorities (the Prefect), who can oblige any landowners they designate to form an association. In principle, non-voluntary action is limited in scope. In forestry, it may involve the opening up of forest roads, reforestation or land clearance. However, when the Forest Code was amended under the Act of 4 December 1985, the legislator introduced the idea of an “authorized syndical association” with overall responsibility for forest management 1/; and members are obliged to allow the association to do the work it is authorized to do on their holdings and to pay their dues. The landowner's right of withdrawal from the association is recognized, and is the only liberty left open to him. Because withdrawal can be rather costly for the members of the association, they do not often avail themselves of this right, which, furthermore, is not recognized in the case of associations established by the authorities.

France's success in coming to grips with the problem of excessively small holdings stems from the wide range of solutions which the law offers. The question which springs to mind is: how can these solutions be taken over into the legal systems of tropical countries where fragmentation is widespread? It is difficult to decide whether or not these measures can be exported but their success in France merits comment.

France's policy for reshaping the agriculture/forestry pattern was introduced in a favourable historical context and had the benefit of an adequate institutional infrastructure. Three features characterize the historical context. The most significant is, without doubt, rural population trends. Since the late XIXth century there has been a steady drift of rural dwellers to the towns, which has not been offset by any significant rise in the birthrate. Measures to remedy the fragmentation situation were taken at a time when population pressure was not at its most intense. Furthermore, considerably higher yields now guarantee sufficient

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1/ Article L 247.

food for the population despite a reduction in the overall cropped area. Land is now available, thus making land tenure reorganization measures easier to implement. Secondly, rural dwellers have easy access to schooling. This means that French farmers have the knowledge they need to operate the recognized agricultural or forestry associations that the legislator has made available to them. Such institutions would no doubt not be viable if they were to be managed by illiterates. Secondly, farmers' sons have other options open to them now. They are no longer obliged to continue the family farm. Their level of schooling and the educational opportunities that the country offers gives them both the imagination and the means to choose another occupation. This leads to a certain degree of social mobility and helps to release land for other uses. The third feature, stemming from the two previous ones, is the fact that there is a market for land. Agricultural and forest land is bought and sold just like any other property. When a sufficient number of these transactions take place, price trends, based on supply and demand, emerge.

Another factor has led to changes in the rural sector in all EEC member countries: the Common Agricultural Policy. Whilst originally conceived as a guarantee against agricultural market price fluctuations, in practice it became a sort of permanent producer subsidy. One of its effects has been to favour the large farmer over the small farmer whose productivity is lower. In so doing, it has served to raise the minimum size limit below which a farm is no longer economically viable, has eliminated jobs in agriculture and has favoured concentration of land ownership 1/.

The existence of a market for land is the sine qua non for the establishment of land management bodies, such as the sociétés d'aménagement foncier et d'établissement rural (SAFER) - one of the chief tools of French policy for reforming agricultural structures. This situation is not met with in tropical countries. In Rwanda, matters are quite the reverse. There agricultural holdings are extremely small, and it is widely felt that to be assured of a satisfactory standard of living one must own land. Even

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1/ Cf. Paul Cheshire: Les effets économiques et écologiques de la politique agricole commune, in Revue française de finances publiques, 1985, pp 87 to 103.

those who hold a job in the towns or a government post still feel the need to own a small plot of land 1/. The usual custom is for the father (a farmer) to give each of his sons (and he usually has several) a piece of land as each of them settles down. Land is not often bought and sold. Productivity is low and schooling not widely available in the rural areas. Thus, to stem the practice of fragmentation, which is the cause of serious deforestation problems and erosion, would appear to be a difficult undertaking, particularly since Rwanda does not have the same institutional infrastructure as France to support its land policy. Two points are worth noting here: the cost of the policy, which is borne by the community, and the importance of keeping an impartial check on operations. The only public expenditure involved in establishing mechanisms for the transfer of property to heirs or setting up landowner cooperation organizations is the cost of the incentives which accompany these measures. On the other hand, consolidation and land management activities involve the provision of credit to cover the planning work required, pay the surveyors, whose task is to suggest how the field boundaries can be put right, and the experts recruited to evaluate the property or, in the case of land management bodies, to buy land. It is significant that the number of consolidation operations has declined considerably since the start of the current recession. In the early seventies, some 350 000 ha were consolidated annually. Since 1975, this figure has fallen to 150 000 ha. Experts estimate that some 20 million hectares 2/ overall are still to be consolidated. The sine quanon for the acceptance of non-voluntary operations involving the sale of property or the establishment of joint management bodies is impartiality. It is to be expected that rural consolidation operations will lead to attempts to defraud, corruption or abuse of power by some local public figures or people in authority. Unless one is absolutely certain that the aggrieved landowners will not hesitate to appeal against a decision which, in their

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1/ A young Rwandese civil servant with a university degree in agriculture, was heard to remark: “My post in the Civil Service offers me no guarantees. I could be dismissed tomorrow. I need a piece of land to be sure I won't starve.”

2/ Henri de Farcy and Jacques Gastaldi: La propriété agricole, P.U.F., Paris, 1977.

opinion, favours a minister, mayor, prefect or senior official and that the court will quash that decision without too much difficulty, it would be advisable to abandon the use of the consolidation technique. Unless one is certain that a non-voluntary cooperation system will not be used to the personal advantage of any single individual or by the local authorities to relieve them of their responsibilities, once again it would be advisable not to enact such a law. Unfortunately, in many tropical countries, to appeal against an act committed by the authorities or a decision favouring someone in authority is considered an act of political hostility and, as such, is liable to be penalized.

In view of the effects of the European agricultural policy it would be worthwhile to try and see how it could be used as a basis for reorganizing the countryside. There could be a system of selective aid to agriculture favouring farms of a particular size. In time, farms which do not meet the size requirement and have thus been indirectly penalized will gradually disappear.

There is no doubt that such a policy would lay a considerable burden on the country's budget, since it would be based on a system of agricultural subsidies. The State would nevertheless be able to ensure that its outlay became a generator of income and other benefits: as a result of higher agricultural output imports would decline, land would be released for cash-cropping or the tax base would be broadened.

The most radical means of putting an end to the practice of land fragmentation - agrarian reform - has been deliberately omitted from our list. This is because agrarian reform would appear to be a means of achieving social and political objectives (revolutionary, as in Russia or reactionary, as in Rome under the Gracchi) rather than simply a tool for reorganizing the countryside. None of our reorganization methods challenges the social order or the status of private property or brings about sudden changes of ownership. On the other hand, it is a much more difficult task to reorganize when problems of the forest are linked to traditional land tenure rights.

2 - Ownership by traditional social groups

Where exclusive use rights over land were initially in the hands of social groups, their evolution was predominantly in the direction of individual ownership. The Mediterranean Basin has from ancient times witnessed State ownership, as in the Egypt of the Pharaohs, and feudal tenure, as in Greece, but also private landowning.

African society has been more conservative and has prolonged the existence of tribal ownership down to our own days. In that continent there are still regions where the social group - tribe, descent group, village - owns the land, and each member of the group will have an exclusive use right of the portion allotted to him. In parts where shifting cultivation has ceased and settled agriculture has become the rule, there has been a marked affirmation of the rights of the individual vis-à-vis the group. The prohibition sometimes in force against the holder of a use right making the land over to a stranger outside the group 1/ would appear to be the last step before the complete transformation of tribal ownership into individual ownership. In attempting to embody African conceptions in European juridical categories the colonial legislators created a vast property to the benefit of the State. For, in opening up procedures for the registration of land, they considered any land coming within the sphere of communal or group ownership as being unoccupied and ownerless - and land was not covered by written titles. Since the registration campaigns met with little success outside the towns, what happened in effect was an appropriation of vast tracts of country by the State, and former occupiers found themselves in the position merely of use right holders over their land as a result of a sort of resurrection of the old distinction between eminent domain and mere user. When the countries concerned attained independence, their governments were careful not to disturb a status quo that was so much

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1/ The prohibition can in practice be circumvented by bringing the outsider within the social group. Cf. Alain Mignot: La terre et le pouvoir chez les Guin du sud-est Togo, Publications de la Sorbonne, Paris, 1985, pp. 85 f.

to their advantage. It should be added that peasants were ever suspicious of registration procedures 1/.

Traditional tenure has survived in India and especially in the Pacific. The islands might have experienced developments comparable to those which took place in Africa had not attachment to traditional social conceptions been stronger there. The imposition of European land tenure systems has not survived independence; and some States in the Pacific - Solomon Islands, Papua New Guinea, Vanuatu 2/ - have brought back customary land tenure as one of their main political principles. From the forest standpoint, customary ownership raises difficulties. The actual situation varies from one country or island to another, though there are certain elements common to all. Land is divided on a clan or descent group basis, and the State will possess only a small amount of the land. In order to settle disputes, the boundaries of the property of the respective groups have been set down in written acknowledgements. The members of the clans or descent groups are all co-owners of the group's land and holders of use rights of the portion allotted to each. As co-owners they are entitled to draw their share of any income produced by the commonly owned land and to participate in decisions regarding the purpose to which such land shall be put 3/. Land may not be sold. Outsiders may obtain the use of it against lease. Lastly, areas that are not cultivated are looked on as a reserve of land and as a source of naturally occurring products to which all members of the group may have access.

In view of what is described here, it is necessary that novel legal formulas should be found so that the forest resource can be made to yield but even more so that it should be properly managed.

1/ Cf. Harry Turay: Land tenure systems in Sierra Leone, Njala WU University College, 1980.

2/ Cf. Gideon Zoleveke: Traditional ownerships and land policy, in Land in the Solomon Islands, Fiji Times and Herald, Swa, 1982.

3/ It should not be supposed that such participation is on democratic principles entailing “voting by the assembly of co-owners”. Decisions are taken on customary principles, i.e., by the chiefs.

In Papua New Guinea, for example, the continued existence of traditional ownership is guaranteed by the laws in force and constitutes one of the pillars of national policy. But the Government is also determined on a programme to ensure that the forest shall contribute to the country's economic development (National Forest Policy, August 1974). The programme calls for establishing wood-using industries, which accordingly implies a thoroughgoing system of forest management. Since the local people possess neither the necessary know-how nor the capital for this, inevitably recourse must be had to the foreign investor.

Here the forest legislation contemplates measures designed to facilitate the sale of cut timber and at the same time to control the volumes of such sales. The Government may purchase from the tribe its felling rights and issue firms with felling licences within the limits of these rights themselves. The machinery so provided, where the Government acts as intermediary between firms working the forest and the owners of the latter, presupposes that the owners freely consent to such sales of their felling rights. The second solution consists in the granting of permits by the authorities to the firms to purchase these rights from the owners direct, in terms of pre-set volumes. Lastly, provided certain conditions prescribed by the law are met, the owners can be left free to sell their timber without any intervention by the authorities 1/.

The actual implementation of the law has proved disappointing in many ways. The local people have said their income from the timber working is insufficient. Generally, they have little interest in maintaining the forest as something permanent, and think it more useful to put the land down to crops. The working of the timber has not been accompanied by restocking. What is needed is to have the cost of forest management borne by those who fell the trees, as provided for in the Forest Code of the Philippines and as seen in the forest concessions of African countries. It is common knowledge that this system is not very satisfactory. The person working the forest has really no interest in

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1/ Forestry (Private dealing) Ordinance 1971 and Forest Regulation No. 1506.

seeing that the felled areas are replanted as they should be. If that interest is to be encouraged in him, then he must be guaranteed the use of the forest over several rotations. But custom limits the occupancy of land to one generation. And again, forest management - silviculture - is one thing; and exploiting the forest for its timber is another. The skills and the equipment required are different in the respective cases. In any event, the measure described does not per se provide an overall solution to the problems arising with traditional ownership. It seemed best to oblige owners to form landowner groups, which would be corporate bodies managing the property for the benefit of the members. The legal basis for such groups is to be found in the Land Group Act 1974. As an institution, these groups provide the authorities with a single interlocutor with whom the problems of planning and the disputes inevitably arising in forest working can be dealt with. But, in the long run, the success of land groups puts the very survival of traditional ownership at risk or, in any event, will lead to a radical change in the order of things that the peasants are used to.

Management of the forest resources gives rise to problems of a more delicate nature, since the classical rules cannot be applied to them without adaptation to allow for the peculiar characteristics of the people for whom they are intended.

The most important requirement is that of securing the reconstitution of whatever resources are exploited. If one abandons the idea that restocking should be done by the firms that do the felling, then the task could be entrusted to the forest services. Financing the cost of the operations implies levying a tax on the owner or whoever purchases the felling rights. Again, it would be necessary to require the owner to allow the forest services to restock his land and perform warden duties for the replantings. Owners are in the habit of considering their forests as a reserve of land that can be cleared in order to serve their farming needs. Decisions as to the location and extent of reforestation are bound to lead to conflicts with the authorities. And such conflicts will be all the more acute as population growth renders it more difficult to assign to each and every member of the group his own parcel of land. Here the law could strengthen the hand of the

Government by creating an obligation for owners to maintain a certain proportion of their land under forest cover. In the same way, the rules governing clearings should be adapted to the needs of shifting cultivation for as long as this practice persists and needs to be regulated 1/.

The foregoing rapid glance at the question of adapting forest management to traditional forms of land tenure raises more problems than it solves. One seems, here, to be faced with an illustration of the widely held notion that technology-based civilization constitutes a sort of package whence no advantage will accrue unless the price for the whole of the package is paid. For even when one adopts as one's principle that traditional rights should be respected, it is difficult to conceive of forest management other than in terms of guaranteeing duration to the operator and unity in decision making. The more one is brought to satisfy technical demands, the more traditional rights are curtailed. This is true whether one is dealing, as in the present context, with the very foundations of ownership or, as in the case of State forests, with use rights. It will be interesting to see if in the long run the States of the Pacific manage to attain the objectives they have set themselves. For the immediate future, what most commands attention are the indications that they may not. And the contrary signs are many. They include the disappearance pure and simple of forests that have been worked on industrial lines without the operator equipping himself with the means necessary for managing those forests; and they include the abandonment of programmes for economic development that were to have been financed with the funds generated by the forests, and the retreat from conceptions of traditional ownership that are by now devoid of meaning - in fact if not under law.

1/ Flexibility in applying these measures can be achieved by prescribing the sites where clearings may proceed, or in the obligation to leave certain trees standing, in the duration of fallow, and even in the obligation to plant trees on fallows.

CHAPTER II

FOREST POLICY AND PUBLIC OWNERSHIP

In the previous chapter it was seen that characteristic of ownership by public entities is the fact that these possess a twofold power over land, first as owners and, additionally, because they enjoy the prerogatives of authority. To be exact, this is true chiefly of the State. Other, subordinate authorities are not necessarily vested with the prerogatives of power, at least where forests are concerned. There may even be highly specialized and well staffed and equipped public services that are endowed with forest land - a hospital, for example, that has received the land as a gift. In these cases, the law treats the owner as an ordinary private person and, like him, as subject to the general forest law enforcement rules or, again, may provide that by an act of authority the management of the stand may be entrusted to the national forest services. The same may be true of land belonging to local government - municipalities, provinces, counties, prefectures. The temptation therefore will be to settle the question of forests belonging to public entities (other than the State) by considering these simply as privately owned property. This would be oversimplifying the matter, at least where communal forests are concerned. For these have a certain universality, and perform a social function that places them in a category of their own. Accordingly, in what follows, State forests and communal forests will be treated separately.

SECTION I - STATE FORESTS

Public forests, or forests belonging to the State, have an essential part to play in a properly conceived forest policy. For only the State can undertake the management of forests that bring in nothing, or next to nothing, by way of returns. This is eminently true of nature parks, reserves and protection forests in general. To be sure, as noted earlier, private owners can be made to comply with obligations deriving from the forest; and in Europe there are parks and reserves with private property enclaved within them. Here, however, the obligations imply countervailing benefits: otherwise they would constitute a breach of the principle of equality among citizens by imposing excessive burdens on some for the good of all.

A further consequence is that they are inevitably difficult to enforce by reason of the charges they imply on the public purse. Even though Europe's parks and reserves comprise private properties within their boundaries, most of the land concerned is usually domain land. In that continent most domain land has been constituted out of the once royal forests, not only because these still contain fauna and flora worth conserving but even more as a means of keeping down the social and financial costs entailed. The same series of problems will be encountered in the case of stands of premium and slow growing tree species - an oak takes at least 150 years to reach maturity - and it is unlikely that private persons, with their much shorter life-spans, will plant oaks. Consequently, it is the State forests that will have the task of providing this sort of trees, where the purpose is to have a sufficient supply of them in the future. And it is significant, in this connection, that the oak forests of Europe were enlarged during the XVIIIth century to supply the navies' needs for timber. This does not mean that the State should limit its action to the forest sector where it will reap no financial gains from it or, what amounts to the same thing, to the forest that generates only expenses and no profit. The charge on the public purse deriving from protection forests or stands of slow-growing species will be all the easier to bear if the State also possesses forests that bring in immediate returns. The ideal solution would be to have production forests as it were subsidize the protection forests. In conclusion, then, it is simply a case of there being situations where the State can better accomplish its mission in forest matters than can private owners.

The management of State forests is usually the task of a corps of skilled personnel, whether or not there is a distinct government department for the parks and reserves - the State, in other words, managing its own domain with its own personnel - so that there is no inevitable barrier between policy and implementation. The fundamental consideration, accordingly, is that the public forest service shall be organized in terms of optimum efficacy. Even so, land tenure problems will not completely disappear as a result. Some such problems arise precisely in connection with land tenure rights over the State domain; others, again, out of the extension of areas placed under forest service management.

1 - Land tenure rights over the State domain

The juridical position of domain forests is in theory very simple: the State exercises ownership rights defined by the legislation that the State itself has brought in. Ownership in this context raises certain difficulties having to do with forest interests, which can be grouped around three sets of considerations - those relating to State ownership, those relating to forest use rights and those relating to the perennial character of domain forests.

A - State ownership

Depending on the legal system followed, State property will come within the scope of the general land law or be endowed with public domain status to which a special protection regime applies1/. One should not attach undue importance to the differences between these two kinds of ownership in practice. Property coming within the public domain may be re-assigned or may have its classification changed in such a way that it is scarcely different from property governed by the general law of the country. On the other hand, it is always possible to attach waivers to these rules whereby the property takes on some of the character of public domain property.

1/ Those countries where the distinction is made between the public domain and the private domain of the State have their forests comprised within these two categories. The criteria for assigning them to the one or to the other vary considerably. In France a functional criterion is followed. Forest stands are deemed to belong en bloc to the private domain - this to remove obstacles to their exploitation. Forests in the vicinity of built-up areas which are dedicated exclusively to resort by the public and where special arrangements are made for that purpose are deemed to be parts of the public domain. In the Central African Republic forests belong to the private domain except where they occupy land coming under the public fluvial domain (Act No. 61/273 to enact the Forest Code, section 49). Another possibility may be seen in the legislation of Gabon, which provides for a hierarchy among classified forests (which by that token come within the public domain) and forests that are simply protected forests (i.e. areas naturally suitable for forest purposes not otherwise specified, which come under the private domain (Waters and Forests Orientation Act, 22 July 1982, sections 10 and 11).

The State forests of France are, as a matter of principle, property coming within the State private domain; yet under their juridical status alienation is prohibited save by express authorization of the legislator, by which token they enjoy a protection resembling that attaching to the public domain. In reality, the forest property of the State is never entirely a property just like any other, and this is precisely because of the “personality” of its owner.

And yet, the conditions surrounding the establishment of State ownership over the forests may have important consequences in practice.

In Europe, and broadly speaking in those countries where law has an age-old tradition behind it, the State's ownership of its forests and of its lands is universally acknowledged as stemming from a legitimate right. Ownership here is grounded in possession since time immemorial or on some juridical act of acquisition. State property is defended - by the presence of a respectable number of forest wardens - from any attempted encroachment by neighbouring occupiers. Should ownership ever be contested, the matter will normally be dealt with by the competent judge without the future of the State forest being placed in jeopardy to any extent.

The same cannot always be said of tropical countries, where several factors converge at times to endow domain forests with a somewhat imprecise juridical status - in practice, at least, if not in the actual letter of the law. In the first place there is the legacy of the colonial lawgiver who had declared any land left idle and ownerless to be State property, when what was involved were lands under customary ownership and by that token not covered by registered titles. The former possessors of such land continued to consider it as theirs. The fact that the administrative authorities lacked the means to enforce meant that it was not possible to prevent felling, burning-over, clearings and encroachments of all kinds in forests now classed as domain forests. Despite the passage of time, the rural population is still oblivious of the rights of the State, due to this understaffing of the administrative authorities and the impossibility of enforcement. It would, of course, be quite unrealistic to suppose that all

encroachments made on the State forests represent an assertion of ancient rights, for there is no doubt whatsoever that they stem from the simple intention of taking what is within reach (and poorly guarded, into the bargain). The fact remains, however, that the theft of timber is a recurrent practice and there is no widespread respect for the forest assets of the State.

A further source of uncertainty as to the law is one of a technical nature, in the existence of other than agricultural plant cover to which certain laws refer without thereby deeming the land in question to be private property. The State forest domain is thus deemed to include “hillsides” or “land where gullying may occur” 1/. Since no reference is made to the status of such land, ownership can be transferred without recourse to expropriation procedures.

The implementation of reforestation programmes is an occasion of conflict between the State and the rural population, as when the Government seeks the collaboration of these people by making them promises which, rightly or wrongly, they interpret as a gift of land that they themselves had been working. In such cases a clear-cut determination, declared in writing and made public, of the rights of each individual would have undoubtedly retarded operations (or rendered them less attractive) but it would have obviated contestation or the emergence of a feeling of injustice.

There is no generally applicable solution for this type of problem that one can point to. The State might in some cases do better to forgo its rights in parts where these are not socially recognized in exchange for full control elsewhere. This was sometimes the attitude taken by the barons in mediaeval Europe when faced with peasant encroachment on their forests. But in any event there must be no jeopardizing of the interests of the country at large. The procedures for classifying domain forests provide the best opportunity for settling these land tenure disputes, for classification implies the recognition of other land so classified and that it is to be registered. In the procedure a place can be found for an enquiry into land

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1/ Niger, 1974 Act, section 6.

rights and for consulting the population affected. A commission can be vested by law with powers to arbitrate for the purpose of determining what belongs to the State and to settle ownership conflicts1/. In order to be credible, the commission must have a composition such, and must function in such a way, as to guarantee that the claims of the local population are duly heard; otherwise, this would be a mere administrative ritual that would do nothing to solve outstanding problems. In practice, therefore, the commission must have among its membership representatives of the local people, such as the municipal authorities; and its meetings must be announced by the most appropriate means of publicity 2/. Once this inevitably time-consuming task is completed, it is desirable, in order to forestall objections, to have State forests clearly demarcated, physically, for example by reference to roads or by the placing of boundary marks, hedges or notice boards. At the same time, legislators are more often than not afraid that they are placing an excessively heavy burden on the forest services by requiring them to provide these physically tangible boundary marks for State forests.

Whatever solutions are adopted, it is ultimately in the general interest and in the interest of each and every individual that land tenure situations characterized by a divorce between the law and fact or, worse still, by imprecise law, should not be perpetuated.

In this respect, the laws of English-speaking countries contain explicit provisions requiring that if land belonging to a person is to become part of the State forest domain it must first be purchased from him 3/.

1/ Examples of provision for arbitration will be found in the 1984 Rwanda Act, sections 34 to 39, and in Senegal's Forest Code (Decree No. 65-078, 10 February 1965), articles D 11 to D 18.

2/ In places where resort to the courts is possible and functions effectively, it will obviously be possible to appeal the rulings of the commission, or decisions taken on its advice, to the competent judge.

3/ Examples: Under Sudan's Central Forest Ordinance 1932, section 5 (5) creation of a central forest reserve is deemed to be a public utility purpose within the meaning of the Land Acquisition Ordinance". The National Forestry Act of Malaysia is even more explicit (section 9).

B - Use rights in State forests

In one way, the exercise of use rights makes for the uncertainty attaching to land tenure that was discussed in the previous section. For the lawyer, these rights will be seen as a limited possibility of access to resources deriving from property belonging to another. In practice, however, users will naturally be tempted to extend the content of these rights to the point where they start behaving as owners of land part of the fruits of which they already possess, particularly if the forest is not well guarded. In this way use rights have disappeared from privately-owned forests, save where they have been preserved by legal servitudes, or under contract.

Use rights can be prejudicial to State forests and stand in the way of their successful management; and in Europe the laws have severely limited their exercise. The French Forest Code, for example, prohibits the granting of use rights in State forests for whatever reason, and recognizes only those uses that were in being before 31 July 1827, when the Code was promulgated. And the Government has the faculty of buying out or setting aside these rights and has a power of close control over their exercise 1/.

In the tropical countries, the legislator has also been aware of the drawbacks attaching to use rights and has tended to restrict these rights or to do away with them altogether. First, it is the general rule to limit removals authorized under use rights to the satisfaction of the personal needs of the user and his family or the village community of which he is a member. Only exceptionally does one meet with “commercial” use rights authorizing the local people to harvest materials with which to fashion articles that can be sold outside that community. Rights of this kind for the most part cover local crafts such as basket-weaving or the construction of canoes for the river traffic 2/.

1/ Articles L 138 and R 138.

2/ Example: The Congo Forest Code (as revised by the Act of 7 July 1982), article 13: “In protected forests, use rights may continue to be freely exercised .... Beneficiaries of such rights may exploit palm trees, etc., even commercially ...”.

It is difficult in practice to secure compliance with such a limitation on use rights in terms of their purpose. The fact of opening up roads and tracks places the forest areas only a few hours' truck drive from the towns. There is thus an abiding temptation to sell products so obtained at the roadside or to make use of the transport bound for the towns. The ease, materially, with which this can be done, should be seen as an instigation to poaching - easily recognizable by noting the meat offered for sale at the approaches to African villages and even in the markets. Morever, it has its adverse effects on forest production. Normally, given the high price of fuel on the market, and the growing scarcity of fuelwood in relation to needs, the rule should be to require owners to plant trees for their own needs or for sale and, on the other hand, to require some of them to take up forestry. The latter activity should, in principle, become progressively more lucrative as forest stands become smaller, wherever no other sources of energy have taken the place of timber. Yet this logical evolution does not frequently come about. And this habit of taking what one needs from the domain forests is certainly a major obstacle to the development of forest husbandry since it deprives this activity of the financial stimulus that the laws of the market should provide.

Other limits on use rights apply to the objects in respect of which they can be exercised and to the places that are excluded therefrom. The various forest codes list products which may be removed and activities that may be carried on under such rights. Generally, one finds very comprehensive lists in countries that are well endowed with dense forests such as the Congo, and lists that are far more restrictive in arid zone countries or those with insufficient forest stands. All legal systems prohibit use rights in parks, reserves, and reforestation areas (i.e. where man-made stands are established). It is legitimate to ask, moreover, how use rights could have come into existence on land where there were no wooded stands. Where a natural forest is classified, or declared to be reserved, this act of the administrative authorities prescribes rules for such use rights as may be maintained in being there. Careful distinctions are necessary in taking up a position vis-à-vis use rights in State forests. On the one hand the exercise of such rights in the present-day context can militate against the

conservation of the forest if it leads to excessive use and eventual degradation of the resource. Moreover, as pointed out earlier, in countries where there is insufficient wood for domestic needs, use rights constitute an indirect and serious hindrance to reforestation. Several of the laws examined seek to offset the effects of over-free use by subordinating rights to the condition of the forest 1/. On the other hand, it should be noted that use rights in domain forests are an institution to be met with everywhere. Even in Europe, where they have been severely restricted, they persist in a vestigial form for the older generations, while a novel “use right” may be cited, namely that of being able to go for a walk in forests - which, in the case of Europe is certainly a source of their degradation. In tropical regions, where the economy of the rural population is dependent on the forest, it would be absurd to abolish use rights. In actual fact, problems arise from the misdirecting of rights proper to a traditional way of life into the commercial channels along which technology-based civilization is borne. With things as they stand there can be no compromise solution to these problems. Forest laws, it will be noted, are invariably silent as to the juridical regime of use rights - they define the extent and the purpose of such rights and where they may be exercised but do not provide for their organization - beyond referral to custom in most cases 2/. It would doubtless be a fruitful approach to try to understand custom in order to embody it in a written rule and, where appropriate, bring it under control. In any event, the approach would repay exploring, for, when all is said and done, the situation would not be so very different from the rules, themselves customary in origin but

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1/ Senegal, Decree No. 65-078 of 10 February 1965, article D.20. The exercise of use rights “remains at all times subordinate to the condition of the forest and to the possibilities for restocking. Such exercise may be suspended whenever the Forest Services deem it necessary to impose restrictions with a view to safeguarding the country's forest assets”. The Forest Code of the Congo (article 14) relies on a similar principle in the case of classified forests.

2/ The Forest Code of the Congo, for example, provides that users shall comply with the provisions of the law, the regulations made for its enforcement, and the customary rules compatible with written law.

given set expression in the written law, that in Europe govern access to the products of the common forests, e.g. estovers, or the privilege of gathering firewood 1/.

C - Ensuring the continued existence of State forests

As a general rule the continued existence of a forest is best assured where the forest is a State forest. The owner does not die, and he is immune from the vicissitudes of succession. The owner cannot be obliged to sell his estate or to declare bankruptcy and, moreover, has an armoury of juridical means at his disposal, together with no ordinary power, to make others respect his rights. Nevertheless, the authorites exercising the powers of the State may sometimes take decisions that result in the diminution of the country's forests.

Past history and current affairs offer many an example of Governments that have sacrificed the forest in order to meet pressing financial needs or to carry through ambitious programmes for the provision of basic facilities. State ownership is not per se an absolute guarantee that the forest cover will be maintained in being in the future - nor can such a guarantee be demanded of it. Inevitably, in the affairs of a country, a choice will have to be made between a community need that commands respect and the forest, while it may not be possible to foresee which should prevail. On the other hand, any legislator at pains to secure the continued existence of the forest will eschew hastily taken decisions. What it is possible - and necessary - to impose, is a procedure which will preclude any impairments to the forest unless there are counter-balancing advantages. Two kinds of measures can be proposed in this connection having to do, one with clearings in State forests, and the other with the alienation of Government forests.

1/ Etymologically estovers refers to necessities (est opus) for fuel, etc. The French equivalent affouage refers to the hearth (ad focum) and thus to the sharing of firewood among households.

Clearance in State forests is sometimes governed by the same rules as those governing forests belonging to private persons. But it is not always so. In France, for example, cover on State land may be removed if the land is assigned a different purpose that is in the general interest. The administrative procedure providing for the new assignment automatically entails withdrawal from the forest regime and, by that token, from the prohibition on cutting trees. Unless the rules governing the new assignment so provide, no assessment of the pros and cons of this change of assignment is required.

The situation described differs according to whether the forest to be cleared is a national park or is a nature reserve or is part of a regional nature park. The texts prescribe declassification procedures, with their abundance of consultations and public hearings. However, in the case of production forests - and they form the bulk of domain forests - the legislation has placed reliance on the wisdom of the administrative authorities. Somewhat unwisely, one might think. It could be objected that there is no point in making the State go through the forest clearing procedures, since it is the province of the State to organize such procedures, and to make it submit to these would be tantamount to requiring that it first obtain a permit - a mere ritual, one might say, of no substantive efficacy. This argument, however, does not survive scrutiny. In the first place the one-ness of the State is a legal fiction. The will ascribed to it is effectively the wills of the various policy-making and administrative bodies; and it is not necessarily the same authority that proposes to eliminate a forest in order to assign the land to a different purpose that will be deciding on applications for licences to clear. Moreover, if the social circumstances of the country so permit, control by the courts over authorizations given for this purpose is a forum of direct democracy in that interested members of the public will be able to ask the courts to check whether the decision is lawful and to overturn it if it is not. Again, the obligation to comply with an authorization procedure which comprises an assessment of negative aspects of all kinds associated with the intended clearing. Increasingly enactments are coming to formalize this procedure in requiring a fully fledged impact assessment. It would be unfortunate, where State forests are concerned, to renounce guarantees of

this nature. To complete this list, one might note that where the law requires that any clearance be counterbalanced by an equivalent restocking, there is no reason why the State should be excused from complying with the rule. Provision of the kind is found in the law of Switzerland, Rwanda and Cameroun 1/. A closely related principle is to be found in enactments that require that a stated percentage of the land shall remain under permanent forest cover - as is the case in Senegal 2/, for example.

In the case of the conveyance, with or without charge, special rules are prescribed the purpose of which is to assign to this procedure an exceptional character. In countries where forests are part of the public domain the latter is covered by the two major elements of the public domain regime, namely, inalienability and imprescriptibility. But this is an extreme solution where production forests are concerned. If a forest comes under the public domain this normally leads to the application to it of highly restrictive rules regarding not only protection but also the use that may be made of it. Uses, among other things, will be governed by the principle that access to public advantages shall be open equally to all. In this case, if the law is respected, the public domain status will interfere considerably with the commercial operations that forest working normally comprises. And there is a measure of conflict between the management of something on economically profitable lines and that of public domain status. It is possible to obtain for a forest an entirely comparable protection while at the same time leaving it in the State private domain. Several countries declare their domain forests to be inalienable; and inalienability logically entails immunity from prescription. Some of the

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1/ Cameroun: Decree No. 83/169 of 12 April 1983, article 6 provides that a domain forest may be assigned any non-forest purpose only following the classification of an area of not less than equivalent size as a domain forest.

2/ Senegal: Forest Code, article D 11 prescribes that the area under forest shall be equal to 20 percent of the land area of the respective departments of the country.

enactments make express provision for such immunity. Thus, the Code (Act) of the Central African Republic provides that “in forests of the classified domain acquisitive prescription shall not obtain, whether as regards the ownership of the land or as regards uses there...” 1/.

Inalienability cannot be taken as an absolute rule defying time. Public domain status means that declassification procedures will have to be resorted to. It should be possible to overcome the need were it to arise; and indeed the enactments empower the legislator in very general terms to alienate property otherwise protected in this way 2/.

Here one touches on a problem that is common to all property for which the laws provide a highly protective regime. Admittedly such a regime cannot be conceived of as being applicable indefinitely, apart from the fact that it is desirable to protect oneself in advance against hastily deliberated exclusions. The solution usually adopted, as in the case of domain forests is to vest in some high authority - head of state, parliament, government - the necessary powers to waive the protection regime. Of course, this does not necessarily offer the best possible guarantees. The decisions of a Head of State are not necessarily better thought out than those of a Minister. A legislative assembly is not perforce independent of a Government or wiser than it in its counsels. In reality, it is elsewhere - in the procedure - that it is possible to make advance provision against over-hasty decisions by the public authorities. Procedures, here, must call for consultation, for public hearings, for publicity, for a lapse of time before a decision may take effect, whereby persons aggrieved by such a decision may state their case and enlighten the relevant authorities. When State forests are being alienated, the matter

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1/ Act No. 61/275 of 5 February 1962, section 2.

2/ As in the united Kingdom, where National Trsust property is declared inalienable. In France, the rule is laid down in the State Domain Code, article L 131.1; and, in Central Africa, by the Forest Code, article 6.

giving most concern - from the forestry standpoint at the very least - is that clearing will follow. It is reasonable therefore to require that the rules governing forest clearing shall be observed and that clearing be authorized as a condition, under law, for any alienation, if the alienation is to be followed by clearing.

2 - The size of State forests

Provided State ownership of land - land conceived as a means of production - is not a matter of ideology, then the actual extent of domain forests is quite a relative consideration. It is meaningful only in relation to such considerations as the size of the forest services or the acreage that can be put down to stands without jeopardizing agriculture and the population's food supply or, again, to the need for having certain lines of timber production in public hands.

Schematically, two types of situations will be considered here, namely those where the State holds a very limited acreage and, at the opposite extreme, where that acreage is a large one.

State forests will be too small in the aggregate if the total surface area is insufficient to meet the needs that the State is expected to supply. If such a situation is not a consequence of an ever-diminishing acreage remaining after more and more land has been brought under the plough, it may be possible to remedy it by a policy of land purchasing or even renting. Otherwise - if there is little or no land left or, again, if food needs are not met - the State must resort to land unfit for crop growing and afforest this or, yet again, to tree planting along roads or at public works sites where this is technically possible. Rwanda provides an example of this sort of situation - brought about in its case by population pressure. There the forest services restock land areas that are so poor in quality as to be incapable of bearing crops or even pasturage. Also, a 20 metre-wide strip is reserved on either side of highways for “wayside plantations” 1/.

1/ 1983 Draft Forest Code, articles 31 and 33.

On the other hand, domain forests may sometimes be very extensive - and be excessive in relation to the need for farmland, which would justify a policy for their reduction and for clearings. Such a policy was followed by the sovereigns in Europe in Carolingian times and, nearer our own time, taken up by countries in South-East Asia, among them the States of the Federation of Malaysia. The latter have built up their economic development on the conversion of land under the primary forests which at the beginning of the XXth century covered their territory almost entirely, over to food and industrial (oil palm, hevea) crops. In legal terms, the process is reflected in the granting of written titles of ownership, and in a progressive diminution of the domain forest. Local community interests have retained a customary way of life of the forest dweller, while the interests of the forest itself have been taken care of in the demarcation of “permanent forest reserves” or “customary lands” which, theoretically, may not be cut over. This policy has yielded brilliant results, though its implementation leaves something to be desired from the forestry standpoint. As regards the shortcomings, in the first place, these forest reserves have not been established with sufficient juridical backing to ensure their maintenance in being in the event of conflict with agricultural development projects, which have led to the declassification of the reserves, to the detriment of the wood-using industries established nearby. Next, the pace of forest clearings has in some cases outstripped the possibility of bringing the land under the plough, entailing, on the one hand, an excessive waste of timber resources and, on the other, the degradation of the soil thus exposed, defenceless, to the forces of erosion. The Malaysian experience has served to bring out the advantages of a thoroughly conceived planning of the conversion of forest land, taking into account all factors involved. To be sure, the regions of the world where forest conversions of this kind are desirable, or possible, are diminishing in number. As things stand at this juncture of the twentieth century, the problem is rather one of reconstituting forests and of inadequate forest services. This is true of several tropical countries where the State possesses vast tracts of land where economic and ecological needs are pressing but the forest services have neither the budget nor the manpower to deal with them. Faced with a problem of this kind, the State will understandably be induced to recruit

auxiliary staff to provide a prolongation of the work of the forest services; and that is what Governments did when it was a question of exploiting forest resources - created by nature itself - by granting concessions or felling licences. But the difficulty of finding partners is far greater when the intention is to associate these in fully-fledged forestry. One solution is to transfer State ownership to local authorities so that these can set up community afforestation schemes (though experience here has not always been encouraging). The other possibility is to make land available to private persons on condition that they plant forests there.

Forest legislation will be all the better for being as comprehensive as possible in regulating the latter type of concession. Provision can be made to the effect that a contract may be entered into with a private person, a company properly formed under the appropriate law, or under procedures contemplated by that legislation itself. This last point is essential if it is the intention to elicit interest in forestry among the rural people who lack the means to have a properly functioning board of directors that is otherwise prescribed under company law. One could go even further and suggest that a member of the forest services be made responsible for assisting a team of farmers with the management of a forestry unit entrusted to their care. This official would be required in such cases to keep the documentary material necessary for the proper functioning of the team - such as the names of the members and the schedule of tasks needing to be performed.

It is equally necessary to determine the tasks incumbent on persons in partnership with the State. In the case of a concession granted to a company or to an individual offering sufficient technical guarantees, the overall management could be placed in the hands of the concession holder on condition that a management plan approved by the forest authorities is complied with. In other cases, decisions made as to the tasks to be performed will be better suited to the capacities of the persons concerned if they are taken at the time of signing the contract or forming a team of forest auxiliaries. If nothing better is possible, then these auxiliaries

could be asked simply to provide warden services - a formula offering no mean advantage in certain regions.

Finally, it should be clear that in exchange for their services concessionaires or other collaborators will have the right to dispose of products legitimately harvested. It is here, of course, that the major limit to this sort of organization is encountered. For it is in satisfying fuelwood demand that the need for reforestation is most acutely felt. Firewood, however, is not the most remunerative product for the forester even if he can command a high price for it on the market. There is thus a lack of incentive for farmers whom it is hoped to attract to forestry. Again, when it is a question of restocking, the income from fellings or shares in the products will inevitably often be deferred until the trees mature. Even with rapid-growth species it is difficult to persuade farmers to give up time and effort to trees from which they will be reaping profit only at some later date - supposing they trust the administrative authorities. Accordingly, the choice of land areas for installing a forest is not an unlimited one. These areas must be reasonably near the farmer's home or his fields and they must already have on them a sufficient number of mature trees for him to obtain an immediate harvest while new plantings are growing.

The Republic of Korea has achieved brilliant results by placing the management of its domain forests in the hands of village forest associations. In order the better to ensure the success of the experiment it has developed an ideological programme – “Saemaul Undong” - inculcating the need to work at reforestation as a means of improving the lot of each individual and of the nation as a whole 1/.

1/ Cf Korean Country Report to the VIIIth World Forestry Congress, Jakarta 1978, and Forest Law 1980, section 74.

SECTION II - COMMUNAL FORESTS

Communal, or municipally owned, forests have widely differing origins. In Europe they stem mostly from seignorial concessions made in mediaeval times as a countervailing right for the renunciation of those rights which the inhabitants had over the lord's land. Some such forests will have even more ancient beginnings, with titles going back directly to the tribal forests common among the Germanic and Celtic peoples. Others will be traditional institutions; others, again, will have been constituted in the present century in terms under which State land is transferred to them. Some communal forests belong to the community as a body corporate; some are the undivided property of the communalty of the inhabitants. Apart from all this diversity, one fact stands out, namely the general tendency everywhere in the world to maintain communal forests in being or to create fresh ones - a tendency, however, not observable in the case of other instances of local government. Equally significant are the purposes assigned to these communal forests, these being to provide produce and other benefits in kind for the local inhabitants or, again, revenue for financing communal facilities. In all cases, the communal forest is seen as a supplementary resource necessary for the livelihood of the rural community. There is a universal character attaching to the communal forest, even if certain enactments completely ignore this fact or treat the forest simply as property coming under private law. Communal forests give rise to specific juridical problems, which can be considered under the headings of their perennial character, management and purpose.

1 - The continued existence of communal forests

Communal forests are naturally more exposed than are State forests to ill-considered clearings and transfers of ownership. Where they are deemed to belong to the generality of the inhabitants, there is the additional danger of those inhabitants dividing up the communal property among themselves; and in the dividing up process it is quite possible that the most influential among them will take the lion's share. In Pakistan, according to a World Bank report, the conversion of former Crown lands into

community land (shamlat), where in theory all members of the community could graze their animals, has in fact resulted in virtual privatization of the pasturage by the abutting owners 1/.

A similar development took place in France during the Revolution, when the inhabitants started dividing up their communal forests among themselves. This explains why, when the Forest Code was being drafted, in 1827, the concern was to embody in it the rule whereby ownership of communal wooded stands may at no time be divided up among the local inhabitants 2/. By the same token, clearings and conveyances require the prior approval of the State forest authority. Desirably, the approval so given should call for the same guarantees as those contemplated for forests belonging to private individuals. Generally speaking, the same considerations can be adduced as in the case of domain forests as a justification for stringent rules here. It will scarcely pass unnoticed that the situation itself offers some sort of guarantee - in that the representative of the State has tutelary responsibilities in cases where a commune decides to dispose of its forest. But the State itself may, in several instances, have a direct interest in any conveyance or clearing of a communal forest, as when the latter is expropriated for the purposes of building a road, for example. Guarantees that the communal forest will be maintained in being in perpetuity should take the form of requiring that for every clearing there must be a countervailing reforestation.

1/ Michael M. Cernea: Land tenure systems and social implications of forestry development programs. World Bank staff working paper No. 452, April 1981.

2/ Article L 141-3. The Royal Commissioner defended the principle before the Chambers in terms that merit reciting here. “Communal property”, he said, “belongs to the inhabitants of the communes and not to the present generation. Succeeding generations are succeeding usufructuaries of that property - a perpetual succession which must endure as long as the commune endures. Accordingly, no passing generation is entitled to change the nature of the title that it holds and set itself up, by its own authority, as owner” (cited in F. Meyer: Législation et politique forestière, Paris, Berger Levrault, 1968, p. 69).

2 - The management of communal forests

For as long as the communal forest retains the character of a production forest its management can be organized in conformity with three major models. Management can be unrestricted, rather as with private forests, though this does not preclude State control in the form of mandatory management plans or the requirement of felling licences (supposing these are contemplated for private forests). Such a model, in fact, can cover several different possibilities. The commune may manage its forest with its own resources in manpower or otherwise, but it may also contract the work out. In that case the problems observed with State forests reappear. Secondly, the management tasks can be taken over in their entirety by the State forest services, who will also take charge of selling the produce. In this instance, the commune will receive a rent from the State or the profits obtained from the working of the forest minus the operating costs duly vouched for by the forest services. Thirdly, the forest services can take over part of the management. It will then draw up the management plan and direct the personnel but it is still the commune that performs the actual tasks with the staff it has recruited for the purpose. The assistance of the forest services is now limited to providing technical direction.

Whenever provision is made in the laws of a country for the intervention of the forest services in communal forests, this does not mean that all such forests are affected. In Spain, for instance, ICONA is responsible for managing forests that have been “catalogued”. Similarly in France, the National Forests Office manages only those forests that have been placed under the forest regime, i.e. those suitable for management and having been formally placed under that regime. If one remembers that not all stands making up a commune's forest will necessarily be taken over by the State - with the somewhat “final” nature of such takings over - it will be seen as an exaggeration when some claim that State intervention is tantamount to dispossessing the communes of their forests. For the communes in any event retain certain powers. It is significant that in a country like France, that maintains a close watch over its communes, the latter have come round to

forming joint bodies for the management of such stands as they share. At commune level one meets with some of the difficulties encountered by private persons and associated with the fragmentation of forests. The solutions proposed are entirely comparable, and consist in the formation of intercommune associations or joint bodies, where one owner is a public authority other than a commune.

If a commune takes on the management, whether or not the entire management, of its forest, there is the obvious possibility that it may do the job badly and perhaps put the interests of the forest at risk. If it is intended to deal with situations of this kind, the forest services must be empowered to take over directly the management of communal forests, at least on a temporary basis.

3 - Purposes assigned to communal forests

The traditional purpose of the communal forest is that it should produce. When the production is sold, no major problems arise save that of preventing corruption or sales at insufficient prices. Where price lists are in use, then the commune can sell on the basis of these. Otherwise, the law may prescribe that sales shall be by auction, in which case it is important that all the conditions for auction shall be met. And if auctions are to be a genuine competition whereby the commune can obtain the best prices for its timber, there must first be a market for timber and a sufficient number of potential buyers, who must be notified of the sale by means of adequate publicity. But even when all these conditions are satisfied, one notes that sometimes buyers conspire to rig the outcome. The most commonly resorted-to expedient is to enquire into the state of the commune's finances. If the commune is urgently in need of money, the potential buyers may agree among themselves not to bid beyond a certain amount; and rather than have to wait for a fresh auction, the commune will be glad of a smaller amount of money than expected, but ready money. In any event, a degree of State control is called for in order to ensure that sales will be conducted according to the rules.

The sharing of forest products among the inhabitants, however, is a far more delicate matter. Problems will arise whenever it is necessary, first of all, to determine who qualifies as an inhabitant and, next, how much is to be attributed to each one. Is the sharing to be done by inhabitant or by household as with rights of estovers? And does inhabitant mean, here, whoever has shared in the upkeep of the communal forest or the person who resides permanently in that commune? Should a share be open to those born in the commune - the “local boys” who may nevertheless be working and residing elsewhere? And how long does one need to qualify as being resident?

There are some inhabitant's rights that are exercised directly without there having to be a prior determination of shares as with estovers. Such is the case with common or grazing rights and the right to gather minor products. Experience shows that village communities tend to affirm their rights vis-à-vis outsiders. But situations of the kind lend themselves to abuses by individuals. Where, with a communal forest, it is in everyone'e interest to place an overall limit on removals in order to maintain the highest sustained collective yield, each individual user will see it as being to his advantage to take more than his share, yet to the detriment of the community 1/. Behaviour of the kind is to be met with among sea fisherman no less than among mushroom gatherers or stockmen grazing their animals in the communal forest. This does not necessarily point to ownership by one person being better than communal owner, but rather to the need to control access by entitled persons to the resources held in common. The communes should in particular regulate livestock grazing in their forests and perhaps impose the services of one or more commune-employed herdsmen.

Communal forests can also be assigned to protection purposes. Three posibilities can be thought of here. First, the commune may decide of its

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1/ Cf. Henri Lepage: Pourquoi la propriété, Paris, Hachette, 1985, pp. 329 f

own accord as to the purpose. This is frequently to be seen in the case of forests in the vicinity of large towns in western countries. Secondly, the State can impose the various protection regimes on communal forests, conceivably providing for indemnities for any loss due to this cause. Lastly, the communes can enter into contract with higher-level authorities such as the Region or the State itself for the purpose of creating protection areas. The Swiss National Park of the Engadine, for example, has its legal basis in contracts of this kind. The arrangements cover not only the management procedures and the protection rules but also provide for compensation payable by the Confederation for the revenue and other advantages thus forgone by the communes (timber cutting, hunting fees, and the right of gathering wild products, etc.). Similarly France's regional nature parks are created under a contractual charter associating communes, departments, the Region and the State.

CONCLUDING REMARKS

In terms of our planet, the present period of history is characterized by the forest being very much in retreat. This explains the public outcry against the wholesale forest clearing that are going forward in certain countries, Brazil 1/ for example, and the quest for fresh solutions whether technical, such as cloning, or through the agency of legislation. The range of solutions proposed in the latter domain points to the need for a certain pragmatism. There is no form of ownership that does not imply some disadvantage or other for the forest; and it is not possible to make a hard and fast classification of those forms of ownership in terms of their amenability or otherwise to forest husbandry.

Nor does it appear desirable that one policy should be assigned a privileged position vis-à-vis any other. For a decade now, we have heard a lot about the forest at the service of rural development - as was once the case with the taungya system. In concrete terms, however, the results have been very unequal. If one may draw a conclusion from a comparison of laws and policies, it is that the countries' legal systems must be adapted to the widest possible choice of measures whereby the law may be adapted to all local potentialities. For the truth is that the essential element in any righting of wrongs eludes the law because it lies in the political will of the powers that be. Where the forest is concerned, that political will is all the more difficult to achieve the longer the period of time over which it will need to be exercised. Conceivably, governments may find a greater incentive and help in the developments going forward in international law.

It is striking how wildlife has benefitted from international instruments, as compared with our forests. Now, the forest, too, possesses an international dimension. It is not a matter of indifference to the international community if the volume of timber in supply worldwide is diminishing, or that the production of oxygen by forest stands should be reduced or that desert encroachment should be continuing apace.

1/ Forested areas are estimated to have diminished by 7 266 million ha, of which 1 480 million are accounted for by Brazil. Source: FAO: Forest Resources, op. cit.