

France

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Contents

1.	DOMESTIC FORESTS AND FORESTRY	183
1.1	Forest cover, type and tenure	183
1.2	The development of forest policy and the institutional framework of forestry in France	183
1.2.1	Legislation	183
1.2.2	Present-day administration	184
1.2.3	Producer associations	184
1.3	Public perceptions of forestry	184
2.	HISTORICAL INVOLVEMENT WITH TROPICAL FORESTRY	185
2.1	The French colonial empire	185
2.2	The colonial forest service	185
2.3	The colonial timber trade	186
2.4	Overseas Departments and Territories	186
3.	STRUCTURE OF DELIVERY OF DEVELOPMENT ASSISTANCE	186
3.1	Development assistance commitment	186
3.2	Organisation of the bilateral aid programme	186
3.2.1	<i>Secrétariat d'Etat chargé de la Coopération</i>	187
3.2.2	<i>Caisse française de développement</i>	187
3.2.3	<i>Fonds français pour l'environnement mondial</i>	187
3.3	Personnel	187
3.3.1	<i>Ministère de la Coopération</i>	187
3.3.2	Other Ministries	188
3.4	Aid delivery	188
3.4.1	The importance of research in aid delivery	188
3.5	Multilateral assistance	189
3.5.1	European Union	190
3.5.2	United Nations	190
3.5.3	World Bank	190
3.6	Non-governmental organisations (NGOs)	190
3.6.1	NGOs and debt reduction activities	190
3.7	Development companies/consultancies	190
3.8	Decentralised aid to local authorities	190
4.	DEVELOPMENT ASSISTANCE STRATEGY	191
4.1	Introduction	191
4.2	Research strategy	191
4.3	Tropical Forestry Strategy	191
4.3.1	Policy principles	191
4.3.2	Environmental studies and monitoring	192
4.3.3	Protected Areas, wildlife and biodiversity	192
4.4	International influences and French international activities in natural forest management	192
5.	REGIONAL AND THEMATIC DISTRIBUTION OF FORESTRY SECTOR FUNDING	193
5.1	The environmental sector	193
5.1.1	Forestry	193
5.1.2	Wildlife management	193
5.2	Research in the service of development	194
5.3	NGO funding	194
5.4	Local authority development activities (<i>coopération décentralisée</i>)	194
6.	STRATEGY ON RESEARCH AND TRAINING IN TROPICAL FORESTRY	195
6.1	Forestry research	195
6.1.1	<i>CIRAD-Forêt</i>	195
6.1.2	Forestry research in ORSTOM	196
6.1.3	Forestry research in the universities	196
6.1.4	The French Institute at Pondicherry	197
6.1.5	ECOFOR	197
6.2	Education and training – Universities and 'Ecoles d'ingénieurs'	197
6.2.1	Editorial background note	197
6.2.2	Forestry training in the ' <i>grandes écoles</i> '	197
6.2.3	Forestry training in the universities	197
6.2.4	Other courses	198
7.	PROJECT CYCLE MANAGEMENT	198

8.	PROJECT REVIEWS AND PROFILES	198
8.1	From 1960 to 1980: Focus on increased production	198
8.2	The 'Gestion des terroirs' approach	199
8.3	The 'Local Development' approach	200
8.4	Recent trends in project management	200
9.	CONCLUSIONS	200
	REFERENCES	200
	KEY CONTACTS	200
	ACRONYMS	200
	ACKNOWLEDGEMENTS	201

1. DOMESTIC FORESTS AND FORESTRY

1.1 Forest cover, type and tenure

There are two particularly notable features of forestry in present-day France: the large area of forest cover and the importance of small-scale private ownership.

Forest cover in metropolitan France has grown significantly in recent decades, from 6 million ha at the turn of the century to over 14 million ha today, and forests now represent 27% of the total land area.¹ While the rate of reforestation has slowed somewhat in the last few years, the total area of forest cover is still increasing by 25,000 ha per annum (this compares with a peak of 50,000 ha per annum earlier in the century). Today, over half a million people are reckoned to be dependent, in one way or another, on the forestry sector (*Ministère de l'Agriculture*, 1995).

The pattern of forest ownership, like agricultural land ownership in general, has been significantly influenced by the egalitarian ideology of the French Revolution. The principle of equal inheritance of all heirs was enshrined in the *Code Napoléon* of 1804 which still forms the basis of French civil law. One result of this has been a tendency to fragmentation of land holdings. Today, more than 70% of the total forest area is under private ownership, and 25% of this is in small ownerships (less than 4 ha).² Only 12% of forests are under state ownership, while 18% are owned by *collectivités publiques* (local government authorities³). The forests of France are notably diverse in species type; 89 tree species are found, 61% of them broadleaf, especially oak (*Quercus spp.*) and beech (*Fagus spp.*), with the remaining 39% conifers, particularly pine (*Pinus spp.*), fir (*Abies spp.*) and spruce (*Picea spp.*). Coppice woodlands still cover almost one half of the forest area. The fragmented nature of many of the forest holdings poses some difficulties for the operation of the processing industries, which tend to be concentrated near the ports, far from many small producers, and the economics of small-scale management in France are a subject of debate among forestry professionals.

France is the leading producer of hardwoods in Europe, while in production of conifers it is surpassed only by the Scandinavian countries and Germany. In addition to timber, France's forests provide a range of other products and services, including a number of important and distinctive non-timber products (various fruits and nuts; cork from the cork oak [*Quercus suber*]; mushrooms and truffles; etc). The French are renowned for their love of hunting; revenue from the issue of hunting permits for government forests alone brought in more than FF 170 m. in 1992 (Eurofor, 1994).

From the extent and diversity of its forests, over a

considerable historical period, flow a number of consequences. France possesses a long tradition of forest management and many of the tools of international forestry have been developed and tested there. The country can also claim an important place in international forestry education. The foundation of the British colonial forest service in India, for example, was laid with the training of 82 foresters at the *Ecole de Nancy* in the period 1867–75.

Though the similarities between peasant farming in France and in the developing world can be overplayed, the fact that much of the activity is in the hands of small-scale producers does influence the character of France's relations with its former colonies, and has contributed to the distinctive tradition of decentralised co-operation and exchange between *collectivités locales* in France and similar groupings in the former colonies (see section 3.8).

1.2 The development of forest policy and the institutional framework of forestry in France

1.2.1 Legislation

As the extent of recent reforestation suggests, the heavily wooded and diverse character of the modern French countryside is by no means an original condition. Legislation over a period of two centuries has exerted a significant influence over the development of the landscape. The primary aims of the various Acts have included the control of deforestation; reforestation; enhancement of soil, watershed and dune protection; control of fire risk (particularly in the dry Mediterranean zone); and increasingly of late, conservation of wildlife.

The first recorded forestry legislation in France was the Royal Forestry Regulation of 1219, to control wood-cutting on Crown lands. An embryonic forestry administration was created in 1291, with the appointment of roving inspectors, *Maîtres des Eaux et Forêts*. A true *administration des Eaux et Forêts* was founded as early as 1346, in the form of an autonomous forest authority. The first regulation of private forests dates from 1520, and throughout the sixteenth century there was a progressive increase in the power of the forestry administration to intervene in private forests, so as to guarantee fuelwood and timber supplies.

The structures of the modern forestry institutions were laid in the period 1820–7, with the reorganisation of the forestry administration in the aftermath of the Revolution, the issuing of a new Forestry Code (*Le code forestier*), and the creation of a forestry school at Nancy. The latter laid down the first principles of a French silvicultural system, based on established German methods as well as existing practice in France.

The period 1857–1914 was a time of great innovation in forestry. Roads were opened in the forested areas offering new management possibilities; an extensive planting programme was initiated; community use rights were restricted within the national forest estate; a number of new training schools were opened; and the first forestry research laboratories were created at the *Ecole de Nancy*. A law of 1882 on the protection of

1. This figure includes the 250,000 ha of poplars and the acreages of isolated copses and orchards which are counted as agricultural land for census purposes.
2. France is second only to Portugal, in European terms, in relation to the proportion of private ownership. Almost 75% of private owners in France live in rural *communes* with less than 5,000 inhabitants. (*Ministère de l'Agriculture*, 1995)
3. These include local authorities at the levels of *région*, *département* and *commune*.

forests in the mountains (*la Restauration des Terrains en Montagne, RTM*) sought to use forest conservation to ensure the protection and management of vulnerable areas, and there were significant plantings in the Alps, Pyrenees and elsewhere.

The inter-war years were marked by relative inactivity, although the law of 1922, *le Régime des Forêts de Protection*, introduced a powerful instrument of legal protection over the forest estate. The post-war years (1945-) have been characterised by an intensification of activity in terms of both legislative and administrative changes. The most recent major legislation is the law of 1985 concerning the management, development and protection of forests (*La Loi Relative à la Gestion, la Valorisation et la Protection de la Forêt Française*). The land law of 1985 also has implications for forests, particularly in relation to the co-management of forests and agricultural areas.

Management plans (*plans simples de gestion, PSG*) were introduced in 1963 as part of a series of important changes in forestry administration. Management plans are now required for all private forests greater than 25 ha. Possession of a PSG confers certain benefits on the owner, including the freedom to clear fell. PSGs are optional for blocks between 10 and 25 ha (though there are financial incentives to encourage their preparation even for such small areas). As of 1989, PSGs were in existence for 2.4 million ha of private forests (out of a potential area of 3.5 million ha), and a further 1 million ha was subject to other regulatory schemes.

1.2.2 Present-day administration

Legislation of 1963 introduced a new forest authority (*Sous-Direction de la Forêt*), which is nowadays a unit of the *Direction de l'Espace Rural et de la Forêt (DERF)* of the *Ministère de l'Agriculture et de la Pêche*. The Forest Authority is responsible for the development and application of policy; forest management and protection; marketing and promotion of wood; forest land-use planning and control of production; promotion of research, training and education; and supervision of forestry agencies such as the *Fonds Forestier National (FFN)* and *Centres Régionaux de la Propriété Forestière – CRPF* (see below). The Authority is also responsible for a variety of grant payments to producers, through the *Service Régional de la Forêt et du Bois (SERFOB)*. The 1963 law also led to the creation of a Forestry Commission, the *Office National des Forêts, ONF* (whose functions are considered further in section 3.4.1), and the setting up of a forestry extension service based in the 17 *CRPF*. These provide extension advice on a range of issues including the preparation of management plans. In some areas extension services are also provided through the *Chambres d'agriculture (Ministère de l'Agriculture, 1995; Eurofor, 1994)*

The *Fonds Forestier National (FFN)* was established in 1946 with the aim of reducing the country's dependence on imported coniferous pulp through the promotion of the indigenous production and marketing industry.⁴ The *FFN* offers a number of different types of loans, as well as grants in cash and kind, to promote afforestation and reforestation, in return for adherence

to the fairly stringent technical standards laid down by the *ONF*. Most of the planting and restocking in France since 1946 has been financed by the *FFN*, the total planted to date being c. 2,500,000 ha (*Ministère de l'Agriculture, 1995; Eurofor, 1994:1295*).

There are seven national parks in France, covering an area of 150,000 ha. In addition, there are 25 nature reserves (*réserves naturelles*) with an area of 43,000 ha, 56 *forêts de protection* (62,000 ha) and 122 *réserves biologiques* (25,000 ha).⁵ In all, about 2% of the national territory now has protected area status.

1.2.3 Producer associations

Small producers are grouped into producer associations (*Syndicats de propriétaires forestiers sylviculteurs*). There are 76 associations spread throughout the various *départements*, and these are grouped into a national federation of private forest owners (*la Fédération des syndicats de propriétaires forestiers sylviculteurs*). Both of these act to promote and protect the collective interests of their members to whom they also provide technical and financial support (Eurofor, 1994).

Among producer associations, *groupements* are an important and distinctive feature of French forest management. There are two types of *groupement*. The first is the *groupement forestier*, a legal entity usually formed by a group of close family members, which offers certain tax advantages but involves the surrender of individual ownership. The second (formerly known as *groupement de gestion* though this term now subsumes all types of *groupements*) is a form of co-operative in which individual ownership is retained, and whose members co-operate on fairly restricted commercial and related grounds (group purchasing and marketing, etc.). A total of 720,000 ha is currently under the former type of ownership, with 3,600 *groupements*, while 600,000 ha is under the latter type, involving 5,000 individual owners.

1.3 Public perceptions of forestry

It is tempting to see the limited pressure on natural resources within the national territory as a cause of the relative weakness of the French environmental lobby. Certainly, the 'Green Movement' in France is less strong than that in, say, Germany or the Netherlands. However, environmental concerns are locally important in many areas – and growing everywhere (as witnessed, for example, by the ban in some *départements* on planting poplar trees in the interests of biodiversity). Tensions between the interests of biodiversity conservation and production are sometimes marked. The extent of forest fires, particularly in the Mediterranean coastal zone, is a cause of widespread public concern.

France has played a leading role in a number of important international forest and environmental conferences, including the convening, under the auspices of President Mitterand, of the 1986 Silva Conference on temperate forest conservation and the conservation and management of the ecosystems of the Sahel, and the 1990 Strasbourg Conference on the preservation of European forests.

4. The *FFN* is financed from a special Treasury fund, independent of the government's normal budgetary processes.

5. This figure includes both metropolitan France and the overseas territories.

2. HISTORICAL INVOLVEMENT WITH TROPICAL FORESTRY⁶

2.1 The French colonial empire

France's colonial empire was largely established in the second half of the nineteenth and the early years of the twentieth centuries, and included territories in Africa, South America, South-East Asia and the Pacific. The West and Central African colonies were established in the period 1895–1922;⁷ the colonies in South-east Asia between 1863–1886;⁸ the Maghreb, 1830–1909;⁹ the colonies in the Pacific, 1843–82.¹⁰ Most of the possessions achieved independence in the period 1956–62, although a few remain linked to France, either as full overseas departments, of equal rank with metropolitan *départements* (such as Guadeloupe, Martinique, Réunion, and Guyane), or as overseas dependent territories (New Caledonia, French Polynesia).

This vast colonial empire included a wide variety of biomes, from tropical rain forest to tropical drylands and deserts.

2.2 The colonial forest service

A colonial forest service was only slowly established, hindered in the early years by the civil administration's desire to achieve rapid economic development of the colonies (Guillard, 1987). The first attempts to set up a forest administration were in Martinique (1853), Réunion (1872), Cochin China and Indo-China (1862–6) and Madagascar (established in 1896 though not effective till 1905). The impetus to these innovations was provided by the twin pressures of the development of tropical timber production in the colonies and the deleterious effects on forests of land conversion to agriculture (it is estimated that in Madagascar alone, 1,300,000 ha of forest were destroyed in the period 1890–1912), largely through land conversion in the small farm sector.

The 1920s saw the publication of numerous forestry regulations for the colonies. In 1923, the first decree governing the organisation and management of the colonial *Service des Eaux et Forêts* was issued.¹¹ A number of other decrees and ordinances were issued in the period 1923–9, which led to the gradual establish-

ment of a full corps of colonial officers of the *Service des Eaux et Forêts*.

The mandate of the colonial forestry service was broad: establishment of a colonial forest estate; drawing up a forest inventory; studies of tropical timbers; protection of forests and control of shifting cultivation, burning and soil degradation (a particular problem in the groundnut basin of Senegal, where export crop production expanded rapidly); desertification; silvicultural management. The staff and means to implement these aims were remarkably limited: the best organised of all the colonial forestry departments, Indo-China, had only one conservator and 27 inspectors/sub-inspectors for an area of 30 million ha, 21 million of which were state forests. In 1912, Madagascar possessed only one forest agent and three local guards; by 1931, it had 6 officers, 26 junior officials and 39 locally-recruited staff, whose brief was to manage 9 million ha of forest and undertake a sizeable programme of reforestation. Nevertheless, the achievements were often impressive. In Côte d'Ivoire between 1926 and 1930, two, sometimes three, officers managed to survey two-thirds of the area of dense forest (12 million ha); create 50,000 ha of protected areas, 72,000 ha of botanical reserves and 15,000 ha of enrichment zones; manage 8,000 ha earmarked for production of fuel for the railways; create a forest research station; establish a programme to control forest fires; and initiate a legislative programme which was later to become the 1935 Forest Law for the whole of French West Africa.

A series of legislative measures was introduced in the 1940s in relation to the management of the *Service des Eaux et Forêts* of the colonies. This culminated, in 1950, in a number of decrees which redefined the administration of the service and the deployment of its personnel. The mandate of the Colonial Service was to manage the state forests and all other forms of public and customary forests. The *Service des Eaux et Forêts d'Outre-mer* was headed by an *Ingénieur général* under the authority of the *Direction générale de l'Agriculture, de l'Élevage et des Eaux et Forêts* of the *Ministère de la France d'Outre-mer*. There were federal services in each of the three major territories (West Africa, Equatorial Africa, and Indo-China) under an *Inspecteur général* or *conservateur*, and a local service in each territory under a *conservateur*.

In the early years, recruitment to the colonial service was restricted to graduates of the *Ecole de Nancy*, though in-country training was later introduced for locally employed staff. Commencing in 1940, there was a substantial increase in the proportion of colonial forest officers graduating from Nancy, relative to officers of the metropolitan service. While, in the period 1925–33, only 47 of the 279 graduates of Nancy were colonial officers (17%), the proportion had grown to 92 out of 179 (51%) by 1945–54. As decolonisation took effect, however, the proportion declined substantially; in the period 1955–64, only 13 graduates out of 165 (8%) were destined for the colonial service.

As of 1955, the *Corps des officiers-ingénieurs des Eaux et Forêts d'Outre-mer* comprised about 200 officers, 114 of whom were in field postings outside of the colonial capitals. 24 were posted in Madagascar, 13 in Gabon, 10 in Côte d'Ivoire, with smaller numbers elsewhere. Silvicultural research was undertaken at

6. This section draws heavily on Guillard, 1987.

7. Senegal, where there had been French settlements since the 17th century, came under a French Governor from 1854 and became part of French West Africa in 1895 along with Mali and Upper Volta (Burkina Faso). They were joined by Ivory Coast and Niger in 1904. Congo (Brazzaville) and Gabon came under French administration in 1889, and became colonies of French Equatorial Africa in 1910. Chad joined in 1913. Cameroon was divided between the British and the French in 1922.

8. Cambodia became a French colony in 1863, Cochin China (the southern tip of present-day Vietnam) in 1867, and Vietnam in 1884–6.

9. Algeria was progressively brought under French dominion in the period 1830–1909, and Tunisia in 1888. Morocco was divided into French and Spanish Protectorates in 1912.

10. Tahiti came under French control in 1843 and, with neighbouring islands, became a colony in 1880–2. New Caledonia came under the French flag in 1853.

11. Indo-China was excluded from this decree.

various locations in savanna and humid forests, and significant investments were made in a number of areas, including reforestation, wildlife management, regulation of hunting and soil conservation.

2.3 The colonial timber trade

A sizeable timber industry was established in the colonial period. Exports of logs from the colonies grew rapidly: in 1927, French West Africa (mainly Côte d'Ivoire) exported 118,000 tonnes, Cameroon 51,000 tonnes, Gabon and Congo, 324,000 tonnes – collectively, more than half of the export value of both French West and Equatorial Africa. Even today, the former African colonies still export upwards of 3.7 million m³ of logs, 1 million m³ of sawnwood, and over 200,000 m³ of plywood and veneer¹² (1995 figures, *pub.ITTO*, 1996).

2.4 Overseas Departments and Territories

One aspect of France's colonial inheritance is that it now possesses a sizeable tropical forest estate of about 8.8 million ha in its overseas departments and territories. Most of this is in Guyane (8.3 million ha), with small areas on Réunion (87,700 ha), Guadeloupe (66,400 ha) and Martinique (46,500 ha). There is also significant forest cover in the overseas territory of New Caledonia (372,000 ha of moist forest, 393,000 ha of mixed forest and scrub, and 20,700 ha of mangrove). The situation in Guyane is dealt with further in the chapter concerning DGs V, VI and XVI.

3. STRUCTURE OF DELIVERY OF DEVELOPMENT ASSISTANCE

3.1 Development assistance commitment

France is one of the leading donor nations in terms of aid commitments, third in order of aid volume (US \$7.95 billion in 1993) and sixth as a percentage of GNP (0.63% in 1993). Over half of its bilateral aid is targeted on low-income countries, mostly in sub-Saharan Africa. Half the bilateral aid is tied to procurement from France (DAC, 1994; Naudet, 1997).

3.2 Organisation of the bilateral aid programme

The French system of aid delivery is unusual for its complexity. At least eight ministries and a central government executive agency are involved in bilateral co-operation on a significant scale. Aid recipients have differential access to financial and technical assistance according to a well-established structure of country priorities.

There are three major categories of aid recipient (OECD, 1994):

- (i) 37 'pays du champ' (this is sometimes translated as 'concentration countries' or 'sphere countries') which are associated with France through formal agreements of co-operation. Fourteen of these belong to the franc zone, all of them in sub-

Saharan Africa. Membership of the franc zone gives access to a common currency on a fixed parity with the French franc, which is in theory (though increasingly less frequently in practice) freely convertible between the member states. The other major members of the group are Franco-phone countries in Africa and the Caribbean, though other countries (for example, Mozambique and Namibia) have recently also joined. Guinea-Bissau is in process of joining the franc zone (*Acte d'adhésion* of 18 April, 1997, signed in Cotonou), bringing the total number of states in the zone to 16. The 'pays du champ' accounted for almost half of all French overseas assistance in 1991–2.

- (ii) The three overseas territories in the Pacific and the island group of Mayotte in the Comores, which together account for 14% of official development assistance (oda) (1991/2). French Polynesia and New Caledonia receive 90% of the aid going to this group.
- (iii) About 100 other countries ('other developing countries') which together account for the remaining development assistance. In this grouping, the major recipients are the three Maghreb countries (Morocco, Tunisia and Algeria), with which France has close historical and geographical ties, and Egypt; together these four account for 40% of aid to the 'other developing countries'. Other important recipients of aid within this group include Indonesia, China, Thailand, Ecuador, India and Mexico.

The delivery of French bilateral aid is differentiated by the status of the receiving country largely in terms of the above categorisation.¹³ The *Secrétariat d'Etat chargé de la Coopération* (the former *Ministère de la Coopération*) is responsible for financial and technical co-operation with the 'pays du champ', except for balance-of-payments aid, which is handled by the Treasury Department of the *Ministère de l'Economie, Finance et de l'Industrie*. The latter also handles financial aid to the 'other developing countries'. Technical co-operation with the 'other developing countries' is handled by the Directorate-General for Cultural, Scientific and Technical Relations (DGRCST) of the Ministry of Foreign Affairs (*Ministère des Affaires Etrangères*). The *Secrétariat d'Etat Chargé de l'Outre-mer* (formerly *Ministère des Territoires et Départements d'Outre-Mer*) covers aid to the Overseas Departments and Territories. Other Ministries are responsible for bilateral technical co-operation programmes in various partner countries and territories; these include the Ministries of Health, Education, Agriculture, Social Affairs, Youth and Sports, Scientific Research, and (until its recent incorporation into *Economie et Finance*) Industry (Naudet, 1997).¹⁴

13. This outline takes account of the reorganisation of the government announced by the incoming Prime Minister, Lionel Jospin, on 4 June 1997.

14. It should be noted that despite the various changes in government structure which have taken place in recent decades (witness the reorganisation of June, 1997), the relationships between France and the *pays du champ* have been characterised by a remarkable degree of continuity, by the standards of international aid, and there has been a significant and steady concentration of bilateral aid to the benefit of this grouping.

12. Of these quantities, the volumes sold to metropolitan France are: 730,000 m³ of logs, 100,000 m³ of sawnwood, and over 20,000 m³ of plywood and veneer (1995 figures, *pub.ITTO*, 1996). In the case of *Okoumé*, 1m³ is equivalent to 0.6 tonnes.

3.2.1 *Secrétariat d'Etat chargé de la Coopération*

The Ministry of Co-operation administers the *Fonds d'aide et de coopération (FAC)*, which covers economic and social infrastructure projects. The Ministry is represented in the 'pays du champ' by cultural and technical co-operation missions (*Missions de Coopération*). The development priorities of the Ministry are broad: rural development, the environment, major infrastructure, health, education, military co-operation, telecommunications and culture are all eligible for its aid. In the field of rural development, natural resource management – including forest resources – has come to occupy an increasingly important position. The total aid budget of the Ministry of Co-operation is currently about FF 6.7 billion per annum (c. US \$1 billion). FF 1.4 billion of this comes from the FAC.

3.2.2 *Caisse française de développement*

The French Development Fund – *La Caisse française de développement, CFD* (formerly *Caisse centrale de coopération économique, CCCE*) – is a public executive agency under the authority of the Prime Minister and Minister of Economy, Finance and Industry. In the past, the division of responsibilities between the CFD and the Ministry of Co-operation depended on the status of the transfer in question – the former handling loans and the latter grants. Since 1990, the division has been more sectorally based, the CFD handling the productive sectors, while the Ministry handles the social sectors. The CFD, like the Ministry of Co-operation, provides development aid to the 'pays du champ'; its brief covers finance and technical assistance for production projects, structural adjustment programmes, senior staff training, etc. The CFD has overseas representation in 40 partner countries, as well as in the overseas departments and territories.

The CFD has a number of subsidiaries, including the *Société de Promotion et de Participation pour la Coopération (P.RO.PAR.CO)* and the *Centre d'Etudes Financières et Bancaires (CEFEB)*; the various subsidiaries are collectively known as 'groupe CFB'. P.RO.-PAR.CO is an agency dealing with the promotion of private enterprise and the privatisation of public enterprises. It works in 91 countries and territories in Africa, Asia, the Caribbean and the Pacific. CEFEB offers training programmes and seminars of varying duration in the fields of banking and finance.

The CFD manages a fund of about FF 15 billion, 73% of which is invested in projects, the remainder being programme aid. Only a small proportion of this goes to forestry aid. Less than 0.6% is formally designed as 'forestry', although, when projects in which forestry is a subcomponent are also taken into consideration (such as natural resource management and craft and industry projects with forestry components), the total investment rises to about 1.5% (1991–5).

3.2.3 *Fonds français pour l'environnement mondial*

The French Fund for the Global Environment (*Fonds français pour l'environnement mondial, 'FFEM'*) was established in 1994, and reflects France's interest in

global environmental protection policy, in line with the conclusions of the 1992 UNCED Conference. Though managed bilaterally, it parallels in many ways the Global Environmental Facility of UNDP/World Bank, and intervenes in rather similar areas. The operations of the FFEM are supervised by an interministerial steering committee. The fund is considered further in sections 4.3 and 4.4.

An organogram of the main bilateral agencies is provided in Figure 1.

3.3 *Personnel*

3.3.1 *Ministère de la Coopération*

The Ministry of Co-operation is the most important organisation involved with development aid, in terms of both financial means and numbers of personnel. The Ministry comprises two *directions* and one *service*:¹⁵

- the *Direction du développement* with four *sous-directions* (see Organogram);
- the *Direction de l'administration générale*, with several *sous-directions* (personnel, budget, IT, etc.);
- the *Service de coordination géographique et des études*, in which is located the *Mission des Etudes, des Evaluations et de la Prospective (MEEP)* which is responsible for project monitoring and evaluation.

Forestry projects are monitored by the *Bureau des ressources naturelles et de l'environnement (DEV/ERN)* of the *Sous-direction du développement économique et de l'environnement (DEV/E)*, staffed by a bureau chief and five *chargés de missions*, deployed as follows:

- one *chargé de missions* for forests (institutional support and policies, forestry management, forestry sector development, wood industries);
- one *chargé de missions* for biodiversity and protected areas;
- three *chargés de missions* dealing with fisheries, mining, and water resources

Within the *Sous-direction du développement institutionnel (DEV/I)*, two sections are able to finance projects in the forestry sector:

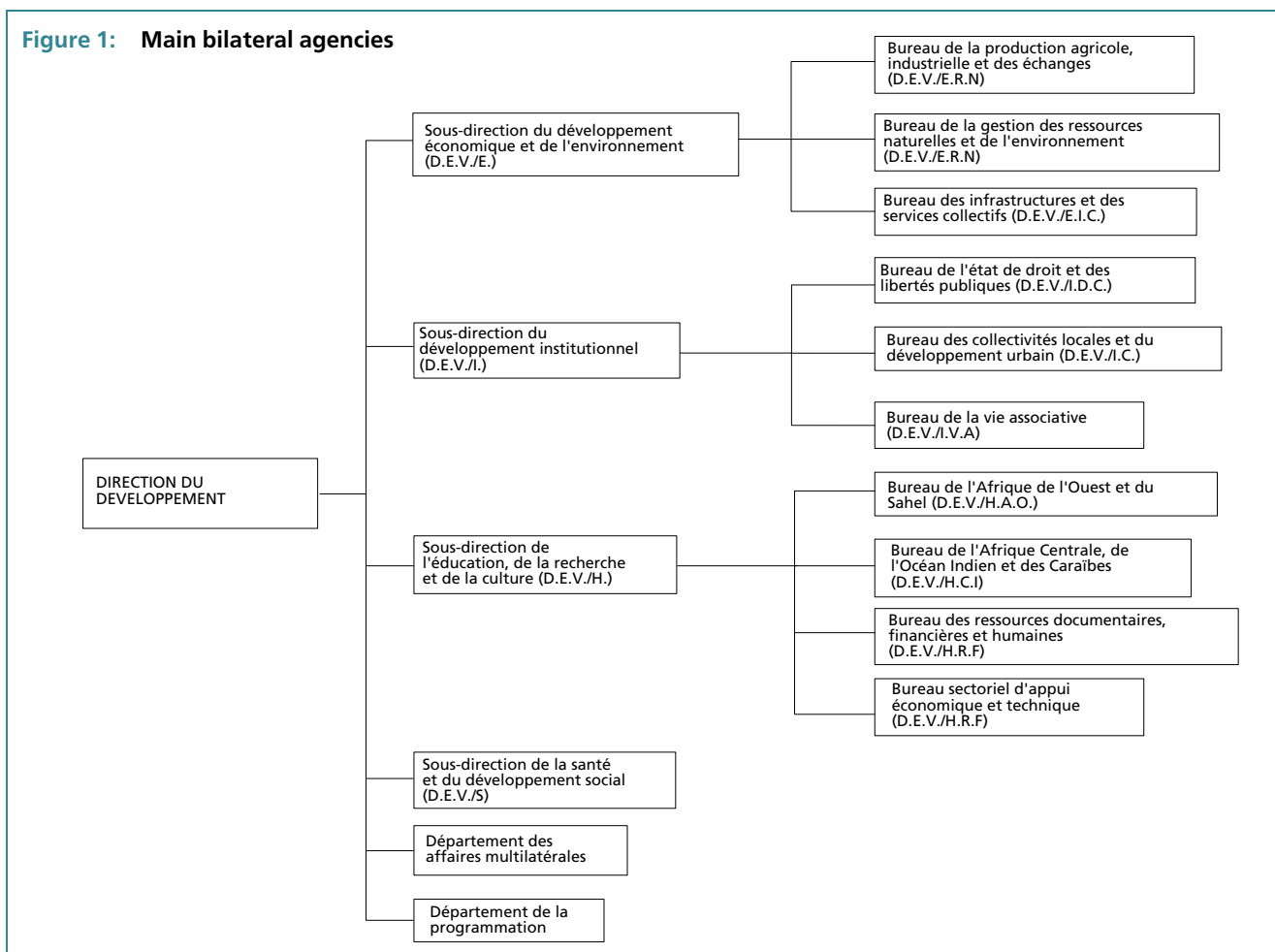
- the *Bureau des collectivités locales (DEV/ICL)* which provides support for the policy of decentralised co-operation (see sections 3.8 and 5.2); and
- the *Bureau de la vie associative* which finances projects in the NGO sector (see sections 3.6 and 5.3).

The *Sous-direction de l'éducation, de la recherche et de la culture (DEV/H)* finances forestry sector training, particularly the project 'CRESA forêt-bois in Cameroon (see section 5.1.1 footnote 18). It also has a supervisory role in relation to technical assistants working in forestry training institutions (Yamoussoukro in Côte d'Ivoire and Dschang in Cameroon), and has responsibility for the CAMPUS university exchange programme (see section 5.2).

140 advisory staff (5 of them forestry specialists), at the level of *diplômé* of an *école d'ingénieurs* or university, are currently (1997) employed by the

15. A 'service' is a division of a 'direction'; each *direction* is likely to comprise several *services*.

Figure 1: Main bilateral agencies



Ministry, at the *Direction du développement* in Paris and in the following *sous-directions*:

- Direction (DEV) 8
- Sous-direction DEV/E 30
- Sous-direction DEV/I 34
- Sous-direction DEV/H 45
- Sous-direction DEV/S 23

There are currently 500 *assistants techniques directs*, ATD, (of whom 80 are *coopérants du service national*, CSN) working in the *pays du champs*, in fields covered by the *Sous-direction du Développement Economique et de l'Environnement*.¹⁶ 26 of these (5 of them CSN) are managed by the *Chargé de mission des forêts* of the *Bureau de la Gestion des Ressources Naturelles et de l'Environnement*.

3.3.2 Other Ministries

Several *directions* within the Ministry of Agriculture are concerned with international co-operation:

- in the *Direction de l'Espace Rural et de la Forêt*, there is a *Chargé de Mission* dealing with international affairs, who represents France on the Intergovernmental Panel on Forests of the UN Commission on Sustainable Development;
- in the *Direction de la Production et des Echanges*, there are several geographical desks within the *Service des Relations Internationales* (Africa, Asia, etc.).

In the Ministry of the Environment, there is a *Service des Relations Internationales* responsible for policy matters and monitoring of development projects.

3.4 Aid delivery

French aid is delivered through a variety of partner agencies. These include:

- French development research institutes such as the *Centre de Coopération Internationale en Recherche Agronomique pour le Développement* (CIRAD) and the *Institut Français de Recherche Scientifique pour le Développement en Coopération* (ORSTOM), as well as the *Centre National de Recherche Scientifique*, CNRS), the Museum of Natural History and the universities;
- French NGOs, some of which have sound development credentials and provide potential partners for co-operation activities. One limitation of this grouping is its heavy Sahelian bias and relative lack of interest in the humid tropics;
- French commercial firms, both manufacturers (eg. Vergnet, which supplies wind and solar pumps) and consultants (see section 3.7), as well as public agencies with environmental interests (agencies concerned with satellite monitoring are particularly strong in France; one example is CNES).

3.4.1 The importance of research in aid delivery

Natural resource research figures very prominently in the aid profile, and two specialist agencies, CIRAD and

16. This number does not include French experts working in projects funded by France and international agencies.

ORSTOM, receive the bulk of resources devoted to this theme. CIRAD focuses mainly on applied development research, particularly in relation to natural resource management, while ORSTOM is more oriented to basic scientific research. More recently, the *L'Office National des Forêts (ONF)* has begun to develop a competence in tropical forestry research.

CIRAD was set up in 1984, as the result of a merger of eight research institutes specialising in sectoral research. In addition to the forest sector, for which the agency had hitherto been the CTFT (*Centre Technique Forestier Tropical* – see Box 1), other focal areas included cotton, food crops, livestock, oil crops, textiles, horticultural beverage crops, rubber, and machinery. CIRAD, with its head office in Montpellier, co-operates with 90 countries and has researchers on long-term postings in some 50 of these. It employs 1,800 people (50% of them scientists) deployed in its seven departments, as shown in Table 1.

CIRAD has a budget of around FF 1 billion, 60% from the Ministry of Research and 40% from contracts with public and private sector agencies. CIRAD also takes part in training young French and foreign scientists. In 1995, it helped to train 808 researchers, including 411 nationals from countries of the South.

The activities of CIRAD-Forêt are considered further in section 6.1.1.

ORSTOM, which was set up in 1946 as the *Office de la Recherche Scientifique et Technique Outre-Mer*, became the French Scientific Research Institute for Development in Co-operation (*Institut Français de Recherche Scientifique pour le Développement en Coopération*) in 1980, while retaining the internationally known acronym ORSTOM.

In 1995, it had a budget of FF 1.14 billion (including FF 1.078 billion from the Ministry of Research). Its staff were deployed as shown in Table 2.

ORSTOM is organised into departments (earth, ocean and atmosphere; continental waters; health; societies, urbanisation and policy; agricultural environments and activities). The department for agricultural environments and activities (*Milieux et activités agricoles, MEA*) has the largest number of researchers. Among its activities are studies of the problems of erosion, agrarian systems (natural resource management by rural societies) and wildlife (birds and ungulates), all topics which affect the forest sector. About 20 researchers are involved in this work. ORSTOM has 32 centres and missions, including 5 in metropolitan France (Montpellier, Bondy, Brest, Orléans and Paris) and 5 in the Overseas Departments and Territories (Guyane, Réunion, Martinique, New Caledonia and French Polynesia).

ORSTOM's activities in the forestry sector are considered further in section 6.1.2.

Office National des Forêts. ONF is responsible for managing all forests in France subject to the *régime forestier* (ie. state and local authority forests – 30% of the total forested area). The heir to a national administration with several centuries of experience of forest management, ONF has a multiple mandate in the management and development of the forests for which it is responsible: sustained timber production, maintenance of biodiversity, and public access. ONF works primarily in the national territory (including Overseas Departments such as Guyane), though more recently, it

Table 1: Distribution of staff by department – CIRAD

	No of staff
Annual crops (CIRAD-CA)	470
Perennial crops (CIRAD-CP)	301
Livestock and veterinary medicine (CIRAD-EMVT)	167
Forestry (CIRAD-Forêt)	179
Farm production and rural systems (CIRAD-SAR)	125
Fruit and horticultural production (CIRAD-FLHOR)	246
Joint laboratories, documentation and training (CIRAD-GERDAT)	309

(Source: CIRAD, 1996)

has begun to work in other countries, including those traditionally associated with the development agencies such as CIRAD. For example, it has been involved in a growing partnership (funded by the French Ministry of Co-operation) with the Forest Development Agency (SODEFOR) of Côte d'Ivoire, dealing with development procedures for gazetted forests and for staff training (especially in accounting and administrative management). This partnership has helped SODEFOR move from a rather cumbersome and costly administrative management to a more dynamic approach, involving some sub-contracting work. ONF is also active in other developing countries, notably Cameroon (the Dimako pilot integrated development project), Madagascar (Environmental Action Plan) and Brazil (developing eucalyptus plantations for industrial charcoal).

3.5 Multilateral assistance

French official development assistance (*l'aide publique au développement* or 'APD') stood at US\$7.4 billion in 1996, equivalent to 13% of the total commitments of the OECD-DAC. Three-quarters of this was bilateral, and the rest multilateral. Multilateral aid was spent as follows:

- European Union – 50% (US\$5.5 billion)
- International financial institutions (World Bank, IMF, regional development banks and funds) – 30%
- United Nations – 5%
- Other – 15%

Table 2: Distribution of staff by geographical posting – ORSTOM

Metropolitan France (of whom 260 in Montpellier)	964
Overseas Departments and Territories	178
Africa and Indian Ocean	271
Latin America	111
Asia/Pacific	38
Other areas and international institutions	23

(Source: ORSTOM, 1996)

3.5.1 European Union

The Multilateral Affairs Department of the Ministry of Co-operation coordinates multilateral aid, particularly in relation to the European Union. Consultation with the EU is handled at national level by the sectoral *sous-directions* of the Ministry of Co-operation in association with the European Commission, and overseas by the *Missions Françaises de Coopération et d'Action Culturelle* in association with the EU Delegations. France is involved with two pilot programmes in inter-European development co-operation, in Côte d'Ivoire and Mozambique. Co-operation with the EU is facilitated by the posting of French *Coopérants du Service National (CSN)* as assistants to EU Delegations (currently 6 per year in Africa), by regular training sessions for French technical assistants on the theme of 'working with international agencies', by the organisation of regular meetings to monitor development programmes, and by participation of the Ministry in international discussions on the future of the Lomé Convention.

3.5.2 United Nations

In 1995, French contributions to the main UN agencies were as follows:

• UN Volunteer Programme	FF	2.0 million
• UNSO	FF	2.5 million
• UNDP	FF	100.0 million
• UNESCO	FF	126.0 million
• UNEP	FF	16.6 million

(Source: Ministère de la coopération, 1996)

3.5.3 World Bank

France is currently the fourth largest shareholder in the IBRD, with 4.6% of the capital, and the fourth most important donor to the International Development Association (IDA), with 7.4% of contributions. French funding to the Bank is concentrated particularly on sub-Saharan Africa (40% of its IDA contributions were devoted to the region in 1994–5, 40% of these being invested within the Franc zone).

3.6 Non-governmental organisations (NGOs)

NGOs are playing an increasing role in the system of French development aid. The majority of French International Solidarity Associations (ISAs) are grouped together into nine collectives or umbrella bodies, according to their objectives: support for development projects; emergency work; posting of volunteers; development education; environmental protection for sustainable development; and assistance to migrant workers. Since 1983, there has been a permanent dialogue between these coordinating bodies and the government authorities through the Development Co-operation Commission. The Commission gives equal representation to the public authorities (nine ministries) and the nine ISA umbrella organisations. It commissions studies on relevant topics, particularly in the fields of rural development, natural resource management and biodiversity and publishes an annual directory of ISAs.

The International Environment and Development Collective (*Collectif Environnement Développement International, CEDI*), set up in 1991 as part of the

preparatory work for the 1992 UNCED Conference, aims to heighten the profile of French environmental associations on the international stage. The CEDI, which is also responsible for follow-up to UNCED and the implementation of the commitments arising out of Agenda 21, acts as an interface between environmental protection movements and the public authorities, constituting a permanent pressure group *vis-à-vis* the latter, especially in relation to the environmental dimensions of national and international policy.

Funding is also given to information and networking activities. 40 French-speaking bodies have set up an information system known as IBISCUS, which seeks to meet the information and communication needs of those working in co-operation and all others interested in development issues in the South. IBISCUS provides an abstracting service (currently 70,000 documents), and summary notes and statistical tables on the economic situation of countries in Francophone Africa.

3.6.1 NGOs and debt reduction activities

For some years now, NGOs have been able to take part in reducing the debt of developing countries, while increasing their scope for such operations through the debt conversion mechanism. The Conversion, Debt, Development and Environment Association (*L'Association Conversion, Dette, Développement, Environnement, ACDE*), which was set up following a round table on debt, brings together ISAs for the purpose of redeeming the bank debts of developing countries on the secondary debt market and, following their conversion into local currency, using this as an instrument to fund development projects. ACDE carried out 4 conversion operations in 1992, for a total value of \$500,000, and 11 operations in 1993, amounting to just under \$1 million, mainly relating to Madagascar. Projects in the field of health, small enterprises, rural development and protected areas have all been funded by debt conversions.

3.7 Development companies/consultancies

Out of the fifty or so French consultancy companies involved in international rural development aid, there are about ten active in the field of tropical forestry. This group includes companies such as BCEOM (*Bureau Central d'Etudes Outre-Mer*), SECA (*La Société d'Eco-Aménagement*) and FRM (*Forêts-ressources-management*), all of which have worked for the French Government, as well as four other national and international organisations.

3.8 Decentralised aid to local authorities

'Decentralised co-operation' is the name given to another characteristic aspect of French development aid – twinning arrangements between French local authorities (*collectivités publiques*) and communities in the South. These take place at three administrative levels – *Région, Département and Commune*.

There are two key dates with regard to decentralised co-operation:

- In June 1990, on the occasion of the Conference of Heads of State of French-speaking countries held in La Baule in Brittany, France declared its intention

to treat recipient countries' moves towards democracy as a criterion of aid conditionality. Citizen empowerment and decentralisation of government authority were viewed as integral to this theme.

- (b) The law of 1992 on the territorial organisation of the French Republic gave a legal foundation to the development activities of local authorities. Local authorities were authorised to sign agreements with foreign administrations 'within the limits of their competence and respecting France's international commitments'.

The state encourages decentralised co-operation primarily by means of co-funding. This is based on various arguments:

- acknowledgement of the know-how of local authorities and their ability to mobilise civil society;
- the conviction that relations between local structures have a more human touch and are longer lasting;
- the need to share the financial burden and the human resources devoted to international aid.

Despite these good intentions, concrete achievements to date have been rather limited. Only the largest of the communes have sufficient resources to participate in co-operation activities (not more than about 1% of the category), although around 35% of departments and 75% of regions are taking part. The share of an authority's budget allocated to co-operation with foreign countries rarely exceeds 0.5%.

Expansion of the scheme has been limited by the low levels of democratic authority of many potential partner communities in the South, and by their frequent inability to enter into direct relationships with local authorities in the North. Few have sufficient revenue, and those that do are usually managed by personnel delegated from the state level, rather than by local public servants as this category is understood in France. Consequently, many of the French authorities have focused more on economic and social development activities, often through projects implemented by NGOs, than on direct support to parallel public bodies in the South. The promotion of decentralised co-operation with countries in Eastern Europe in the period since 1990 has also had a negative effect on the level of resources allocated to co-operation with countries in the South.

4. DEVELOPMENT ASSISTANCE STRATEGY

4.1 Introduction

France's long experience of development aid derives largely from the special relationship that has been maintained for more than 35 years with the French-speaking countries in Africa. Experience acquired in the former French colonies south of the Sahara (the main sphere of influence) has gradually been extended to other countries, particularly Francophone countries such as Zaire and, more recently, Lusophone countries such as Mozambique.

The French approach to development has moved

forward considerably in recent decades, from a sector-based and production-oriented approach (improving yields and cropping systems by the dissemination of technical innovations produced on research stations, without too much regard for the real conditions of rural producers) to a broader approach seeking to take into account all components of the agrarian and livelihoods system. This development has been translated into several generations of projects (initially 'sector-based projects', followed by 'integrated projects', then 'village land-use management' [*gestion des terroirs*] and, finally, 'local development' projects – see section 8).

France aims to ensure consistency in the international co-operation activities funded in the field of environment. It is keen to maintain a strong presence at international fora monitoring the implementation of the UNCED recommendations, and is committed to helping the countries of the South, especially the '*pays du champ*', play an active role in these fora.

4.2 Research strategy

Ministry of Co-operation policy in the field of research is designed to meet two objectives:

- (i) to contribute towards the building and maintenance of a scientific community in the countries where the Ministry works;
- (ii) to help to produce the necessary knowledge for development, using the support of the French scientific community to promote exchanges of information, joint research programmes, etc.

It is because of the Ministry's concern to help countries find their own routes to development that it regards scientific research as such an important component of development. The aim is to make scientific knowledge available to policy-makers and development practitioners, so as to enhance their decision-making capacities.

Development thus requires the existence of a scientific community in the partner countries which is able to:

- produce the knowledge and information essential for development policies
- be in a position to plan the future of their economies and societies and thus develop a capacity to make proposals, and provide expertise and advisory capabilities.

Research training is mainly provided by universities and the specialist research institutions, and (on a much smaller scale) the *écoles d'ingénieurs* (see section 6.2).

4.3 Tropical Forestry Strategy

4.3.1 Policy principles

In the field of forestry and the environment, French policy seeks to apply three principles of intervention:

- (i) to respond clearly to the long-term interests of partner countries in natural resource management, as these are the productive basis of their economies;
- (ii) to bring the scientific capacity of French development research institutes such as ORSTOM and CIRAD to the service of the developing world;
- (iii) to build on a limited but exemplary series of field activities and achievements.

The overall framework for French development co-operation is sustainable development as defined and adopted at the UNCED Conference. French co-operation therefore pursues three objectives:

- (i) contributing, by means of activities in the South, to the preservation of the overall environment (e.g. by setting up the FFEM);
- (ii) promoting French environmental know-how; this knowledge is very broad and relates to fundamental scientific research on animal and plant species, as well as to the use of advanced technologies such as satellite imaging (via the French 'SPOT' satellite), etc.;
- (iii) supporting the sustainable development of partner countries in areas of activity in which the long-term challenges are particularly important, especially in situations where human activity can cause irreversible ecological deterioration. These activities are mainly funded from two sources – FAC and CFD.

The tropical forest sector is a major area of concern, especially in view of the international sensitivities surrounding the issue of deforestation. French co-operation is very active in the scientific field (where a long-term perspective is regarded as essential) as well as in institutional support to forested countries and to the African Timber Organisation (ATO).

In the field of nature reserves and wildlife, French co-operation policy takes account of the advantages for national economies of the existence of nature reserves (game viewing or hunting), but also the need to involve the local people in protected area management.

A feature of recent work has been the implementation of the recommendations of the UNCED Conference. In particular, this has resulted in the signature in Paris in 1994 of the Anti-Desertification Convention and the establishment of the FFEM.

In 1995, the Ministry of Co-operation adopted a five year plan of action in the environmental field focusing on three main issues:

- protecting and exploiting nature reserves and wildlife, based on an integrated approach to land-use management;
- forest development;
- support for the preparation of environmental strategies, and for activities to build up the human and institutional capacity of partner countries.

4.3.2 Environmental studies and monitoring

In the field of environmental management, France regards the quality of information available to policy-makers as a crucial area of concern. This is especially the case with regard to the management of forest resources. Earth observation systems are a major industrial issue and a priority for French space policy. The 'SPOT 5' satellite programme has allowed France to become one of the most advanced countries in the field of satellite observation for civilian purposes. The dynamic SPOT process has led to the emergence of a skilled workforce in France, specialising in applications of remote sensing and geographical information systems.

French co-operation operates at a number of levels in the field of GIS:

- programmes are under way with national geographical information centres in Madagascar, Benin, Gabon and Mozambique. These aim to help the national services better perform their function as public services, in a cost-effective manner, while supporting their reorientation towards a service provider role, seeking to meet external needs in areas such as cadastral surveys and thematic project mapping. In several cases (Madagascar and Benin in particular), French aid is in the form of a contribution to the NEAP (National Environmental Action Plan), work that is also supported by other donors, including the World Bank;
- at regional level, French co-operation supports the AGRHYMET Centre based in Niamey, which works throughout the area covered by the CILSS (the Interstate Committee to Combat Drought in the Sahel);
- through the OSS (Observatory on the Sahara and Sahel), French co-operation supports projects to observe the environment and adapt information technology to the benefit of the African continent in the environmental field.

4.3.3 Protected Areas, wildlife and biodiversity

French policy with regard to wildlife and biodiversity is grounded in the principle of local participation. At national level, French co-operation supports the implementation of natural resource management strategies. At local level, France supports approaches which seek to harness the economic potential of protected areas for the benefit of the local people. This involvement is vital for there to be any prospect of sustainability.

4.4 International influences and French international activities in natural forest management

French aid to safeguard the tropical forest is thus based on the principle that it is by making a greater contribution to the essential development needs of populations and partner states that the forest can be conserved. This was the position adopted by France during the Conference of Ministers responsible for the forest in Central African countries in Libreville in April 1990, at the 10th World Forestry Congress held in Paris in September 1991, at UNCED in June 1992, and during the preparatory work for the April 1995 session of the Commission on Sustainable Development.

Aid to tropical forestry in Africa is provided at a number of levels:

- France is making a large contribution to the Global Environment Facility (FF807 m. over the period 1994–8). France has also endowed its own parallel fund (FFEM) with FF 440 m. over the same period. This is targeted on the preservation of biodiversity and world climatic balance; the protection of tropical forests is one of the priority budget allocations. These two sets of commitments represent a substantial pledge to the maintenance and enhancement of the global environment.

- French aid supports regional and national forest institutes in order to help Africa contribute to major international forest and environmental debates. In this regard, France is helping to enhance African expertise within the African Timber Organisation based in Libreville; supporting the Tropical Forest Action Programme (TFAP), especially in Congo and Gabon; and contributing to the establishment, by the International Centre for Forestry Research, of an African regional forest research network supported by CIRAD-Forêt. French aid is contributing to the identification and implementation of measures to increase the contribution of forests to state revenue. A series of projects has been established to encourage (for example):
- industrialisation of the timber sector (e.g. loans and shareholding by P.RO.PAR.CO in the logging industry of Côte d'Ivoire, Cameroon, the Central African Republic and Gabon);
- promotion and diversification of forest production (working on NTFPs in the Congolese forests);
- the sustained use of forest resources (the Dimako Project in Cameroon and a study on the competitiveness of African timber);
- international regulation of the timber trade (various studies, and work on the eco-labelling of African timbers).

The UN Specialised Agencies, especially the FAO, are important for publicising French approaches to development. Over and above its regular contribution to FAO (7% of the organisation's core income), France makes an additional contribution, approximately equal to 20% of the programme budget, to support forestry-related work.¹⁷

5. REGIONAL AND THEMATIC DISTRIBUTION OF FORESTRY SECTOR FUNDING

5.1 The environmental sector

Funding in the area of the environment falls into ten categories. At the end of 1995, the portfolio of ongoing projects of the Ministry of Co-operation amounted to FF 433 m., and was distributed as shown in Table 3.

Taking into account other projects dealing with the environment as a sub-theme, and training and education activities, the resources committed annually by the Ministry to the environment come to some FF 230 m., including FF 30 m. for forests and FF 15 m. for nature reserves, wildlife and biodiversity.

5.1.1 Forestry

The commitment of French aid for the forest sector in Africa has been FF 300 m. since 1992. A third of this has come from the Ministry of Co-operation and two-thirds from the CFD, spread over some twenty projects.

The Ministry of Co-operation actively supports the

Table 3: Thematic distribution of projects of the Ministry of Cooperation, 1995 (FF m.)

Environmental policy	17
Water	82
Urban environment	66
Renewable energy	11
Fishery resources	71
Forest resources	97
Nature reserves, wildlife and biodiversity	22
Locust control	16
Environmental study and monitoring	45
NGO support	6

(Source: Ministère de la coopération, 1995)

development of forest policy and legislation in partner states and the implementation of field projects and programmes to help local people manage their forests and improve their livelihoods. This is the objective of the 'Rural land and forest management project' in Mamou, Guinea, the 'Village management of timber resources' component of the project of support to decentralisation in Mali, and the population/forest interaction component of the Dimako project in Cameroon.

French aid supports the training of personnel responsible for protecting and managing forests and the establishment and transfer of scientific and technical skills. It provides support to the forest departments of the Ecole Nationale Supérieure Agronomique in Yamoussoukro (Côte d'Ivoire) and the Faculty of Agronomic Sciences of the University of Dschang (Cameroon); it is also supporting the establishment of a *Centre Régional d'Enseignement Spécialisé en Agronomie, 'CRESA Forêt-Bois'* in Yaoundé, Cameroon.¹⁸ Finally, a new form of partnership is evident in the transfer of knowledge and technology between ONF and SODEFOR in Côte d'Ivoire, with funding from the Ministry of Co-operation.

5.1.2 Wildlife management

The Ministry of Co-operation has committed FF 22.7 m. to this theme since 1992. Its resources are backed up by those of the FFEM, one of whose spheres of action is the preservation of biodiversity. The broad areas of concentration of ongoing programmes are as follows:

- rehabilitation and development of existing reserves (Manda in Chad, Niokolo Koba in Senegal and Bénoué in Cameroon);
- assessment and enhancement of the role played by the Banc d'Arguin in the renewal of natural resources in Mauritania;

18. There are six CRESA, regional centres for training in agronomy according to a broad model laid down by a conference of francophone heads of state in 1989. Besides 'CRESA Forêt-Bois' in Cameroon, a second 'CRESA-forestier' is planned in Morocco, within the *Ecole Nationale Forestière d'Ingénieurs (ENFI)* in Rabat.

17. This contribution is used to cover the costs of 3 or 4 Associate Experts in Forestry (approx.20% of French technical support) as well as US \$3–500,000 for forestry projects.

- organisation of hunting and overhaul of wildlife legislation (Burkina Faso);
- studying the interaction between humans and wildlife and setting up pilot operations for the protection of some seriously threatened species such as the black rhinoceros or elephant (Cameroon, Côte d'Ivoire);
- enhancing plant biodiversity by supporting production (Gabon and Madagascar);
- training, especially through the Garoua Wildlife school (Cameroon).

5.2 Research in the service of development

La Recherche au Service du Développement ('RSD') involves a number of different institutions (CIRAD, ORSTOM, CNRS, INRA, universities and *écoles d'ingénieurs*) and a great diversity of geographical areas, themes and methods. The budget devoted to RSD was FF 3.2 billion in 1993, more than 85% from public funds. The Ministry of Research remains the main donor, contributing 61%, with the other ministries together contributing 24%.

In 1993, the geographical and sectoral spread of RSD expenditure was as shown in Tables 4 and 5.

French co-operation uses many different instruments to foster research competence: the scholarship funds managed by the *Missions de Coopération* in consultation with the national authorities are the most important means employed, although ORSTOM also has a 'research allowance' budget line specifically set aside for students from developing countries. These funds may be used to award training grants for research. In 1994, a total of 638 grants was awarded, representing a financial outlay of over FF 33 m. Such grants allow for short and medium length courses at research laboratories. One form of grant (the *bourse d'excellence*) provides substantial support for students preparing research theses, whose work has been found to be of particularly high quality.

The Ministry provides funds to enable African researchers to participate in the major research programmes conducted by French specialist agencies in African countries (around FF 2 m. per year). Computerised information networks (electronic mail, fora, etc.) and access to international databases are also being developed. In order to foster inter-African exchanges, various thematic networks receive support from the French Government. One of these covers ecology.

Specific attention is given to North-South university

co-operation in respect of research. The main scheme is 'CAMPUS', to which about FF 53 m. are committed annually.

Finally, the Ministry of Co-operation is the main donor to the multilateral Francophone organisation, AUPELF/UREF (*Association des Universités Partiellement ou Entièrement de langue Française/Universités des Réseaux d'Expression Française*). Around FF 100 m. are made available to this organisation which is responsible for fostering exchanges in higher education and research. Of this, FF 40 m. have been specifically earmarked to research. In addition, though on a smaller scale, support is given to research involving several universities through the fund for university co-operation, 'FICU'.

In total, more than FF 100 m. a year is devoted to development-related research activities. These resources are combined with the provision of more than 160 researchers as technical assistance at African institutes (not including trainers/researchers and research personnel from specialist French institutes established in Africa). In full-time equivalents (and including trainers/researchers, but not the staff of specialist institutes), more than 200 researcher-years are made available to Africa annually.

5.3 NGO funding

State funding to NGOs amounts to more than FF 300 m. per year. The bulk of this goes towards two sets of activities:

- subsidising the operation of the French volunteer association (*Association Française des Volontaires du Progrès, AFVP*);
- flat-rate payments to cover the social security of volunteers and other *coopérants*; this group includes young men undertaking development work as an alternative to national military service (*Coopérants du Service National, CSN*) in projects supported by NGOs.

5.4 Local authority development activities (*coopération décentralisée*)

The budget resources allocated by the state to decentralised co-operation come from the Aid and Co-operation Fund (FAC) as well as from a specific budget line established in 1986. From 1985 to 1992 (inclusive), this funding amounted to a total of FF 184.5 m. (including FF 136.2 m. from the FAC). In 1992, local authorities allocated around FF 100 m. to projects in the '*pays du champ*' (a considerable increase on the

Table 4: Geographical spread of RSD projects, 1993 (by % allocated)

Metropolitan France	31
Overseas departments and territories	16
Sub-Saharan Africa, Indian Ocean	25
Other developing countries	24
Bilateral agencies	4

(Source: Ministère de la recherche, 1995)

Table 5: Sectoral Distribution of RSD Projects, 1993 (by % allocated)

Agriculture, rural development	48
Physical environment, natural resources, energy	19
Health	14
Humanities and social sciences	3
Other (information and training)	16

(Source: *ibid.*)

FF 40 m. spent in 1988). Sectoral distribution for FAC co-funding in 1995 is shown in Table 6.

Starting from an initial allocation of FF 5 m. in 1985, co-funding granted by the Ministry of Co-operation reached FF 27 m. in 1995. To date, the total allocation has been about FF 60 m. In Africa, there has been a strong concentration of activities on three Sahelian countries – Senegal, Mali and Burkina Faso, with a smaller number in Cameroon, Guinea and Togo. The three Sahelian countries together account for almost 50% of the co-funding awarded for decentralised co-operation by the Ministry of Co-operation. (The total allocation to these three under all co-funding arrangements is likely to be even greater since the local authorities whose projects are co-funded by sources other than the Ministry include small communes which work mainly in the Sahel in fields such as small-scale water supply and reforestation.)

6. STRATEGY ON RESEARCH AND TRAINING IN TROPICAL FORESTRY

6.1 Forestry research

France is one of the world leaders in tropical forestry research. Over several decades it has amassed a considerable wealth of knowledge of direct value to development work. The two main organisations for tropical forestry research are CIRAD-Forêt and ORSTOM.

6.1.1 CIRAD-Forêt

The mandate of CIRAD-Forêt is largely that of the old CTFT (with the exception of the fishing and fish-farming sector which was transferred to CIRAD-EMVT). Box 1 briefly reviews the history of the CTFT.

The activities of CIRAD-Forêt are organised into four programmes (natural forest, plantations, agroforestry and timber), each with research, training and development components.

The 'natural forest' programme. This involves methods for the sustainable management of tropical forests, meeting the objective of continuous timber production, but also taking account of biodiversity issues and the needs of local people. The programme covers: the design, establishment and monitoring of experimental systems investigating the effects of various silvicultural techniques on the dendrometric characteristics of forest (Côte d'Ivoire, Central African Republic; Gabon, Indonesia, Guyane and Brazil, all in partnership with national agencies); methods to reduce the damage caused by logging; economic and financial studies of various forest management options; methods for analysing the practices of local people; and relations between the state and private agencies involved in development management. CIRAD-Forêt is involved in various projects, in particular the integrated pilot development project (API) in Dimako, Cameroon ('API-DIMAKO'). Data collected in Guyane continuously since 1984 have made it possible to construct a simulation model of the dynamics of a forest, and this has provided a useful tool for foresters. With funding from the French Ministry of Co-operation, CIRAD-

Table 6: Local authority co-funding by FAC, 1995 (%)

Agriculture (including forestry)	6
Town planning/infrastructure	20
Local economic development	3
Institutional support to local authorities	19
Health	1
Cultural sector	2
Multi-sector	48

(Source: Ministère de la coopération (1993))

Box 1: Centre Technique Forestier Tropical (CTFT)

Over a period of 35 years, from its establishment in 1948 to its absorption into CIRAD in 1984, the CTFT was closely involved with most of the major research activities undertaken by France in the field of tropical forestry. (The organisation's origins in fact go back even further, to key historical events such as the establishment, in 1916, of an important programme to cover France's growing needs for aviation-quality timbers from tropical sources; the setting up, in 1923, of the Colonial Forestry Service; and the establishment, in 1924, of a colonial forestry research institute at Nogent-sur-Marne. The CTFT had its immediate roots in the *Section Technique Forestière* at Nogent, staffed by colonial foresters cut off from their overseas postings by the war.)

The mandate of the new CTFT was to undertake research on colonial forestry and timber, for which major demand was expected during the period of post-war reconstruction. The expansion of the Centre's programme continued even during the period of colonial withdrawal, with a number of industrial projects (work on the production of sawn timber in Cameroon and plywood in Gabon) and the opening of a number of overseas research stations (two initially in 1958, in Gabon and Congo-Brazzaville, with six further centres in the following decade).

In 1963, the *Bureau des Etudes Techniques (BET)* was established in the CTFT, and this led to its involvement in a large number of activities in the former colonies (most notably in Central Africa), including forest inventories, training programmes, reforestation projects, paper mills, and numerous silvicultural studies. By 1974, BET was working in more than forty countries in Africa, Latin America, Asia and the Pacific.

In the period 1975–84, CTFT was incorporated into the *Groupement d'Etude et de Recherche pour le Développement de l'Agronomie Tropicale (GERDAT)*. While maintaining its links with national forestry research programmes in several African countries, it also took on more basic research, particularly in Guyane and the Sahel. In 1984, it became part of CIRAD as a new department, CIRAD-Forêt. For a history of CTFT, see Catinot (1994).

Forêt is co-operating with CIFOR on a regional project ('FORAFRI'), which aims to take stock of French research on the silviculture of natural forests in five African countries (Cameroon, Congo, Côte d'Ivoire, Gabon and the Central African Republic).

The 'plantation' programme. This involves the selection and improvement of species of major commercial importance, the production of high quality seedlings, preparation of the soil and the maintenance of young plantations (with particular reference to fertilisation techniques). CIRAD-Forêt has a substantial seed laboratory in Montpellier, and works in close liaison with international agencies, especially FAO, to conserve genetic resources.

The 'agroforestry' programme. This involves producing technical reference materials for crops in agroforestry systems, such as: the combination of cotton and *Faidherbia albida* in Northern Cameroon; improved fallows (fallow planted with fast-growing leguminous species, particularly *Acacia mangium*, in Côte d'Ivoire); wood lots, especially *Faidherbia albida* lots in Burkina Faso (work which is conducted in partnership with *l'Institut de Recherche Burkinabe d'Ecologie Tropicale, IRBET*); live hedging, primarily for erosion control with secondary fodder production (Réunion), for protection against depredation by livestock (Sahel), or as shelter-belts (various coastal and irrigated areas).

The 'timber' programme. This is organised into four components: use of technical data, determinants of tree and timber quality, improving product performance and techniques for processing and working timber. The quality of trees and timber is studied using non-destructive methods (detecting internal faults, predicting stresses during felling and sawing, etc.). Improving product performance involves increasing the durability of timbers, particularly softwoods. Optimisation of processing is by low-energy drying techniques and low-cost preservation methods. This work, begun even before the establishment of CTFT, has allowed the technical characteristics of more than 1,000 species to be tested. The aim now is to enter all this information on a multi-media database.

Research units within CIRAD bring together researchers from several departments. The unit 'GREEN' deals with management of common pool resources, particularly forest and wildlife. Researchers from 'GREEN' are working, in Madagascar and elsewhere, on a local management system being set up by the administration as part of the second phase of the Environmental Action Plan (EAP). This group is also working in Niger on a project to enable rural communities to exploit forest resources on a sustainable basis for urban fuelwood supply.

A reorganisation of CIRAD will be undertaken in January 1998, which will affect all departments.

6.1.2 Forestry research in ORSTOM

Within ORSTOM, a new organisation is being established with nine major programmes. One of these programmes, 'Environment and Development in Forest Environments', deals primarily with the humid areas, covering both natural forest and reconstituted forest (plantations and agroforestry). It focuses on three themes:

- harvesting, conservation and enhancement of the resources of forest environments (characterising forest resources mainly in terms of biodiversity, technical production characteristics, local knowledge and sustainability of production methods);

- the regional dynamics of transforming these environments (changes over time, interaction between different modes of exploitation, tenure studies and indicators of the state of the environment), with widespread use of satellite tools, especially geographic information systems;
- public policy and procurement (links between local dynamics and economic, political and institutional contexts at national and international level, and conflict or synergy between legislation, customary rights and actual practices with regard to land use).

ORSTOM is involved in several programmes dealing with these themes, such as the 'Forresasia programme' in the Philippines and elsewhere (part-funded by the EU); the 'Rehabilitation of *Imperata* fallows' programme in Indonesia; the 'Environment and Societies in Central Africa' programme in Cameroon; the 'Highlands of Vietnam' programme (in conjunction with a number of partners, including the European Commission and the French Institute at Pondicherry); etc.

ORSTOM researchers are working on mangroves (in Madagascar, Vietnam and Senegal) and in areas surrounding national parks (Bandiar in Guinea, Niokolo-Koba in Senegal and 'W' in Niger). ORSTOM is involved in the 'Long-term Savannah' (SALT) programme, with researchers based in Niger, Mali and Burkina Faso; and the 'Fallows' programme working in the same three countries and also in Senegal and Côte d'Ivoire.

The organisation is also involved in building scientific capacity in the South through training in research and specific support: almost 1,000 students and professional researchers from countries in the South worked with ORSTOM researchers in 1995. ORSTOM is heavily involved in various PhD training courses, especially a course run by the University of Orléans. Modelling (simulating natural resource management) has an important place in this work.

ORSTOM plays an active role in the French Committee to combat desertification. It is also involved in the interdisciplinary programme at the *Centre National de Recherche Scientifique (CNRS)*, entitled 'Environment, life and society' begun in 1990. This programme has established collaborative links with the 'Long-term Savannah' and 'Inter-tropical Forest Eco-systems' (SALT and ECOFIT) programmes, the latter operating mainly in Brazil, Guyane and Vietnam. It has four components (ecological systems and human activity; dynamics of biodiversity and the environment; the environment, societies and sustainable development; and methods, models and theories for environmental research). The 'Dynamics of biodiversity' component represents the bulk of the French contribution to the international DIVERSITAS programme led by UNESCO.

Several programmes are in the identification phase, notably in Côte d'Ivoire (acquisition and management of residual forests in the South-West), Laos (analysing management systems for forest environments) and Madagascar (development of the biosphere reserve of Mananara-Nord).

6.1.3 Forestry research in the universities

Many universities are involved in research activities in the area of tropical forests and in training young foreign

scientists, especially from tropical countries. Some of this research work (such as the studies of forest ecology and architecture at the *Institut de Botanique*, University of Montpellier II) is of international renown and significance. Upwards of sixteen French universities are currently listed as having major active research programmes in fields of relevance to tropical forestry.

6.1.4 The French Institute at Pondicherry

The Union Territory of Pondicherry was a French colony from 1814 to 1954, when it became part of India. French is still widely spoken in the territory. The French Institut (*L'Institut Français de Pondichery*, IFP) was founded in 1956 with two sections, one dealing with the study of Indian languages and literature, and the other with vegetation mapping and phytogeography. Within the latter, the Department of Ecology and the *Laboratoire de géomatique* work on forestry issues, particularly in relation to the southern Indian states and other countries in South-east Asia (Vietnam, Sri Lanka, Nepal and Malaysia). About a dozen French and other European researchers work at the Institute, funded by either the Foreign Ministry or research organisations such as CNRS. The Department of Ecology deals with a number of themes: environmental dynamics and evolution (climate, soil, vegetation), functioning of ecosystems, evaluation and conservation of biodiversity. The *Laboratoire de géomatique* deals with geographical information systems, vegetation and bioclimatic mapping. The IFP is also involved in various other research programmes in the region, such as the joint *Institut Géographique de Vietnam/IFP/ORSTOM/Belgian universities* programme in the highlands of Vietnam.

6.1.5 ECOFOR

Among the recommendations of the 1990 Strasbourg Conference was a pledge on the part of the European Heads of State to reinforce research, both national and collaborative, on forest ecosystems (Resolution N° 6). In France, this led to the establishment of 'ECOFOR', with the membership of a number of institutions with interests in forestry research. Present membership includes CNRS, INRA, ENGREF and ONF. ECOFOR focuses primarily on temperate forest issues, with research programmes in the field of plantation forestry and the ecology of broadleaf forests (particularly beech), but it has an interest in tropical forests primarily through work in Guyane.

6.2 Education and training – Universities and 'Ecoles d'ingénieurs'

6.2.1 Editorial background note

Higher education in France involves two parallel and largely separate streams: on the one hand, there are the universities, which are broadly similar to universities elsewhere, and on the other, there are the *grandes écoles*, uniquely French institutions which are a product of the Napoleonic system.¹⁹

The standard university system involves three 'cycles' of training: the *premier cycle* of 2 years' duration leading to a DEUG (*Diplôme d'Etudes Universitaires*

Générales), which is undertaken immediately on completion of the highest school-leaving examination, the *Baccalauréat* (or *Bac*); the *second cycle* which lasts two more years and leads to a *maîtrise* (hence *Bac* + 4 years); and the *troisième cycle*, the first year of which leads to a DEA (*Diplôme d'études approfondies* or to a DESS (*Diplôme d'Etudes Supérieures Spécialisées*), which may be followed by a thesis requiring a minimum of two further years of study (hence, a minimum of *Bac* + 7 years).²⁰

The *Grandes Ecoles*, of which there are nine in the field of agriculture, are entered by a highly competitive examination (the *concours*) at the end of two years of preparatory study (*classes préparatoires*). Successful students then take a standard three-year course of training leading to a *Diplôme d'ingénieur* (at *Bac* + 5 years).^{21, 22}

6.2.2 Forestry training in the 'grandes écoles'

The specialist course in tropical forestry is of two years' duration, taken at one of the *Ecoles Nationales du Génie Rurale, des Eaux et des Forêts* (ENGREF), of which there are five – in Paris, Montpellier, Nancy, Kourou (Guyane) and Clermont Ferrand. Nowadays, the *Grandes Ecoles* also offer training leading to a 'Mastère' (not to be confused with the university *maîtrise* [*deuxième cycle*]) for students who have completed the *diplôme d'ingénieur*. ENGREF offers a 'Mastère' entitled '*Sciences forestières, option foresterie rurale*', which is particularly relevant to foresters in the tropics. Rather similar is the professional training programme, FFSRC (*la Formation Forestière Supérieure pour les Régions Chaudes*) organised by ENGREF-Montpellier, which provides a 15-month course of specialist training in the field of tropical forestry for students who have completed their *diplômes* at another *école d'ingénieurs*. Like many of the courses of study in the professional stream, a feature of this course is a *stage* (period of training) overseas, involving an applied research project.

Several *écoles d'ingénieurs* offer specialised training in environmental studies; for example, the Mastère '*Développement rural et projets*' or the Mastère '*Systèmes d'information localisés pour l'aménagement des territoires*' (SILAT), both of which are offered in Montpellier by consortia of training institutions from within the 'AGROPOLIS' network.

6.2.3 Forestry training in the universities

There are a number of DESS courses available in forestry-related disciplines, such as the '*Gestion des systèmes agro-sylvo-pastoraux en régions chaudes*' of the Université de Paris XII at Créteil, or the '*Aménagement intégré des territoires*' organised jointly by the Universities of Paris, Toulouse and Montpellier (the

19. For a brief discussion of the French system of higher education in the natural resources field, see Brown (1995).

20. In theory the maximum period of study for the *thèse* is four years.

21. In the French educational system, 'ingénieur' is a status pertaining to qualifications in several alternative fields of applied study, and there is no necessary connection to engineering studies as these are understood in the Anglophone system (see Brown, 1995: 8–9).

22. Studies may be completed at an *école d'application* offering training in a specialist field.

latter is supported by UNESCO and attracts many students from the developing countries).

6.2.4 Other courses

Both the *grandes écoles* and the universities offer other in-service training courses (*formation continue*) in forestry-related fields. These are of variable duration, from one week to several months.

In 1970, the *Office National des Forêts* founded a national training centre near Nancy (*Centre National de Formation Forestière*), which offers training for ONF staff and for international forestry personnel. The Centre also provides custom-made training courses overseas.

The agricultural schools (*Lycées agricoles*) provide training for forestry *techniciens* (courses leading to *diplômes* at immediate post-Bac' level) and for '*techniciens supérieurs* (*diplômes* at the level of Bac' plus two years). Since 1989, the CFPPA (*Centres de Formation Professionnelle et de Promotion Agricole pour Adultes*) have offered in-service adult education courses. A group of ten *lycées agricoles* has recently created, in collaboration with the CFPPA, an association '*Foresterie internationale*' which provides training in partnership with forestry colleges overseas (currently, Côte d'Ivoire, Senegal and Burundi).

There are also a number of private-sector providers of training offering courses in cognate fields, such as FORHOM, the training department of the BDPA-SCETAGRI company.

7. PROJECT CYCLE MANAGEMENT

In France, as elsewhere, the changing climate of public opinion has imposed increasing demands for transparency in public expenditure, and this has led to the routinisation of aid programme evaluation. A decree of 1990 specifies evaluation procedures in areas of public policy. Since 1995, an additional decree has required the evaluation of all projects costing more than FF 2 m.

A handbook on evaluation methodology was published by the Ministry of Co-operation in 1996, and a number of training sessions have been laid on in the Ministry to improve evaluation procedures.

Project cycle management procedures are influenced by the structure of in-country aid management, which is itself related to the status of the partner country. In the case of the '*pays du champ*', project identification and technical support are usually handled by the resident *Mission de Coopération et d'Action Culturelle* (Naudet, 1997). Ideas for projects may be initiated by either the host government or by the *Mission*, acting in consultation with national agencies. For larger projects, the *Mission* coordinates with the Ministry headquarters in Paris. Proposals are then put to the FAC Steering Committee which meets in Paris. The average length of the identification cycle, from initiation to start of implementation is about 18 months. Projects are usually implemented by the in-country *Mission*, rather than directly by the host government; where the latter takes responsibility, the *Mission* is likely to retain considerable influence (*ibid.*).

Projects in 'other developing countries' (ie. countries other than the '*pays du champ*') have usually been managed by the Ministry of Foreign Affairs or the

Ministry of Finance (now the *Ministère de l'Economie, Finances et Industrie*).

Project evaluation procedures depend on the internal structures of the institutions involved. The Ministry of Co-operation has a 'Mission for Studies, Evaluation and Prospective Analysis' (*MEEP*) which commissions a number of country and sector reviews annually (normally, two surveys of assistance to the '*pays du champ*', and up to eight aid sector reviews). These are undertaken by multi-disciplinary teams drawn from both the Ministry and external personnel; the members are required not to have taken any part in the preparation or management of the activities under assessment. Evaluation reports are internal government documents, though an annual review of activities is published, which is available to the public.

Evaluations of 'other developing countries' are undertaken by the Evaluation Unit of the Treasury Department (Ministry of Finance). 12–15% of the projects in such countries are evaluated each year. An annual summary is published. The Evaluation Unit also leads the evaluation working group for development co-operation programmes, which includes representatives of the Ministries of Co-operation, Finance and Foreign Affairs and the CFD. The CFD has its own internal evaluation department, and the Ministry of Foreign Affairs is in the process of establishing one.

8. PROJECT REVIEWS AND PROFILES

French activities in the field of research-action in the post-colonial period have been characterised by a number of distinctive approaches, several of which have had important implications for natural resource management, particularly (given the geographical concentration of French aid in the Sahel) as regards tropical dry forests. This section reviews three of the most characteristic of these approaches.

8.1 From 1960 to 1980: Focus on increased production

During this period, rural development activities focused on the introduction of technical packages designed to increase crop yields. In a relatively favourable economic context and with a stable natural environment, this approach achieved some success with cash crops (cotton, groundnuts, cocoa, coffee, etc.). However, the approach was open to criticism for failing to take sufficient account of the other components of the production system and the broader operation of the agrarian economy. Its limitations soon became apparent: the techniques and equipment introduced were of little benefit to food crop production (which used extensive methods); the area under cultivation was expanded and this led, almost everywhere, to the degradation of the natural productive potential of the most fragile lands; the latter in turn encouraged migration towards areas which still had land surpluses; etc. These problems were exacerbated by the cumbersome nature of the relevant government agencies and the interventionist approaches they employed. During the 1980s, with the appearance of so-called 'integrated

rural development' projects, these agencies also found themselves entrusted with the additional task of improving public facilities. Governments found it increasingly difficult to cope with such a broad mandate, leading to a marked deterioration in the quality of services to producers.

8.2 The 'Gestion des terroirs' approach

In the early 1980s, a new approach, '*Gestion des terroirs*' ('village land-use management'), was pioneered by French development researchers. This addressed two issues that previous projects had tackled only peripherally, if at all: sustainable exploitation of natural assets and participatory development by local communities (see Box 2).

Box 2: The 'Gestion des terroirs' approach

The '*Gestion des terroirs*' approach was first used in Burkina Faso in 1984. The approach draws on several different intervention models: rural awareness-creation (*animation*), 'research-development' (*recherche-développement*), etc. The approach is based on the concept of the '*terroir*' (village land). This term designates the geographical area over which a rural community has rights recognised by neighbouring communities. The *terroir* is made up of all cultivated and fallow land, silvo-pastoral areas and bush, whether under individual or communal tenure. Within the area of the *terroir*, as defined by customary law, the objective is to initiate (by means of advice and financial incentives) a two-fold process of:

- (a) rehabilitation and sustainable use of natural resources;
- (b) intensification of crop and animal production, and the strengthening of agricultural production services.

Typically, a *gestion des terroirs* project takes place in a number of stages including: external analysis; awareness-raising of the population about the problems of natural resource degradation; participatory analysis of the assets, constraints and potential of the land concerned; marking out of the *terroir* and zoning of the land; drawing up land-use management plans, creation of land-use committees and funding of implementation of the plans; monitoring and evaluation; etc. The main activities funded relate to areas such as:

- long-term management of land and natural assets (erosion control systems, development of valley bottoms, sustainable use of silvo-pastoral areas);
- intensification of production systems (agroforestry, diversification of production);

- establishment of infrastructure (stores for agricultural inputs, wells, mills, etc.).

Projects involve multi-disciplinary teams of practitioners (these normally include an agronomist, livestock specialist, forester and sociologist). The teams work with support from a central co-ordination unit, and from extension workers in the field. Projects are usually autonomous structures, under the aegis of the government water and forestry service, with senior national staff seconded from government service.

While interesting and innovative, this approach has, in some cases, proved detrimental to the concern to empower the local population. When imposed as compulsory stages, marking out of the *terroir* and establishing the development plans have sometimes aroused latent conflicts and caused the sudden rejection of the approach. In addition, the restrictive nature of the analysis (confined, by definition, to the borders of village land) does not always allow the *terroir* to be placed within the relevant socio-economic context. For example, few studies have dealt with the relationships between the *terroir* and its encompassing watershed, its relationship with the neighbouring settlements or towns, or its economic integration within wider production systems. Some of the village communities may also have been discouraged by factors such as the long length and scope of the external analysis, the tendency to focus excessively on the degradation of natural resources, and the cumbersome nature of the planning process. Finally, the land-use management committees have sometimes lacked both the representativeness and the authority to exercise their responsibility effectively.

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Box 3: The 'Local Development' Approach

This differs from the *Gestion des terroirs* approach in the following respects:

- The new approach starts by carrying out an overall analysis of the area of intervention, so as to take fuller account of external relationships: production chains, inter-village relations and the interactions of villages with their wider environment.
- Projects no longer designate the target communities themselves, but respond to requests from communities who, following an information campaign, choose to ask for their support in well-defined areas.
- External analysis and the establishment of a land-use management committee are no longer imposed as preconditions, any more than marking out the *terroir* or the drawing up a multi-year plan of action. It is only subsequently, when the villagers have understood and accepted the need for it, that the project will assist them to carry out an analysis of the problems they face in exploiting their *terroir*.

The primary concern is thus to conduct investigations and fund community initiatives in a participatory way so as to guarantee their relevance to local needs. At an early stage, clear, transparent procedures are laid down with village representatives. These identify the methods of the preliminary investigation (feasibility studies), the funding and implementation of local initiatives, the tasks of each partner and the co-operative relationship between them. A local investment fund is set up to finance sustainable development initiatives (such costs are often recovered at a later date). This fund is used for activities such as land-use planning and natural resource management (including forest resources). The approach encourages the creation and structuring of local institutions for the sustainable management of common property (grazing, wooded areas, etc.). The intervention of French local authorities is encouraged, as part of a strategy of supporting the emergence of local African authorities (see section 3.8).

8.3 The 'Local Development' approach

Despite its imperfections, the *Gestion des terroirs* approach has helped to clarify the constraints on the sustainable development of rural areas. It has shown that the major issue is less often a matter of raising people's awareness of the problems of the degradation of their natural resources than of giving them the means to address such problems themselves.

Since 1984, some 30 *Gestion des terroirs* projects have been funded by French aid, mainly in West Africa.

The approach has gradually evolved into what French aid practitioners call 'local development' (see Box 3).

8.4 Recent trends in project management

Nowadays, the involvement of private or voluntary sector agencies is very much encouraged, in place of government technical services, and direct funding of beneficiary-led occupational or area-based organisations is a frequent conduit for aid. The promotion of new national agencies able to work on a contractual basis at the request of communities is encouraged both by calling on experienced French agencies which transfer know-how relating to approaches and project management, and by the provision of training in local development and business management.

French aid continues to encourage the establishment, at national level, of an institutional, legislative, economic and financial framework more favourable to rural development. It fosters rural credit structures, emphasising the establishment of decentralised systems, and encourages the establishment of new relationships between local government services and local communities.

9. CONCLUSIONS

France has a long and very varied experience of forestry management, both in the metropolitan territories and overseas. This experience encompasses a variety of tropical biomes ranging from tropical humid forest to tropical drylands and deserts. Many of the more innovative aspects of France's aid policy have had implications for forestry and the environment: exceptionally high investments in research; strong institutions of research and teaching operating according to a distinctive francophone model; decentralised aid through local authority linkages; stable long-term relationships with partner states at a range of institutional levels. France also benefits from an unusual experience (by comparison with most European states) of tropical forestry within the national territory, via its Overseas Departments and Territories. These features have combined to provide a unique profile of aid management. The major challenge which the country now recognises is to share this experience internationally.

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ACRONYMS

ACDE	L'Association Conversion, Dette, Développement, Environnement
ACCT	Agence de Coopération Culturelle et Technique
AFVP	Association Française des Volontaires du Progrès
API	Aménagement Pilote Intégré
AT	Assistant Technique
AUPELF	Association des Universités Partiellement ou Entièrement de langue Française
BCEOM	Bureau Central d'Etudes Outre-Mer
CEDI	Collectif Environnement Développement International
CEFEB	Centre d'Etudes Financières et Bancaires
CFD	Caisse Française de Développement
CFPPA	Centre de Formation Professionnelle et de Promotion Agricole pour Adultes
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CIRAD-EMVT	CIRAD programme dealing with livestock and veterinary medicine
CNRS	Centre National de Recherche Scientifique
CNFF	Centre National de Formation Forestière
CRESA	Centre Régional d'Enseignement Spécialisé en Agronomie
CRPF	Centres Régionaux de la Propriété Forestière
CSN	Coopérant du Service National
CTFT	Centre Technique Forestier Tropical

DEA	Diplôme d'Etudes Approfondies	RSD	Le Recherche au Service du Développement
DESS	Diplôme d'Etudes Supérieures Spécialisées	SALT	ORSTOM programme on long-term savannah development
DEUG	Diplôme d'Etudes Universitaires Générales	SECA	Société d'Eco Développement
ECOFOR	French research consortium on forest ecosystems	SERFOB	Service Régional de la Forêt et du Bois
ENGREF	Ecole Nationale du Génie Rural, des Eaux et des Forêts	SILVA	French (NGO) association 'SILVA, Arbres, Forêts et Sociétés'
ENSA	Ecole Nationale Supérieure Agronomique	SODEFOR	Société de Développement des Forêts
ENSAM	Ecole National Supérieure d'Agronomie de Montpellier	SPOT	French satellite programme
FAC	Fonds d'Aide et de Coopération	UAIC	Unité d'Afforestation Industrielle du Congo
FED	Fonds Européen de Développement	UICN	Union Internationale pour la Conservation de la Nature
FEM	Fonds pour l'Environnement Mondial (in English, 'GEF')	UNCED	United Nations Conference on Environment and Development (in French: <i>CNUED: Conférence des Nations Unies sur l'Environnement et le Développement</i>)
FF	Francs Français	UREF	Universités des Réseaux d'Expression Française
FFEM	Fonds Français pour l'Environnement Mondial		
FFM	Fonds Forestier National		
FFEM	Fonds Français pour l'Environnement Mondiale		
GERDAT	Groupement d'Etude et de Recherche pour le développement de l'Agronomie Tropicale		
GIS	Geographical information system		
IAM	Institut Agronomique Méditerranéen		
IFP	Institut Français de Pondichery		
IGN	Institut Géographique National		
INRA	Institut National de Recherche Agricole		
IRBET	Institut de Recherche Burkinabé d'Ecologie Tropicale		
MEEP	Mission chargée des études, des évaluations et de la prospective		
MNHN	Muséum National d'Histoire Naturelle		
NGO	Non-governmental organisation		
ONF	Office National des Forêts		
ONG	Organisation Non Gouvernementale		
ORSTOM	Office de la Recherche Scientifique Outre-Mer		
PAFT	Plan d'Action Forestier Tropical		
PN	Parc National		
PNAF	Plan National d'Action Forestier		
PNR	Parc Naturel Régional		
P.RO.PAR.CO	Société de Promotion et de Participation pour la Coopération		
PSG	Plan Simple de Gestion		
RCA	République Centrafricaine		

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