

Austria

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1. TEMPERATE FORESTRY IN AUSTRIA

1.1 Forest cover, type and tenure

Forest cover in Austria may once have been as high as 75%, but by the beginning of the 19th century it had been reduced to around 30%, primarily due to pressure for agricultural land. Active reforestation measures since then have ensured that Austria is now one of the most densely forested countries in Europe with 46% (3,878,000 ha) of its land area classified as forest and an additional 2,000 ha being afforested each year (BMLF, 1995a).

About 77% of the country's forests consist of conifers (primarily spruce), which make up the natural vegetation in the mountainous alpine regions, but were also introduced for economic reasons in some of the lowland areas. These plains and foothills are otherwise dominated by broadleaves, the proportion of which has been increasing due to forest policy changes in the 1970s (BMLF, 1995a).

Fully one-third (1.3 million ha) of Austria's forests serve a protective function. Though this does not exclude timber production, protection against natural hazards such as soil erosion and avalanches is given management priority in these often steep and ecologically marginal areas. Some 80% of Austria's forests is in private hands. 213,000 individuals own forests of less than 200 ha, accounting for nearly half of all forests, with another third being managed by major forest enterprises (BMLF, 1995b). The 16% owned by the Republic of Austria is managed by Austrian Federal Forests, an organisation structured like a private enterprise (Siegel, n.d.).

1.2 Forest institutions

The forest has been under legal protection since medieval times when rules provided for the conservation of the forest to secure raw material supplies (charcoal) for mining, saltworks and metalworks. The Imperial Forest Law of 1852 further emphasised the need to preserve the protective function and ecological benefits of the forest. The Austrian Forest Law (adopted in 1975 and amended in 1987) underlines the shift from perceiving forests as a source of raw material to seeing them as an irreplaceable component of the environment. Thus it stipulates that forest exploitation must always be followed by reforestation, and permanent clearing is only permitted in exceptional cases. Clearfelling of areas over 0.5 ha requires special permission and is completely forbidden for areas over 2 ha. Leisure access to forests is guaranteed for all, although certain activities (such as berry-picking) are limited to prevent overexploitation (BMLF, 1995b).

The Federal Ministry of Agriculture and Forestry (*Bundesministerium für Land- und Forstwirtschaft*, BMLF) is responsible for formulating forest policy and legislation as well as coordination of forestry activities at the national level. Compliance with forest legislation is monitored by a three-tier Forest Authority (Siegel, n.d.). All owners of more than 1 ha of forest are obliged to be members of provincial agricultural chambers which provide advice and promote their members' interests (BMLF, 1995a). A number of

voluntary associations also represent the interests of smaller farm foresters. Subsidies and credits are provided to encourage improved forest management (BMLF, 1995b).

Austria has a particularly well-developed land-use planning system in which a key role is played by the Torrent and Avalanche Control Service established over 100 years ago (BMLF, 1995b). Based within the BMLF and of special importance in such a mountainous country, this service is responsible for carrying out country-wide hazard mapping and implementing the necessary protective measures ranging from reforestation at high altitudes to construction of physical barriers. Both hazard maps and data from the 5-yearly national forest inventory contribute to the Forest Development Plan. First drawn up in 1991 and due to be renewed every 10 years, this Plan provides a framework for political decisions concerning forests at national and provincial level, and is also increasingly used for general land-use and transport planning (BMLF, 1995b).

1.3 Role of forestry in the Austrian economy

Austria is an important net exporter of forest products, and export income per capita is the third highest in Europe after Finland and Sweden (Kuusela, 1994). For the majority of small forest owners, however, forestry is a supplementary and usually off-season activity. Only 33% of forest enterprises constitute a primary source of income (BMLF, 1995a). Overall the forestry sector employs around 8,500 people and accounts for 0.6% of GNP (BMLF, 1995a).

Perhaps more important than its contribution to the economy is the forest's importance as an integral element of the country's cultural landscape. With the majority of the population living in small towns and rural communities, there is a vivid interest in all matters relating to agriculture and forestry (Siegel, 1995). Thus there is widespread concern among both the public and forestry professionals about evidence of forest damage. In 1994 40% of trees were found to have suffered some level of canopy defoliation and nearly 8% were classified as moderately or severely defoliated according to internationally agreed standards. This is thought to be due to a combination of air pollution and acid soils which makes trees more susceptible to pests and diseases and less resistant to climatic stress. Large populations of game and the cattle-grazing, which still takes place in 10% of forests, have also taken their toll on natural regeneration. In addition to these factors are the problems that arise from overuse of the forests by people themselves, particularly in the form of leisure pursuits such as skiing and mountain-biking which can have a damaging impact on ecologically fragile areas (BMLF, 1995b).

2. HISTORY OF INVOLVEMENT IN TROPICAL FORESTRY

Austria's entry to the United Nations in 1955 marked the beginning of a more international orientation. This was a clear break with the tradition of both the early

continental Austro-Hungarian Empire and Austria's subsequent incarnation as a small Central European state, both of which were primarily concerned with internal and European politics (Pilz, 1996; Ederer, n.d.). Austria therefore had none of the active overseas relationships developed by the European colonial powers and also by the Scandinavian countries, nor any history of involvement in tropical forestry on which to base its new programme of development assistance (Ederer, n.d.).

3. STRUCTURE OF AID DELIVERY

3.1 The Department of Development Co-operation

The administration of Austrian aid is dispersed over many Ministries (Figure 1). The Department of Development Co-operation (DDC), which is formally charged with overall coordination of the aid policy of the government, has itself shifted location several times. Originally located in the Foreign Ministry, it was then moved to the Chancellor's office (*Bundeskanzleramt*, BKA) in 1991, only to be re-integrated into the Foreign Ministry in 1995 (BMaA, 1995). In practice, however, the DDC has control over only 10–16% of the aid budget including bilateral aid, contributions to the United Nations Development Programme and a few small United Nations agencies, and part of Austria's scholarship programme (DAC, 1996). The DDC is also responsible for promoting public information about development issues within Austria, which it achieves both through its own information service and through collaboration with a number of NGOs (Pilz, 1996).

The largest part of Austria's official development assistance (oda) (34–44%) is administered by the Finance Ministry which is responsible for contributions to international financial institutions, debt relief and concessional official export credits. The Interior Ministry administers aid for refugees within Austria, the Ministry of Science and Research deals with part of the scholarship programme, and the Ministry of Agriculture manages food aid, contributions to FAO, etc. (DAC, 1996).

In spite of recommendations by the OECD's Development Assistance Committee (DAC, 1996) that staffing levels be increased, the DDC has had to 'downsize' in recent years. All its sector specialists, including the environment adviser, have been 'contracted out' to universities, consultancies and NGOs, and a similar system is being considered for country or regional specialists. Concentration of aid on a smaller number of priority focal countries (see section 4.1.2) has been accompanied by the setting up of regional offices in each of the countries to play a greater role in the development of country, regional and sector programmes (BMaA, 1995). In some cases regional offices are staffed by DDC or embassy personnel while, in others, staff are provided by NGOs in a unique approach in which NGO staff are given the status of consultants to the Ministry (DAC, 1996).

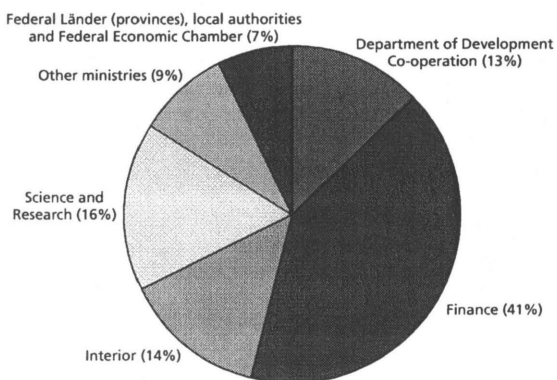
3.2 Bilateral co-operation and NGOs

Austria does not use an official agency to implement its bilateral programme, which accounted for only 12.6% of total oda in 1995 (equivalent to Sch 1 billion) (Pilz, 1996). Instead, the DDC relies on numerous voluntary agencies, private or nationalised companies, consultancies, international organisations, etc., with a total of 74 different implementing agencies being involved in 1994 (Figure 2).

NGOs are considered to be particularly good at reaching the poorest sectors of populations even in countries in which it is not possible to collaborate directly with governments. They also play a very important role in educating the Austrian public about conditions in developing countries and increasing their support for development co-operation activities (Pilz, 1996). Thus in some of Austria's priority countries (e.g. Senegal, Kenya) support is exclusively given to projects co-financed with NGOs. In others like Bhutan, on the other hand, the low level of engagement of Austrian NGOs has meant that all projects are implemented through consultancies (BMaA, 1995). In general, consultancies play a more important role in implementing projects for which specific technical know-how is required (Pilz, 1996).

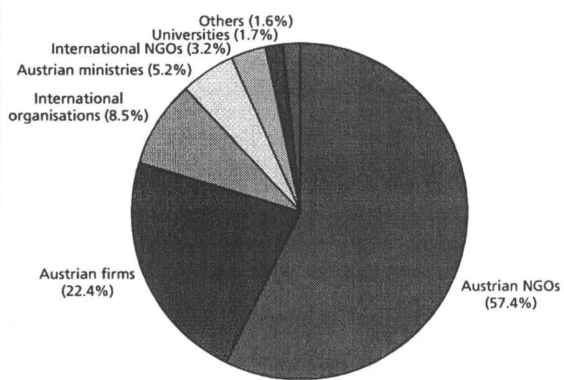
Many Austrian NGOs have very few funds of their own and rely heavily on government co-financing of

Figure 1: Share of individual ministries in Austrian oda: average 1993/94



(Source: DAC, 1996)

Figure 2: Implementation of DDC-administered project and programme aid, 1994



(Source: DAC, 1996)

their projects (DAC, 1996). To be eligible for co-financing, projects must be in line with the government's three-year programme of development co-operation (see section 4.1) and:

- address the basic needs of the poorest people;
- aim to increase the capacity for self-help of target groups;
- involve target groups in the planning and implementation of activities;
- have clearly defined objectives which can be realised within a specified time period.

The level of co-financing can be up to 75% of project costs for projects in one of Austria's priority countries (see section 4.1.2) and up to 35% for those in other countries, with a maximum Ministry contribution of Sch 1 m. per year per project. Decisions about co-financing are taken twice a year by a Programme Committee within the Foreign Ministry (BMaA, n.d. a).

Collaboration with NGOs requires a continuous process of in-depth dialogue to achieve a compromise between the NGOs' desire to take their decisions in an independent manner, and the Ministry's responsibility for implementing an overall development policy (Pilz, 1996). This tension is particularly evident in the government's wish to concentrate projects in particular countries and sectors while the reality is that NGO projects tend to be small and widely dispersed around the world (BMaA, 1995).

The government contributes about 70% to the cost of sending out volunteers through the Austrian Development Service. In 1994 140 volunteers were working in nine countries, principally Uganda, Zimbabwe, Ecuador, Nicaragua and Papua New Guinea. Key sectors for volunteers are technology, handicrafts, trade and health (BKA, 1994).

3.3 Multilateral co-operation

Austria's entry into the European Union in 1995 reversed a trend of declining multilateral co-operation (DAC, 1996). Austria's contribution to the EU development budget was Sch 850 m. in 1995 and, from 1998, additional contributions of about Sch 4.5 billion over a period of five years will be required for the European Development Fund. Rather than seeing this as an opportunity to reduce its own bilateral development aid, Austria sees EU assistance as being complementary to its own. In particular it recognises that a good quality bilateral assistance programme will ensure that it has a stronger voice in determining the EU's development policies (Pilz, 1996).

Austria makes relatively small contributions to the various United Nations organisations with the exception of the United Nations Industrial Development Organisation, which is located in Vienna (BMaA, 1996).

4. TROPICAL FORESTRY DEVELOPMENT POLICIES

4.1 General development co-operation policies

The law governing development aid dates from 1974 and, in spite of several attempts, has not yet been

updated (DAC, 1996). Development co-operation is considered to be an integral component of Austria's foreign policy and, far from being neutral, is expected to contribute to the promotion of peace and good governance, and a reduction in discrimination (Pilz, 1996). The country's aid policy orientations are outlined in the rolling 'Three Year Programme of Austrian Development Aid' which is updated every year. However, the three-year programme primarily covers the activities for which the DDC is responsible and which account, on average, for less than 15% of total oda. Any policy initiative taken by the DDC to improve the quality or orientation of aid can, therefore, be outweighed by activities in other parts of the programme. There is no development strategy covering all aid activities (DAC, 1996).

4.1.1 Volume of funding

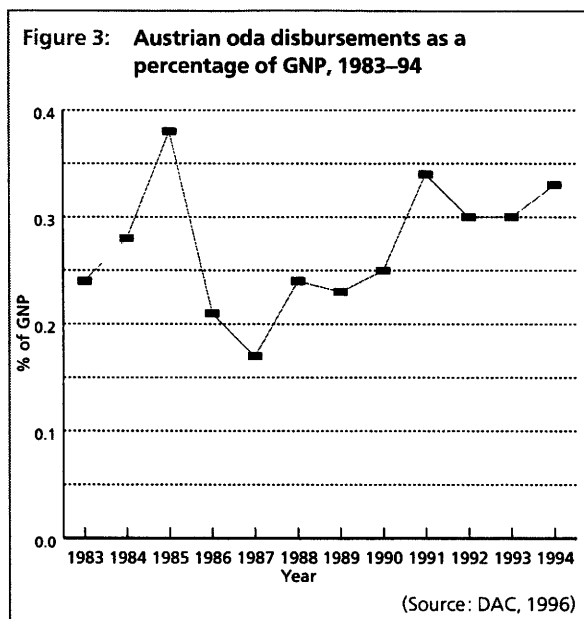
Public support for development co-operation is very high. It is, however, characterised by a misconception that Austria spends much more on development co-operation than it actually does (Pilz, 1996). In 1994 Austria spent Sch 7.5 billion on oda, equivalent to 0.33% of its GNP, compared to only Sch 3.7 billion in 1989 (BMaA, n.d. b). As a percentage of GNP, Austria's aid has fluctuated in recent years (Figure 3). This is primarily due to the fact that most of the funds are outside of the DDC's control and can vary greatly from year to year. These include expenditure for refugees within Austria, imputed students' costs (i.e. the estimated costs of waiving Austrian tuition fees for students from developing countries) and concessional official export credits¹, which together account for almost half the aid programme (55% in 1994). The DAC has criticised the reporting of these costs as oda, as the developmental significance of the costs is not always clear and the benefits are not focused on Austria's priority countries or sectors (DAC, 1996).

The DDC's own small resources consist, to about two-thirds, of firm budget appropriations and, to one-third, of a supplementary budget which may take a long time to negotiate and, in 1995, was only released in the last quarter, leading to uncertainties and delays in providing funding to NGOs. The fact that government budgets can only be committed for one year at a time can be a major headache for NGOs trying to plan for the financial needs of longer-term projects (DAC, 1996).

Austria's volume of development aid should be seen within the context of its generous support to the countries in transition to a market economy in Eastern and Central Europe. In 1993 this amounted to 0.22% of GNP, the highest proportion within the OECD (BMaA, 1995). It is also keen to promote debt relief at the international level and announced debt cancellations of Sch 1 billion in 1995 (BMaA, 1996).

Since 1993 all bilateral technical aid has been in the form of grants rather than loans (Pilz, 1996). However,

1. This scheme provides subsidised export credits to developing countries. The credits are initiated by Austrian exporters with requests being assessed by an interministerial committee including a representative of the DDC who may abstain from approving if it considers that the credit is not sufficiently development-oriented (DAC, 1996).



the major part of Austrian aid is tied. Concessional export credits, imputed students' costs and aid for refugees are for obvious reasons tied. In addition, the major part of DDC-administered aid is also tied as it is implemented by Austrian NGOs, firms and consultancy bureaux (DAC, 1996).

4.1.2 Regional focus

Austrian aid used to consist of a widely dispersed series of individual projects that were chosen based on personal contacts and political considerations (Pilz, 1996). Some countries have always had a large Austrian presence, such as Nicaragua, which saw a wide range of activities implemented by solidarity groups, churches and NGOs supported by the huge wave of public sympathy engendered by the collapse of the Somosa dictatorship (Pilz, 1996). Other countries, however, had just one or two projects depending on the interests of the implementing NGOs.

Given the size of its aid programme, the administration has now recognised that a meaningful contribution can be achieved only if activities are concentrated geographically and sectorally (DAC, 1996). There is therefore an ongoing shift towards a recipient country approach with efforts being concentrated in five key regions in which a total of 8 priority or focus countries (in italics below) and 11 'co-operation' countries have been selected.

Central America	<i>Nicaragua</i> , Costa Rica, El Salvador and Guatemala;
Sahel region	<i>Burkina Faso</i> , <i>Cape Verde</i> and Senegal;
East Africa	<i>Ethiopia</i> , <i>Rwanda</i> ² , <i>Uganda</i> , Burundi, Kenya and Tanzania;
Southern Africa	<i>Mozambique</i> , Namibia and Zimbabwe;
Himalaya/Hindukush	<i>Bhutan</i> , Nepal and Pakistan.

2. Rwanda was originally considered a priority country but all aid other than relief was suspended in 1994 (BMAA, 1995).

To be selected for co-operation, countries must fulfil a number of criteria:

- suffer from poverty
- be located in one of the five key regions
- be the subject of longer-term Austrian development co-operation experience
- have safety conditions and logistic infrastructure conducive to successful collaboration
- have local structures or institutions capable of implementing projects (BMAA, 1995; DAC, 1996).

Additional criteria apply for 'priority' countries:

- development of a comprehensive co-operation programme based on a detailed sectoral analysis
- extensive Austrian co-operation experience in several sectors
- evident efforts by the national government to protect human rights, support democratisation and promote a careful use of natural resources
- regular development policy dialogue supported by appropriate local structures
- high degree of compatibility between the recipient country and Austrian development policy (BMAA, 1995; DAC, 1996).

It was hoped that by the end of 1997 a country programme would have been developed for each of the priority countries, as well as for some of the other 11 co-operation countries. These will be developed in discussion with partner governments, NGOs, technical experts from North and South and other donors and will provide the general guidelines for development co-operation between Austria and the partner country (Pilz, 1996). Increasingly, country programmes will be drawn up and coordinated by the regional offices, which are also responsible for the preparation, implementation and supervision of individual projects (DAC, 1996). Country programmes are complemented by three-year indicative co-operation programmes, country-specific sectoral programmes to guide the thematic content of particular activities, and annual programmes of activities (BMAA, 1996).

In budgetary terms the intention is to work towards achieving annual aid budgets of Sch 40–80 m. for priority countries and around Sch 20 m. for co-operation countries within the 1996–9 period (BMAA, 1996). After current projects have been concluded the only projects to be funded in non-priority countries will be those funded through co-financing mechanisms with NGOs and other organisations (BMAA, 1996).

The trend towards concentration has already had a marked impact, with the proportion of bilateral aid being spent on the key regions and countries increasing from only 24% in 1991 to 61% in 1994 (BMAA, 1995), and expected to rise to 70% by 1999 (BMAA, 1996). Given the limited proportion of aid funds at the disposal of the DDC, however, its own concentration of funds on a small number of countries will have little impact on the general spread of Austrian aid, which remains very wide (DAC, 1996).

4.1.3 Sectoral distribution

The three-year programme of Austrian development co-operation states that 'Austria's development policies aim to promote sustainable economic growth which

directly reduces poverty, satisfies the basic needs of a growing population, builds viable political economies and establishes the capacity for fruitful participation in the world economy' (Pilz, 1996). Within these global aims Austria particularly provides support in those areas in which it has a comparative advantage, long-standing experience and the right implementing agencies (DAC, 1996). These include vocational training, primary health care, water supply, promotion of democracy, transport, energy, rural development, forestry, mining, promotion of small enterprises, and tourism (Pilz, 1996). For most of these sectors, policy papers already exist or are being prepared (BMaA, 1996). Gender-balanced development is considered an important cross-cutting theme (Pilz, 1996).

For each of the key regions and priority countries, sectors of particular interest have been highlighted. In the longer term it is planned to concentrate the thematic spread of projects to four sectors in priority countries and two in co-operation countries (BMaA, 1996). Forestry is not considered a priority sector for any of the regions but is deemed important in Bhutan and Pakistan. In other countries forestry activities are included as components of projects in other sectors (e.g. rural development in Burkina Faso, agricultural production in Nicaragua) (BMaA, 1995).

4.2 Co-operation in the tropical forestry sector

Austria has no stated policy on aid in the tropical forestry sector. Until 1992 the volume of funding devoted specifically to forestry-related projects was fairly small, standing at about Sch 6.7 m. in both 1991 and 1992, equivalent to 0.1% of total oda or 0.15% of bilateral aid (BKA, n.d.). This was suddenly increased ten-fold when, at the United Nations Conference on Environment and Development (UNCED) in 1992, the Austrian Government announced a three-year (1993–5) special programme of Sch 200 m. (US\$ 18 m.) to support rain forest conservation in developing countries (Pilz, 1996).

The Rain Forest Initiative (see section 5) was in part the product of growing public concern within Austria about the state of tropical forests. In 1990 this had already resulted in the Austrian Parliament passing a resolution aimed at prohibiting the import of tropical timber from countries that did not demonstrate sustainable forest management. Austrian importers agreed voluntarily not to bring in such timber, but due to the critical reactions of some producer countries a new law was adopted in 1993 establishing a voluntary quality mark for timber from sustainably managed tropical, temperate and boreal forests (DAC, 1996). An Advisory Board chaired by the Federal Ministry for the Environment and including representatives of governmental organisations, of the timber industry, environmental NGOs and social and economic partnership organisations has been appointed to set up the labelling scheme.

4.2.1 Multilateral forestry co-operation

The Austrian Ministry of Agriculture and Forestry has provided support to FAO's Tropical Forest Action Programme. It also provides funds to the Consultative

Group on International Agricultural Research (Sch 16.5 m. in 1996), within which Austria attaches particular importance to the Centre for International Forestry Research and the International Centre for Research in Agroforestry (BMaA, 1996). The BMLF supports both the International Union of Forestry Research Organisations, of which it is one of the three founding members, and its Special Programme for Developing Countries for which it provides a secretariat located in the Viennese Federal Forest Research Institute. The BMLF further contributes to forestry aid by making its staff available for postings in development projects.

In close collaboration with FAO, Austrian forestry training centres have organised courses for foresters from developing countries with a special focus on forest technology, benefiting in particular from Austria's own experience of ecologically sound harvesting methods in steep terrain. Training has also been provided in the technical and biological stabilisation of soil erosion and the prevention of avalanches in mountainous areas, as well as in the hazard mapping as carried out by the Austrian Service for Torrent and Avalanche Control.

Austria made a relatively high contribution of Sch 400 m. to the pilot phase (1991–3) of the Global Environmental Facility (DAC, 1996). For the 1994–7 period its contribution amounted to 1% of the total US\$ 2 billion committed (BMaA, 1996).

5. THEMATIC AND REGIONAL DISTRIBUTION OF FORESTRY PROJECTS

When the Rain Forest Initiative was announced by the Chancellor in 1992, Austria had relatively little experience in the field of tropical forestry projects and it was not immediately clear how this additional sum of money would be spent. On the initiative of the DDC environment adviser, an intensive round of informal discussions was launched involving everybody in Austria interested in tropical forests. This process resulted in the definition of a number of positive and negative criteria for selecting suitable projects to be funded within the Rain Forest Initiative.

Overall, selection was influenced by a concern about global ecological and political stability and a recognition that conservation of tropical forests depends on the improvement of key socio-economic conditions in the respective countries. An underlying principle for the allocation of funds was the unconditional respect for indigenous people living in the forest area, based on the belief that preservation of indigenous living space and traditional rights can be an important factor in achieving successful forest conservation. About one-third of the budget was, therefore, dedicated to activities concerned with indigenous peoples such as land demarcation, assistance with legal rights, non-timber forest products, rehabilitation of traditional agroforestry and support to small community-based forest enterprises. The remainder of the funds was used to support sustainable land and forest use by non-indigenous local populations, with special care taken to avoid projects that might cause friction between indigenous and non-indigenous local people (BMaA, 1995).

Another selection criterion was the decision to support forestry activities carried out by local people rather than large companies – including activities ranging from subsistence-level activities to profit-oriented family or community enterprises. Support was also given to sustainable agriculture in forest buffer zones, ecotourism development in forest areas, small-scale village rehabilitation of degraded areas and small-scale sustainable timber extraction by local people (BMaA, 1995). Large-scale industrial logging projects were ruled out as the available budget seemed insufficient to tackle this question successfully. Nevertheless, in order to acknowledge the importance of this area, funding was provided for the timber certification work of the Forest Stewardship Council (FSC) (Weingärtner, DDC environment adviser, pers. comm., 1996).

With respect to implementation it was decided that the public and political desire for Austrian 'ownership' of projects was such that multilateral activities had to be excluded. Instead, all projects were implemented by NGOs because (i) it was partly due to NGO pressure that the special forest initiative had been announced, and (ii) because only NGOs had the necessary connections to implement activities within the short time-frame available after the announcement. The selected projects also had to be of limited duration, with preference given to those that triggered sustainable activities, bridged funding gaps, or demonstrated results that would attract longer-term funders (Weingärtner, pers. comm., 1996). A total of 36 projects were eventually funded, of which the majority have now been completed. Taking into account that most projects tackled several related areas, their distribution by principal themes is shown in Figure 4.

The geographic distribution was widespread, with the 36 projects dispersed in 15 countries. The great majority (22) were in Latin America with 11 in Brazil alone. Eight were in Africa, five in Asia and one (support to the FSC) was global in nature. As hardly any of the projects were in Austria's priority countries, very few have been followed up since completion. Outside of the rain forest initiative there are relatively few dealing exclusively with forestry. Two projects dating from before the UNCED conference are, however, still ongoing, one in Bhutan (see Box 2) and one in

Nicaragua dealing with forest and buffer zone development on the Rio San Juan near San Carlos.

6. RESEARCH AND TRAINING

The Austrian forestry establishment is well aware of the challenging demands of sustainable forest management. The importance of good vocational and technical forestry training is, therefore, widely recognised. Thus, for example, all forest enterprises over 500 ha in size are obliged to employ a state certified forester. These foresters will have undergone either a five-year course of study at a Forestry College (in Bruck/Mur or Gainfarn) followed by two years of in-service training, or a five-year academic degree at the Agricultural University in Vienna with three years of subsequent in-service training. A one-year course of vocational training for 'forest wardens' is provided by the Forestry School in Waidhofen/Ybbs (BMLF, 1995b). In addition, a comprehensive range of training opportunities is provided by both federal and state training centres for small farmers and forest workers to help them improve various aspects of their forest management (BMLF, 1995a).

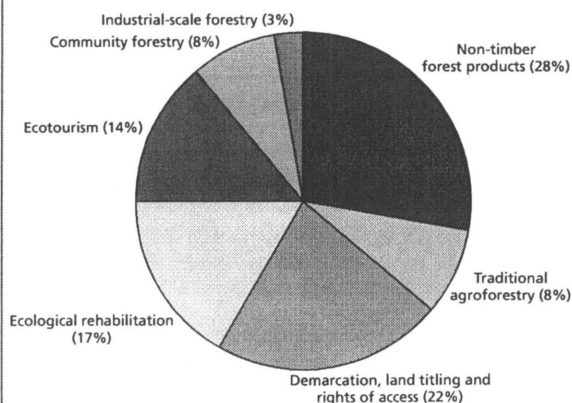
Most domestic forest research is carried out at the Federal Forest Research Institute and the Faculty of Forestry at the Viennese Agricultural University. Current research priorities concern the condition of the forests, focusing on the effects of air pollution and methods of improving the forest's vitality and ecological stability (BMLF, 1995a). Other research projects aim to provide the scientific basis for the development of community-based systems to compensate forest operators for performing those loss-making tasks considered to be essential for ensuring the long-term maintenance of the public utility function of the forest. Tropical forest research is carried out at a number of institutes, with the national node for the European Tropical Forest Research Network being located at the Agricultural University in Vienna.

7. PROJECT CYCLE MANAGEMENT

Austria does not yet have an agreed standard for project cycle management. Many of the NGOs responsible for implementation have not been used to applying planning instruments such as project cycle management or logical frameworks. Evaluations of NGO programmes are also rare and are mostly initiated by the evaluation unit of the DDC (DAC, 1996). In the past no clear distinction has been made between the implementation of official and NGO projects. Although the majority of projects are proposed by NGOs to the DDC for co-financing, in a few cases the DDC prepares its own projects and asks suitable NGOs to implement them. There are, however, no clear guidelines as to how the DDC should select the specific implementation agency nor how it should choose between different NGO proposals (DAC, 1996). In both NGO- and DDC-initiated projects the actual implementation phases are very similar.

With regional offices now in place in all of Austria's priority countries, much of the project cycle management is expected to be decentralised in the next few years (BMaA, 1996). Most projects are now required to have an environmental impact assessment (Pilz, 1996).

Figure 4: Thematic distribution of Rain Forest Initiative projects



(Source: Anon, n.d.)

Similarly, there is an attempt to assess all projects with respect to their impact on and importance for women (BMaA, 1995).

8. REVIEWS AND PROJECT PROFILES

The Division for Evaluation, Inspection and Control of projects was established in the DDC in 1989. Lack of staff and resources means that this division mainly fulfils the task of an audit bureau rather than evaluating development instruments or projects/programmes. It is also only responsible for those activities carried out by the DDC. There has, therefore, been no evaluation of concessional export credits, multilateral aid or aid to refugees in Austria. Most evaluations to date have been project-related, although efforts are under way to evaluate country programmes and institutions (DAC, 1996).

Evaluations aim to assess projects and programmes in relation to their relevance, effectiveness, efficiency, impact and sustainability. An annual programme of evaluations is planned according to the following criteria:

- to evaluate and support strategic work of the DDC, particularly concerning programme development, decentralisation and contracting out;

- to promote the development of uniform quality standards;
- to gradually evaluate all essential aspects of Austrian development co-operation from sectors to regions, and type and phasing of activities;
- to give more emphasis to evaluations of programmes and cross-cutting themes (BMaA, 1996).

Although there has as yet been no formal evaluation of the projects funded under Austria's Rain Forest Initiative, several lessons have been learned from this interesting experience (Weingärtner, pers. comm., 1996). Generally speaking, the projects dealing with indigenous people seem to have been successful, with several areas of land being demarcated and indigenous people being helped to gain access to more solid legal rights. The many projects concerned with non-timber forest products, on the other hand, did not live up to the hopes of the implementing NGOs. In part this was because existing markets for such products were already fully exploited and new markets difficult to create, and also because for many people agriculture was the preferred source of livelihood. An important lesson learned from the two ecotourism projects was that successful ecotourism requires a relatively long build-up of socio-cultural activities to avoid corruption and ensure community-wide ownership.

Overall the Rain Forest Initiative has re-emphasised

Box 1 Brazil: diversifying incomes for indigenous people

Typical of the indigenous focus of Austria's Rain Forest Initiative is its support to the Indian Research Centre in São Paulo. The Centre works directly with Indian communities, providing advice and experience, and carrying out publicity work to inform the Brazilian and international public about Indian issues. One example of such a project is the Centre's work with the Ashaninka community on the Rio Armônia who are looking for new ways to safeguard their livelihoods. In the past many Ashaninka worked for commercial timber companies – often an unhappy experience. Now that their rights to their territory have been legally secured they are trying to make a living from agriculture but this has proved difficult, owing to the distance from the nearest markets. Instead, they are beginning to achieve some success in marketing traditional necklaces made from local seeds.

Another new opportunity for earning an income lies in the collection of plants for the extraction of essential oils for industry. 52 plants have currently been tested, of which five are already used commercially. The project is a complex one involving the scientific training of Indian colleagues at the Universities of Campinas and São Paulo, and collection of plants (particularly those with oil-rich seeds) in the Ashaninka villages, which requires not only the development of specialist collection techniques but also methods of storage and conservation. And this is only the beginning; the difficult phase of processing and marketing is still to come and will require continued dialogue to ensure the support of all members of the community.

(Pilz, 1996)

Box 2 Bhutan: sustainable forestry in steep terrain

The dense fir forests of Bhutan's Himalayan region are the site of an Austrian-supported project which has for several years now been investigating the possibility of achieving sustainable timber exploitation. The project is a collaboration between the Government of Bhutan, experts from the Agricultural University in Vienna, an Austrian consulting company and an Austrian NGO. Located at an altitude of 3,500 to 4,000m, the forest belongs to the state but local communities can exercise certain traditional rights such as collecting fuel or construction materials and grazing their yaks. The forest's undergrowth of rhododendrons and bamboo also provides an important environment for a number of rare animals such as the red panda and the tiger.

The project area covers 10,000 ha and two villages. Early work has concentrated on training local staff in ecologically friendly road-building techniques, and researching methods of sustainable use of the apparent wealth of timber in the area, both subjects which benefit from Austria's domestic experience of implementing forest management in steep, mountainous environments. Research is being undertaken to combat the soil fungus with which even young trees have been found to be infected, causing damage to the roots and spoiling the timber. Further research has shown that regeneration is light-dependent and can be successfully achieved by creating small canopy clearings rather than planting. Certain areas and corridors have been identified as protection forest to secure the habitats of wild animals. The next project phase will determine whether sustainable timber exploitation is possible, examining not only the technical requirements but also the socio-economic aspects, such as the impact on traditional use rights of selling licences to private timber exploiters.

(Pilz, 1996; Stachel, pers. comm., 1996)

the point that quality and sustainability of projects can be better assured through co-operation with priority countries in which longer-term programmes can be responsive to needs and incorporate forestry activities only when it appears appropriate to do so.

9. CONCLUSION

Tropical forestry has not been a major part of Austria's normal programme of development co-operation. The period 1993–5 was an exception when a special Rain Forest Initiative funded 36 projects around the world. The range of projects funded underlines Austria's commitment to the rights of indigenous people and its interest in supporting small-scale projects. The experience of the initiative confirmed the desirability of the current trend in Austrian aid to move towards longer-term programming with a selected number of countries and in a few key sectors. In the future, therefore, forestry projects should be funded only if they respond to specific sectoral needs of a priority country.

There are perhaps two main areas in which Austrian forestry expertise has a potential comparative advantage. One is the development of ecologically sound small-scale timber utilisation and extraction methods for steep terrain, as over 40% of Austria's own production forest is on slopes of over 40% (Siegel, n.d.). The other is the field of forestry legislation and planning, learning from the sophisticated system of integrated forestry and land-use planning in place in Austria.

Austria's early experience of legislative attempts in the field of timber certification gave an important impetus to international discussions and collaborative research on defining criteria and indicators for sustainable forest management. Austria's recent entry to the EU may provide it with another forum to influence the international forestry debate.

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ACRONYMS

BMAA	Bundesministerium für auswärtige Angelegenheiten (Federal Ministry of Foreign Affairs)
BMK	Bundeskanzleramt (Chancellor's Office)
BMLF	Bundesministerium für Land- und Forstwirtschaft (Federal Ministry of Agriculture and Forestry)
DAC	Development Assistance Committee of the OECD
DDC	Department of Development Co-operation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FSC	Forest Stewardship Council
GNP	Gross National Product
NGO	Non-Governmental Organisation
oda	official development assistance
OECD	Organisation for Economic Co-operation and Development
Sch	Austrian shillings
UNCED	United Nations Conference on Environment and Development

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Belgium

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1. DOMESTIC FORESTS AND FORESTRY

1.1 Brief history of forestry in Belgium

Two thousand years ago, most of Belgium was covered by natural forest. The main formations were the oak and birch woods which covered la Campine, the Atlantic oak forests of Central Belgium, and the hornbeam, oak and beech forests of Upper Belgium. First the Gauls cleared patches of forest to practise cultivation and animal husbandry, then the Romans built roads through the forests and made it more accessible.

In the Middle Ages major areas of forest were cleared by Cistercian monks and by feudal lords and princes. At this time the first towns appeared. As the population increased, the cultivated areas were extended and the forest further cleared. This process began earliest in Flanders in the tenth and eleventh centuries, when trade and industry began to develop. The remoter, more mountainous Ardennes, on the other hand, remained a thickly wooded agricultural region throughout the Middle Ages. It was in the thirteenth century that the first communal forests appeared, with specified rights for local people. These included pannage (the herding of pigs), grazing for horses and horned animals, the right to cut firewood, the right to clear forest land for temporary cultivation, the right to extract oak bark for tannin, the use of timber for building and carpentry, and the right to extract organic material from the forest for use on the fields, or as bedding for livestock.

By the sixteenth century, the metallurgical industry was pressing hard on the forest for charcoal to keep the forges going, and charcoal-burners began to be blamed for deforestation. As a result, a detailed Forest Edict on Woodlands and Forests was promulgated in 1617 – a remarkable forest code for the time. It specifically forbade the creation of new forges, but was not able to enforce compliance.

In the eighteenth century, degradation of the forests increased, partly as the result of a regulation dating from 1754 which reduced from 60 to 30 years the age at which trees could be felled. As a result, the vast majority of forests consisted only of coppice with standards by the end of the century. In Flanders, these were composed of oak, alder, poplar, aspen and willow, and in the rest of the country oak, beech, hornbeam and white woods such as ash, maple, elm and lime.

Metallurgy maintained its importance, but from the beginning of the nineteenth century it relocated progressively to coal mining areas. By the middle of the century, as a result, people were beginning to question the economic role of forests by contrast with agriculture, and deforestation rates increased. Despite this, more than 400,000 ha of forest (mainly coppice) were still in place at mid-century.

The trend was reversed only in 1847, when a law was passed relating to land clearance and deforestation, and the state began to encourage reforestation, providing subsidies to communities and individuals for tree planting. Tree cover began to increase again, and the total forest area grew from 435,000 ha in 1866 to 613,800 ha in 1970. An examination of the systems shows that the deciduous high forest area more than

doubled over this period, essentially through the conversion of coppice.

1.2 The timber sector

At the time of the last official census in 1970, the forest covered 613,800 ha, of which 53% was deciduous and 47% coniferous. However, according to a study carried out in the early 1980s (Rondeux, 1980–84), the forest was more widespread and covered 657,500 ha (22.3% of the country). Most of the forest (about 82%) is in the Walloon region. In the deciduous forest the main species are beech, chestnut oak and pedunculate oak followed by other valuable deciduous species such as wild cherry, ash, maple and birch. Spruce represents 85% of the conifers, although in more recent plantations the trend is for diversification with Douglas fir and Japanese larch.

The standing volume of the Belgian forest estate is estimated at 75 million m³, – a density of 120 m³ per hectare on average, together with the poplars outside the forest. Annual production in 1990 and 1991 was 5,270,000 and 4,490,000 m³, i.e. considerably more than 6 to 8 m³ per ha per year. These figures, among the highest in the world, demonstrate the very high productivity of Belgian silviculture.

Production from Belgian forests is on the increase, and in 1991 covered more than 60% of consumption. Most of the imported temperate deciduous timber comes from France and North America; imported tropical deciduous timber originates in South-East Asia (principally Malaysia) and Africa. Imported coniferous timber comes from northern Europe (Germany, Finland, Russia, and Sweden) and from Portugal, Canada, the United States and Chile. Exports are mainly to European Union countries.

Although most of the Belgian forest is located in the Walloon region, it is in the Flemish region that most of the timber-processing plants are located. The added value of the timber sector was BEF 52 billion in 1980, or 1.7% of GDP. In 1987, the added value was estimated at approximately BEF 100 billion.

1.3. Present forest structure

Belgian forests are divided more or less equally between private and public owners. The public forest includes national forests, communal forests (three-quarters of the public forest) and State plantations. All these are subject to the Forest Code of 1854, and subsequent laws and decrees, which lay down the rules governing the administration and supervision of forests. The Code has supported a very competent forest administration, which was regionalised in 1990.

The major differences in the way the Code is applied in the two regions stem from the fact that not only is the forest area in Flanders smaller than that in the Walloon region, but most of it (70%) belongs to private owners. Het Bosdekreet (the Forest Code in Flanders) is notably more restrictive with regard to felling and obliges private owners of more than 5 ha to implement a management plan for their plots. In the Walloon region, private forests are subject to very few regulations. However, they benefit from subsidies to encourage both natural and artificial regeneration of deciduous and conifer species and afforestation of agricultural land. The Walloon region has adopted the principles defined

by the 10th World Forest Congress (1991) and the 1992 Rio and 1994 Helsinki conferences, and intends to continue to manage the forest sustainably and to emphasise the protection, conservation and biodiversity aspects of management. The establishment of simple management plans is being studied and will probably be integrated, by the granting of subsidies, with the other measures applicable to privately owned Walloon forest.

One important feature of the private forest is its division into small holdings. There are more than 120,000 private owners, 80% of whom own less than 2 ha, and only 1.5% of whom have more than 50 ha (representing 45% of private forest). Numerous private owners are grouped together in the Royal Forestry Society of Belgium, (*Société Royale Forestière de Belgique; Koninklijke Belgische Bosbouwmaatschappij*), founded in 1893. This organisation defends their interests both with regard to national bodies and on the Central Committee for the Private Forest (CCPF) a consultative organisation recognised by the European Union (Administration des Eaux & Forêts, 1958; Auteurs Divers, 1985; Bary-Lenger *et al*, 1992; Vertriest, 1990; Ministère de la Région Wallonne, 1996).

2 HISTORICAL INVOLVEMENT WITH TROPICAL FORESTRY¹

2.1 Introduction

The history of Belgian forestry is closely linked to that of the former Belgian colonies. In 1908 the independent state of the Congo became the colony of the Belgian Congo (and at independence in 1960, Zaire). In 1923 Belgium received a mandate from the League of Nations to administer the twin territories of Rwanda-Burundi², a German colony acquired after the 1914–18 war, which at independence became the two states of Rwanda and Burundi.

2.2 Forest research in the colonial period

The years from 1908 to 1914 were devoted to developing Belgian colonial policy and establishing new institutions. In 1910, a General Administration for Agriculture was established within the Ministry of the Colonies. From 1914 to the end of the 1920s, it was essentially the agricultural sector that was developed. The National Institute for Agronomic Studies of the Belgian Congo (INEAC) was created in 1933, its activities also extending to Rwanda and Burundi. Since forests offered considerable economic potential, INEAC established a forest division in 1935, in the Scientific Section of the Yangambi Research Centre located in the Upper Congo region, and then rapidly extended its activities to other regions. For instance, in 1940 the forest station of Luki, located in the region of the Lower Congo, was established. During World War II work and inventories continued and in 1948 the production of a Flora of Congo-Rwanda-Burundi began (Jardin Botanique de l'Etat, 1963). Throughout the war, the local

forest species (*Entandrophragma spp*, *Terminalia superba*, *Cleistopholis glauca*, *Alstonia boonei*, *Podocarpus sp*, *Chlorophora excelsa*, *Pterocarpus soyauxii*, *Khaya sp*, etc.) and exotic species (such as *Pinus spp*, *Eucalyptus spp*, *Acacia spp*, *Callitris spp*, *Grevillea robusta*) thought likely to have a significant economic future were planted and studied under various ecological conditions. Based on the continuity of these observations, silvicultural trials were able to be undertaken from 1946 onwards. The major concerns were environmental protection, soil conservation, protection of forest cover, measures against deforestation and fire-fighting.

In the Belgian Congo, the 1950–59 ten-year plan covered five areas:

1. determination of allowable cut in production forests, regulation of logging activities, perfection of methods of management, enrichment and plantation;
2. trials of new species; improving the profitability of, and diversifying, industrial production (e.g. veneers and plywood);
3. export promotion for timber products;
4. reforestation for firewood;
5. establishment of forest reserves, protection of savannah³, and protection of the forests.

In Rwanda-Burundi, the 1950–59 ten-year plan focused on protection of the upland forests and the establishment of new production forests. In fact, few forests remained and demographic pressure threatened to destroy what was left. By the end of 1959, remaining totals were assessed at 40,000 ha of managed forests, 24,000 ha of afforested areas for production of firewood, 300,000 ha of protected savannah, plus 11,000 ha of afforestation for soil conservation.

Numerous management techniques were tested in three types of silvicultural treatments:

- enrichment planting, using the method of enrichment in dense stands (Anderson method). This method was intended to enrich the natural forest by the establishment of dense nuclei of valuable species in which seedlings were given the chance to grow rapidly with little competition. The intention was that, by the time they came to interact with the natural environment, they would already be large enough to compete successfully;
- progressive evolution of the forest towards a less heterogeneous composition, using the Belgian method of standardisation by height. This method attempted to favour the middle age-classes of the best-represented valuable species by eliminating species with no commercial value, and also by simultaneous intervention in all forest layers. The final goal was to eliminate the largest-diameter stems (apart from those with commercial potential); to maintain a cover of medium-diameter stems rich in desirable species, and to improve light at ground level with a view to encouraging regeneration;
- radical modification of mixed stands into pure stands.

1. Most of the information in this section has been extracted from Drachoussoff *et al* (1991).

2. Actually known as Ruanda-Urundi in the colonial period.

3. Through creation of fire-breaks and encouragement of fire-resistant species.

From 1955 onwards, the older style of arboretum research, which had been to conduct studies of species of potential commercial interest, was progressively replaced by shorter-term comparative trials, conducted in a limited area. These studied the development of a large number of species until they reached the height of 4 metres, the aim being to provide detailed information on growth rates of young trees, on crown diameter, and on susceptibility to pests (Donis and Maudoux, 1951; Lebrun and Gilbert, 1954; Donis, 1956; INEAC, 1961).

2.3 The colonial forest service

A Water and Forests Service was established in the Belgian Congo in 1945. From then on, each province had a forest engineer whose task was to make an assessment of his province, and define forest policy there. In particular, he was asked to establish 'forest operations regions' and to initiate a management programme specific to each, as soon as possible. Strengthening the resources of the Forest Service in this way, made it possible to monitor logging operations more closely and to encourage the establishment of a modern timber industry.

In Rwanda and Burundi, the population had been obliged since 1931 to take part in communal afforestation. Every year, each community had to carry out afforestation at a rate of 1 ha per 300 taxpayers, in order to produce much needed firewood and construction timber for its own needs (De Ligne, 1987).

2.4 Logging operations

A decree governing logging operations was adopted in 1912. The various ordinances which followed made it possible to increase production rapidly. Production rose from 143 m³ of logs and sawn timber exported in 1923, to 9,452 m³ of logs and 3,880 m³ of sawn timber in 1930. The prosperity of the 1920s encouraged private investment and the establishment of colonists. After World War II, all types of logging operations were to be found in the Belgian Congo – and to a lesser extent in Rwanda-Burundi – from modest semi-artisanal sawmills to large-scale operations completely equipped for logging, milling and processing (sawnwood, veneers and plywood). The Belgian authorities tried to encourage operators to maximise the modernisation of sawmills and the processing of logs. In this way the Belgian Congo retained the largest possible proportion of the added value, anticipating current strategies of self-interested industrial development. The volume of logs felled in the colony reached 850,000 m³ in 1955. The production of sawnwood and veneers increased continuously as well, to 56,000 m³ in 1959. The export of logs and processed timber increased from 105,000 m³ tonnes in 1950 to 162,000 m³ in 1959.

2.5 The National Parks

Nature conservation was a major concern of the Belgian authorities. In 1925, the Albert National Park (now the Virunga National Park) was the first national park in Africa. In 1934, the Kagera National Park (in Rwanda) was established, followed by the Garamba National Park in 1938 and the Upemba National Park (now the Volcanoes National Park) in 1939. Management of these parks was the responsibility of the National Parks Institute of the Belgian Congo (IPNCB) created in 1934.

Throughout the period 1945–58 in addition to the 24,740 km² of National Parks, 21 Protected Areas (37,355 km²) and 22 Hunting Areas (54,700 km²) were set up. Conservation and research were the main priorities of the IPNCB; tourism occupied only third place. The national parks of the Belgian Congo were highly thought of and served as examples to many other parts of Africa.

2.6 Post independence

A second 10-year plan (1960–70) was published in January 1960. In terms of the forest, it envisaged the following programmes: an inventory of forest resources; enrichment of the existing forests for industrial timber and pulp for paper-making; reforestation of non-wooded land for purposes of production and/or conservation; and timber technology.

The independence of the Belgian Congo in 1960 and then of Rwanda and Burundi in 1962 did not allow this plan to be implemented. However, the research was partially continued by the National Institute for Studies in Agronomic Research (INERA) in Zaire, as well as by the two Institutes of Agronomic Sciences of Burundi (ISABU) and Rwanda (ISAR).

In Belgium, in 1962, the Development Co-operation Office, currently called the General Administration of Development Co-operation (AGCD), was established. Initially, co-operation focused on the former colonies, but it has subsequently diversified to other countries. For example, it funded two large forestry projects (in Cape Verde and Peru) in the 1970s.

3. STRUCTURE OF DEVELOPMENT ASSISTANCE DELIVERY⁴

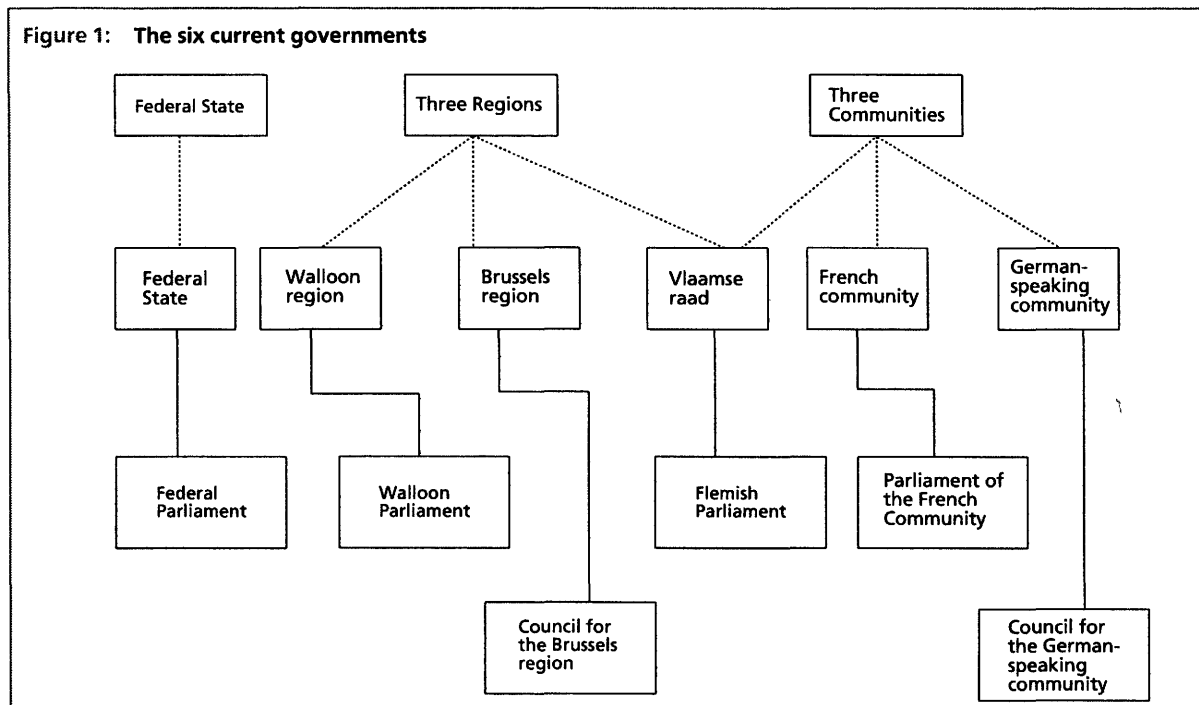
3.1 History of the process of federalisation

Belgium is a federal state consisting of three regions and three communities. This federal structure is the result of a progressive process, the basis for which was laid down in the 1970 reform which allowed three cultural communities to be recognised: the Flemish, the French, and the German-speaking community. Cultural councils were created at that time and authorised to issue decrees with the force of law. These have evolved into the Councils and Parliaments of the Communities.

The reform of 1980 recognised the principle of Regions. Like the communities in 1970, the regions acquired the right to issue decrees with the same validity as national law. However, only two regions were recognised: the Walloon region and the Flemish region. At this point the Flemish region and the Flemish community merged to form the Vlaamse raad. The reform of 1988–89 created a third region: that of Brussels itself. It also devolved certain state responsibilities to the regions and communities. Finally, the reform of 1992–3 put in place a process of direct election to the regional and community councils and parliaments. The 6 current governments are shown in Figure 1.

4. Except where otherwise indicated, sections 3,4,5,7 and 9 of this chapter are based on AGCD, (1990); AGCD, (1993); AGCD, (1994) and AGCD, (1996).

Figure 1: The six current governments



3.2. Federal, regional and community competencies

The federal state remains competent in a series of important areas, in particular development co-operation, monetary policy, justice, social security, foreign policy, some areas of employment, and a large part of public health, national defence and law and order. The regions are competent in the areas of land management, the environment, rural renovation and nature conservation, agriculture, housing, water policy, the economy, energy, some areas of employment policy and the organisation and exercise of supervision over the communes and provinces. The communities have authority in cultural matters and education.

3.3. Organisation of the aid programme

The organogram in Figure 2 shows the decision-making process for Belgian development aid. This aid amounted to BEF 30.4 billion in 1995 (0.38% of GDP). The Secretary of State for Development Co-operation has declared the intention of reaching the 0.7% of GDP UN target by the year 2000 or shortly thereafter and stated that net official development assistance disbursements will increase significantly from 1998 (OECD, 1997: 130). Figures 3 and 4 indicate the picture for 1985-95.

Co-operation between the different departments (Foreign Affairs, Foreign Trade, Finance, Agriculture, etc.) is organised within the Inter-departmental Working Group for Development Co-operation (GTICD), presided over by the Secretary of State for Development Co-operation. Virtually all (as much as 95%) of Belgian activity in tropical forestry comes under the Office of the Secretary of State for Development Co-operation, currently Mr Reginald Moreels, who is also assistant to the Office of the Prime Minister. The General Administration for Development Co-operation (Administration Générale de la Coopération au Développement, AGCD, or *Algemeen bestuur van de ontwikkelings samenwerking*, ABOS) also comes under the Secretary of State.

The organisation chart for the AGCD (Figure 5) is a combination of an earlier one which dates from the reform of the AGCD in 1992, and a later one incorporating modifications adopted in January 1997. A key change is that the old terms – bilateral, indirect bilateral and multilateral co-operation respectively – become governmental co-operation, non-governmental co-operation and international co-operation. To this chart should be added the presence of the Co-operation Sections attached to Belgian embassies (in over 30 countries in 1995). These Co-operation Sections are an integral part of the AGCD, but they are dependent on the embassies which alone are authorised to sign documents in Belgium's name. Their role is essentially to provide follow-up on projects financed or co-financed by Belgium.

Among the major changes to the structure of the AGCD, the following should be noted:

- (i) the combination of two 'Direct Bilateral Aid Administrations' into the single 'Governmental Co-operation', and the reduction in the number of geographical departments which will henceforth be centred only on the countries with programmes;
- (ii) a new form of collaboration between the country desk officers and the sector specialists (5 sectors);
- (iii) the establishment of an 'Evaluation Section' which formalises the increasing interest in evaluating actions undertaken.

3.4. Bilateral aid

The structure of bilateral aid in the AGCD is not sectoral but geographical, which means, for example, that the Central Africa Department looks after all the activities undertaken in this region, whatever the sector (health, agronomy, education and training, support for democratisation etc). Each geographical department therefore includes project managers who are qualified in different sectors. Ideally each department should

Figure 2: Organogram showing the decision-making process for Belgian development aid

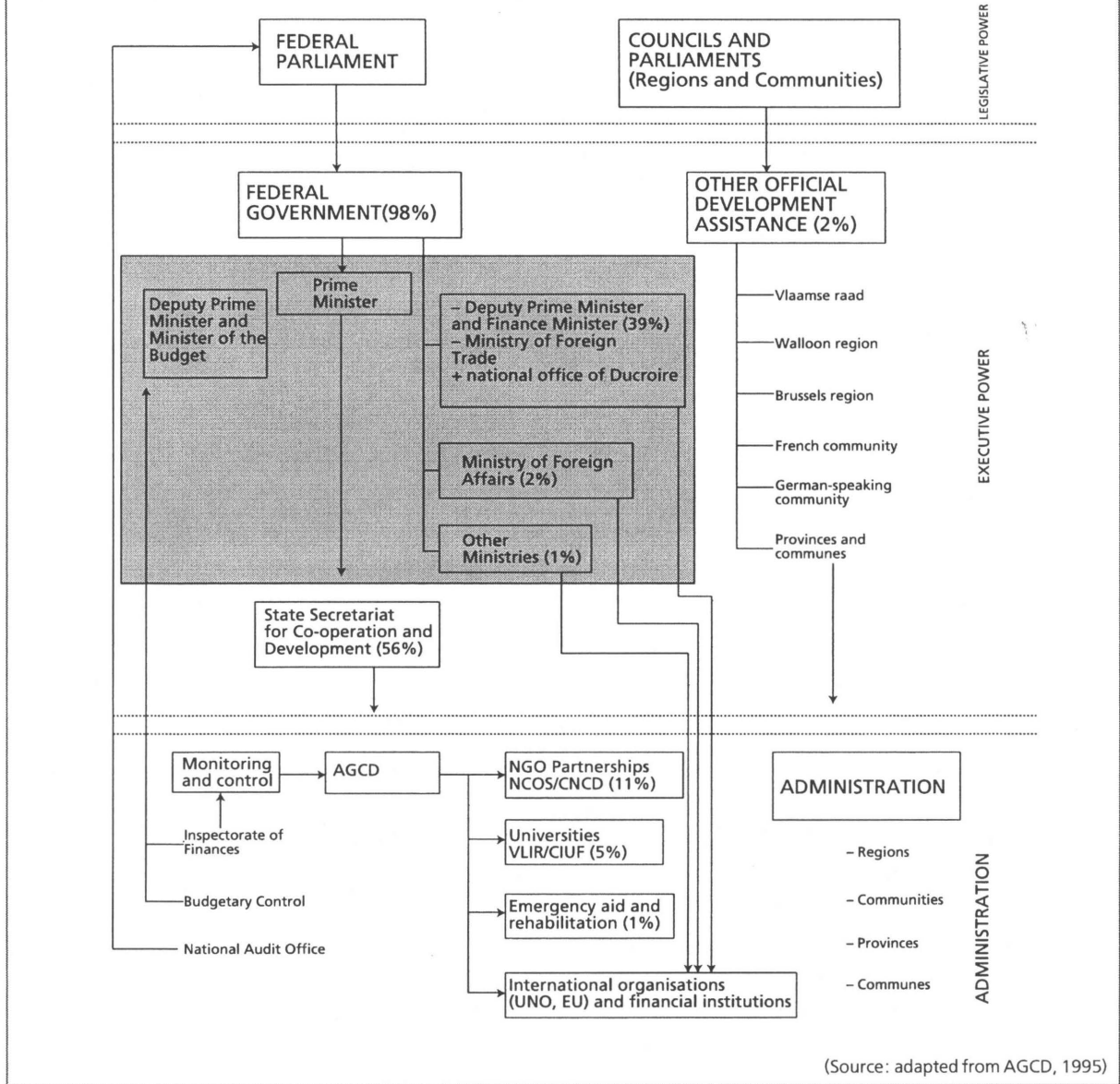


Figure 3: Net disbursements at 1994 prices

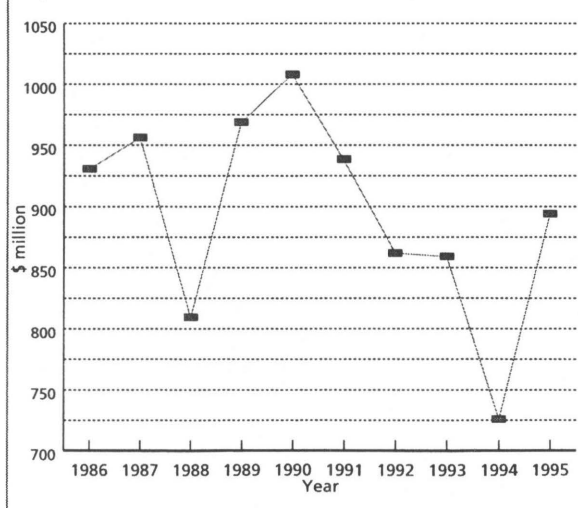
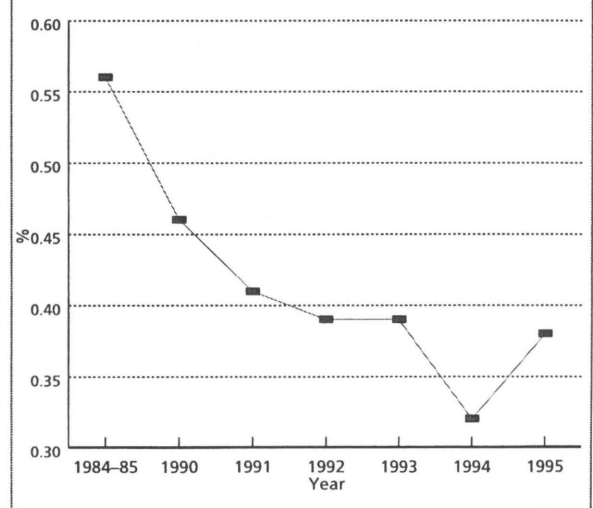
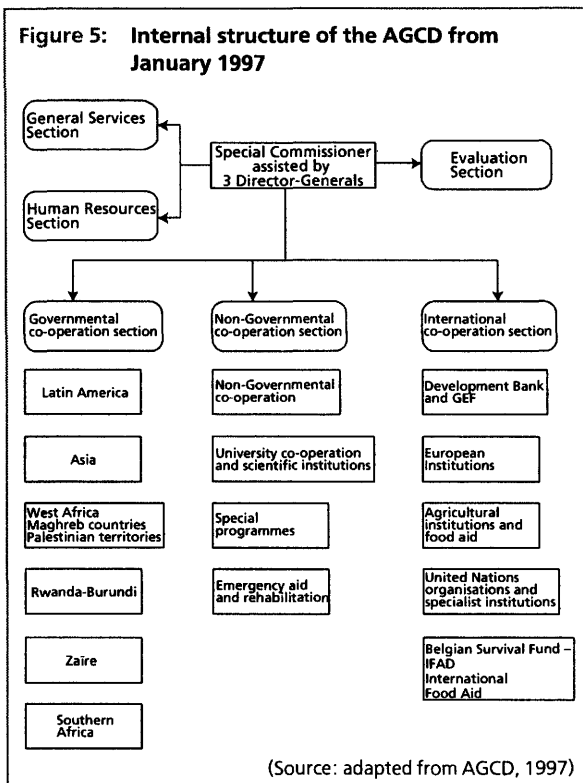


Figure 4: Aid: GNP

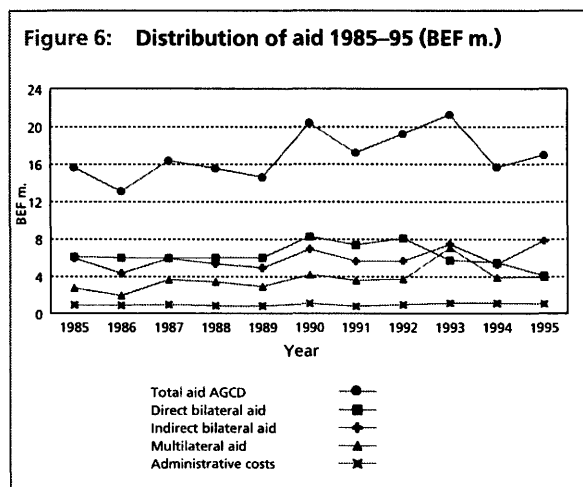




include specialists covering all areas, but unfortunately this is not yet always the case. Tropical forestry is not considered a separate sector but is included in the broader sector of agriculture. There is no designated agency that looks after the implementation of AGCD projects.

3.5 Multilateral aid

The AGCD currently supports about 40 international organisations (such as FAO, UNDP, UNEP, WFP, etc). As far as Belgium's contribution to the FAO is concerned, Belgium participates both in the 'ordinary programme', the obligatory contribution to which is provided by the Ministry of Foreign Affairs, and in its 'field programme', the voluntary contribution to which is provided by the AGCD. The AGCD is currently financing 3 forestry or agroforestry projects within the framework of this programme.



3.6 NGOs

NGOs that request co-financing of their activities must first be recognised by the AGCD. The latter currently recognises about 100 NGOs. These NGOs are also obliged to be members of the NGO federations concerned with co-financing projects and sending out staff: COPROGRAM for the Flemish NGOs, ADO and CODEF for the francophone NGOs. The AGCD generally co-finances 75% of the total amount of an activity, the remaining 25% being provided by the NGO. However, of this 25%, 10% may be provided by the NGO's local partner.

In order to obtain sufficient funds, a number of NGOs have joined two organisations: the National Centre for Development Co-operation (CNCD) for the francophone NGOs and the *National Centrum voor Ontwikkelingssamenwerking* (NCOS) for the Flemish NGOs. These two associations, at the national level, organised Operation 11.11.11⁵, which combines the donations from the Belgian public for development projects. The sums collected by each of these two organisations are then distributed among the NGO members on the basis of the projects they have submitted and which have been selected by the CNCD. The projects are then submitted to the AGCD for co-financing (*Ministère des affaires étrangères, du commerce extérieur et de la coopération au développement*, 1995).

3.7 Other ministries and federal institutions active in the tropical forest sector

Other ministries intervene in Belgian development aid but they do not directly support actions in the forest sector. The Ministry of Finance, in particular, manages government to government loans (with the Ministry of Foreign Trade), part of the Belgian contribution to European development co-operation activities, and the contribution by Belgium to the World Bank and other Development Banks. The Ministry of Foreign Affairs financially supports various institutions and international bodies, in particular Belgium's obligatory contribution to FAO (BEF 133 m. in 1994) as well as an annual contribution of BEF 2 m. to the International Tropical Timber Organisation (ITTO).

3.8 Regional institutions

The Flemish region does not currently support any tropical forestry project. However, negotiations are in progress between AMINAL (Administration of the Environment, Nature and Land Management) and FAO on a project to combat deforestation in the tropics. The Walloon region's interest in tropical forestry is fairly recent but various initiatives have been undertaken. Contacts have been established between the Walloon Ministry of Agriculture and its Chilean counterpart on the identification of research. Other identification missions have also been carried out in Burkina-Faso, Haiti (December 1996) and Equatorial Guinea. The Walloon region often works in collaboration with research organisations and universities to

5. Operation 11.11.11 was established in 1965; the figures mean that the operation began on 11th November at 11a.m., a date chosen to commemorate the armistice of the 1914-18 War.

despatch experts to field locations. The budget for all these projects relating to the environment is approximately BEF 6 m. The Walloon region is also attempting to promote its know-how in the area of satellite imaging.

4. DEVELOPMENT ASSISTANCE STRATEGY

4.1. Background

There is no real policy in the forest sector at AGCD level. Notwithstanding a few large forest projects initiated at the end of the 1970s, forestry has never been an important sector for the AGCD. Moreover, the whole forestry sector is included in the broader sector of agriculture. There is no clear definition of what is considered to be part of the forestry sector and what is not. The structure of the AGCD (Figure 5) means that each department for bilateral, NGO or multilateral aid independently manages all its own projects and which projects fall or do not fall within the forest sector.

However, a database does exist where all the projects in which the AGCD has participated financially since 1986 are recorded. Each project is included in this database with a sector code, including the sub-sectors silviculture, department of water and forests, plant protection, inventory, conservation valorisation of the rural environment, forest, silvo-pastoral, and agro-silvo-pastoral resources etc., which all come under the Agricultural and Rural Development Sector. Project managers are free to classify their projects under the heading they consider most appropriate. Although all codes have been drawn up by the AGCD, they are not based on international codes (for example those of the OECD or FAO). The AGCD has virtually no policy for archiving its old projects. It has therefore proved very difficult to find documentation about completed or abandoned projects, especially as staff also change quickly, and the AGCD was restructured in 1992 and is now, once again undergoing structural reorganisation.

Many project managers are field staff recalled to Brussels for a two-year period only. It is thus sometimes difficult to ensure genuine monitoring of projects, and it is even more difficult to preserve any institutional memory of those executed previously.

4.2 Bilateral co-operation

Belgium's policy on development co-operation is closely linked to the various Secretaries of State who have been responsible for it. In principle, each occupies the post for a period of four years. At the time of the two Secretaries of State who preceded Mr Moreels (who took up his post in June 1995), the work of proposing and drawing up projects was carried out by the recipient country, and Belgium merely reserved the right to accept or reject projects based on the priorities of its overall aid policies, and then monitored them. The policy of the current Secretary of State is more active; more concrete proposals are put forward to the countries with which Belgium wishes to collaborate. The office of the Secretary of State also decides on the privileged sectors for Belgian co-operation. All projects which are drawn up by the AGCD (bilateral aid) or

which are financed wholly or in part by the AGCD (multilateral and NGO aid) must be submitted for the approval of the Secretary of State.

Within the framework of bilateral co-operation, a distinction is made between countries linked by a Memorandum of Understanding (MoU) with Belgium, and those not so linked. The MoUs are drawn up in the course of joint Commissions between Belgium and the partner country which take place in one or other of the two countries. When held in Belgium, these Commissions are chaired by the Belgian Ministry of Foreign Affairs and the Minister of Co-operation of the partner country. If they take place in the partner country, its Ministry of Foreign Affairs receives the Belgian Secretary of State for Development Co-operation. The leaders of the two delegations each present the priorities of their respective countries, in terms of co-operation, and the two delegations then negotiate the broad framework of co-operation in the key sectors, and the global budgets assigned to each sector. Project titles may even be defined at this point.

There are currently more than 15 countries linked to Belgium by an MoU, notably Bolivia, Ecuador, Burundi, Rwanda, Morocco, Niger, Cameroon, the Democratic Republic of Congo, Senegal, Tunisia, Côte d'Ivoire, Sri Lanka and Indonesia.

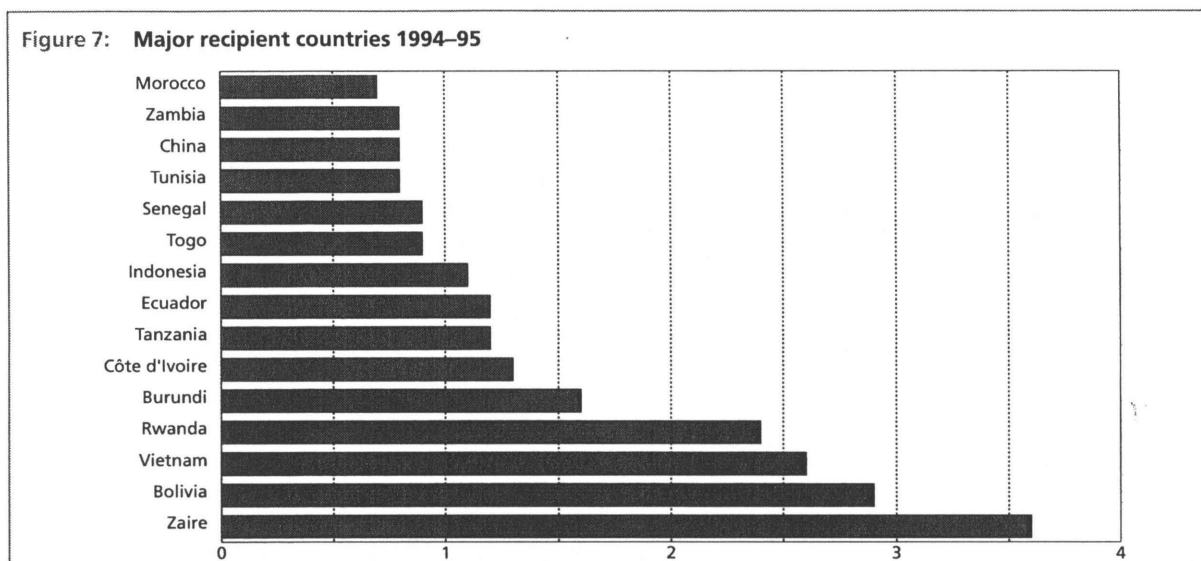
Co-operation with countries without an MoU is based on Belgium's experience of and affinities with these countries. Once the agreement in principle of the Office of the Secretary of State for Development Co-operation has been obtained on the major themes for co-operation, the various departments of the AGCD identify projects in collaboration with the partner country. Belgium is active in some 30 countries with which it has various types of arrangement. Among others, these countries include Burkina-Faso, Ethiopia, Gabon, Kenya, Tanzania, Togo, Zimbabwe, Peru, Surinam, Bangladesh, the Philippines, Vietnam, Laos, Cambodia, Thailand and China.

4.3 Co-operation through NGOs

The Secretary of State's policy is orientated towards closer collaboration with NGOs. This trend is probably a consequence of the greater flexibility and speed with which NGOs implement projects, whilst delays are often apparent within the framework of bilateral co-operation. Most NGOs work on multi-sectoral projects although a few (such as FADO, COOPIBO, etc) specialise in the agricultural sphere. The Flemish NGOs are more numerous and active overall than their Walloon colleagues and, therefore, present more proposals to the AGCD. At present there appears to be a desire on the part of the political authorities and the NGOs themselves to increase their professionalism. Discussions are also in progress to reduce the number of smaller less well-organised NGOs.

4.4 Multilateral co-operation

The current policy of the Secretary of State is orientated towards focusing Belgium's multilateral aid on fewer beneficiaries. The Belgian financial contribution in future will involve only 20 international organisations instead of the current 40 or so. Selection of organisations will initially be made on the basis of Belgium's sectoral priorities (FAO, CIFOR and ICRAF would be likely



candidates, for instance). A further consideration will be the possibility of its being able to gain a seat on the management committee of such organisations or bodies, in order to influence policy and choice of projects.

4.5. Co-operation programme with the private sector

The Secretary of State for Development Co-operation currently wants to put in place a Co-operation Programme for the Private Sector (PCSP), which is intended to establish co-operation between small and medium-sized enterprises of low-income countries and small and medium-sized Belgian enterprises. The aim of this programme is to support the creation and operation of small businesses in the low-income countries and to promote local employment. Negotiations must be initiated with Belgian financial institutions, which will be invited to participate in the project. This type of co-operation will probably not concern the forest sector.

4.6 Impact of international conferences

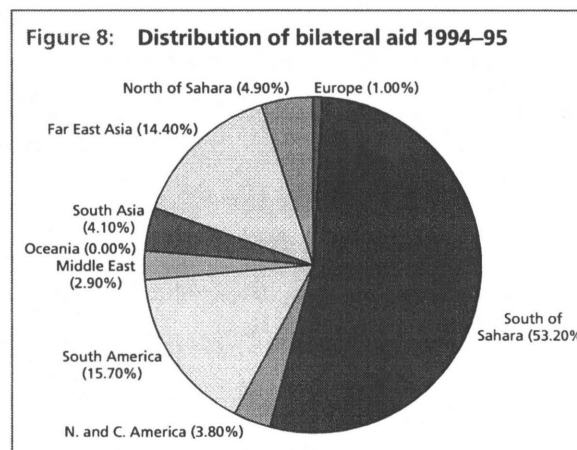
Nature conservation and sustainable development seem to be becoming more important concerns within Belgian co-operation and development projects. Thus, for example, a recent agreement concluded between Belgium and Burkina-Faso includes compliance with Agenda 21 in its preamble. Furthermore, the office of the Secretary of State wants to consult the 'National Council for Sustainable Development' (CNDD) more often, in order to implement a policy of sustainable development and the application of Agenda 21. The AGCD is also making a contribution to the Global Environment Facility (GEF) of BEF 1.1 billion for the period 1994–7. It is noteworthy, however, that the international conferences on the position of women have had distinctly more marked influence on the elaboration of new projects than have international Forestry and Environment Conferences.

5. REGIONAL AND THEMATIC DISTRIBUTION OF FORESTRY PROJECTS

5.1 Regional distribution of projects

Africa has always been the favoured continent for Belgian aid, by virtue of the affinities and experience of Belgium in the Democratic Republic of Congo, Rwanda and Burundi (see Figures 7 and 8). However, following the events on the campus of Lubumbashi University, where several Zairean students were killed, official Belgian co-operation with Zaire ceased in 1990. Co-operation with Rwanda was also interrupted from June 1994 and with Burundi from June 1995. The percentage of Belgian aid going to Rwanda fell from 9% in 1970–71 to 2.4% in 1994–5 and to Burundi from 7.4% to 1.6% in the same period. The cessation of official co-operation with these countries was one of the major causes of the big drop in the number of Belgian aid workers, as shown in Table 1. To this must also be added the desire of the Belgian authorities to reduce the number of aid workers, in particular AGCD employees.

The current Secretary of State has defined new strategies in the area of development co-operation. Belgium will identify some 20 countries, called



geographical concentration countries, to which it will essentially limit its actions; Belgium is currently active in approximately 40 countries.

The choice of the concentration countries will be based on the following criteria:

- low income;
- mainly African in view of the traditional affinities and experience of Belgium in these countries;
- Belgian co-operation already has some experience;
- evidence of good financial management;
- countries clustered in the same geographical region, with comparable economic, social and cultural contexts;
- special attention will also be paid to countries in crisis with which Belgium has a certain affinity.

Within these countries, Belgium distinguishes between countries with programmes and countries with projects. The countries with programmes are those where Belgium undertakes to establish co-operation of a sustained character. In countries with projects, co-operation will be limited to one or two projects. The countries with programmes have already been identified and include the Democratic Republic of Congo, Rwanda, Burundi, Burkina-Faso, the Philippines, Bolivia. There is also a programme region – SADC (The Southern African Development Conference), encompassing several southern African countries, (Mozambique, Angola, Zimbabwe, South Africa, etc.). The 13–14 countries with projects have not yet all been defined but they will also be located close to the countries with programmes. Ecuador and Peru have already been identified in South America, the Mekong region (Vietnam, Laos and Cambodia) in Asia, as well as Kenya, Tanzania and Uganda in Eastern Africa.

5.2 Favoured sectors for current co-operation

The current Secretary of State has also defined five favoured sectors for co-operation:

- health care;
- education and training;
- agriculture and food security;
- basic infrastructure;
- governance and the rights of civil society.

An internal memo on policy strategy relating to the agricultural sector and to food security was drawn up in 1996 by the agronomists' group within the AGCD. It takes account of the orientation defined in the *Plan for the future of co-operation* published by the Secretary of State for Development Co-operation in October 1996. Actions in the agricultural sphere show that the new co-operation strategy is clearly orientated towards an integrated and multi-sectoral approach. Forestry appears as a tool for improving food security by ecological means (for example, preservation of soil fertility and natural resources).

The systematic evolution of forest sector activities since the 1970s has been from large reforestation projects in the period 1970–80, to agroforestry projects. The few current projects in which the forest sector is involved are integrated rural development projects, the components of which are orientated primarily towards

Table 1: Numbers of AGCD and NGO aid workers employed by AGCD, 1989–95

Year	Number of AGCD Aid Workers	Number of NGO Aid workers
1989	1,200	1,451
1991	601	976
1995	341	847

forest management in close collaboration with target groups (Vauron, 1992).

5.3 Regional distribution of forestry projects

Table 2 summarises the great majority of forest projects in which the AGCD has participated since 1986 (plus a few earlier projects). It is not exhaustive because of difficulties in finding data on all the completed projects and accurate information on those listed.

Table 2: AGCD forestry projects since 1986

Country	Duration	Funding level (in BEF m.)
Burundi	1986–94	64.96
	1992–93	7.75
	1988–90	?
	1969–87	190.00
	1986–94	51.82
Gabon	1994–97	48.00
	1996	10.00
Kenya	1997–2000	66.00
	1997–2000	20.00
Rwanda	1986–95	304.49
	1986–92	106.22
	1982–87	33.00
	1986–93	27.87
Zaire	1986–90	60.00
	1986–91	14.16
	1986–91	18.29
Ecuador	1982–89	92.00
Peru	1976–89	310.00
	1982–89	78.00
	1982–89	66.00
	1990–2001	('90–'94) 33.00
Surinam	1989–94	28.00
Malaysia	1986–89	12.00
Sri Lanka	1991–95	50.00
Thailand	1994	0.208

Table 3: Number and types of bilateral forestry projects

Type of project	Number of Projects
Reforestation	7
Forestry Research	6
Integrated Rural Devel. inc. forestry	5
Training projects	4
Management of Natural Resources/Forest	3
Total	25

Note that research and training projects represent 40% of all forest projects. Table 3 shows the types of bilateral forestry projects funded.

Of these 25 projects, 17 began before 1990 and for the time being only 3 are envisaged as running up to the year 2000. This indicates a trend towards fewer new forestry projects. The reforestation projects were carried out essentially between 1986 and 1990, whilst the forest management projects are more recent. The most important forest projects (in financial terms) were carried out in four countries (Zaire, Rwanda, Burundi, and Peru). New projects no longer benefit from as much finance as previously: 8 projects in the 1970s and 1980s had budgets in excess of BEF 60 m. whereas only one forest project started in the 1990s exceeds BEF 60 m. The new projects are also shorter, with an average duration of three years, although delays or extensions are possible. Following the recent events in the Democratic Republic of Congo, Rwanda and Burundi, the new African projects have moved to other countries such as Gabon or Kenya.

The current forest projects in which the AGCD is intervening, either bilaterally or multilaterally, are to be found in Gabon; Peru; China; Cambodia; Vietnam; Philippines; Indonesia; Kenya; Zimbabwe; Togo; Senegal; Guatemala and Bolivia.

5.4 NGOs

The list is not exhaustive, particularly for projects where there is a small forest component; only the projects in which the forest sector was important have been shown. Table 4 summarises these.

Most of the NGO projects are either integrated

Table 4: Types of NGO projects

Type of project	Number of Projects
Integrated Rural Devel. inc forestry or agroforestry	14
Tree-planting (anti-erosion, nursery projects etc)	9
Wood technology, carpentry	5
Management of Natural Resources/Forest	3
Forest Conservation	1
Total	32

projects (agro-silvo-pastoral or agroforestry) or tree-planting projects. There is no forest research and only one forest conservation project. The average duration of the projects is three years. Approximately 50% have a budget of less than BEF 10 m, and only 2 projects exceed BEF 25 m. There are few projects in the Democratic Republic of Congo (only 3), Rwanda and Burundi. Several NGO projects which were due to start in Zaire after 1990 have never begun and activities in progress at that time have often ceased.

No NGO specialises in forestry. There are few forestry projects because they need support over a long period, and represent a duration which is too long for most NGOs (a constraint also increasingly felt in bilateral aid projects). However, it is worth mentioning FADO which specialises in the agroforestry sector and mainly works in Asia.

When a project produces good results, it may be extended by a second phase. The NGOs almost always work with a local partner, which is normally retained if they carry out several actions in the same region. The activities of NGOs are currently orientated towards the sectors of human rights and support for trade union movements, etc., although the proportion of agricultural projects remains high. WWF, which is very active in the forest sector has no project in collaboration with the AGCD.

5.5 Multilateral co-operation projects

Virtually all of the multilateral forestry projects have been undertaken with FAO. The AGCD is currently financing 3 projects implemented by FAO, all in Asia (in Cambodia, China and Vietnam), the aims of which are centred on forest management and improvement. There is also a large FAO-AGCD project in Cape Verde, in which the AGCD has been participating for 15 years, with a total commitment of BEF 442 m.

Apart from these 4 projects there is little information on the activities financed by the AGCD during the period 1986-1991, when budgets were distinctly lower.

6. RESEARCH AND TRAINING

The universities take part in co-operation projects in several ways. First of all, they can submit their own projects to the AGCD under the Specific Initiatives of the Universities programme, or to the European Commission. They may also intervene as the executing agency for part of a direct bilateral aid project (e.g. a timber technology project in Surinam in which the University of Ghent took part); or certain professors may be dispatched on short-term missions as experts (for the AGCD, the Regions, the European Commission, etc). Since 1987, the AGCD has financed only three forest projects drawn up by the universities. Two Belgian universities (the Gembloux University Faculty of Agronomic Science and the Free University of Brussels) are participating in several European Union forestry and conservation projects in tropical Africa. They include projects on conservation and rational use of forest ecosystems; on the future of tropical forest peoples; on natural resource development, and a project on a comparative testing of biodiversity and relations between soil, plantlife and wildlife in Gabon (with the University of Rennes).

The university research programmes which are financed by the AGCD must go through the Inter-University Council of the French Community (CIUF) for the French-speaking universities and through its equivalent, the VLIR, for the Flemish universities. Projects selected are then submitted to the AGCD. Virtually all the subsidies for university tropical forestry research programmes come either from the AGCD via the CIUF and the VLIR or from the European Commission. The French community, however, awards study grants to foreign students via the 'General Commissariat for International Relations of the French Community of Belgium (CGRI)'. Grants awarded by the Flemish community all pass through the Flemish Association for development Co-operation and Technical Assistance (VVOB). The AGCD also pays study grants to foreign students.

The Forest Research Stations of Gembloux and Groedenadaal, which are dependent respectively on the Walloon and the Flemish regions, make available to the regions, the AGCD, the European Commission, FAO, etc experts for missions within the framework of forest projects. They do not execute projects directly. The Association for the Promotion of Education and Training Abroad (APEFE) and the VVOB, presided over by the Community Ministries of Education, are non-profit making associations. They are almost 100% financed by the AGCD; the Flemish region makes a small contribution to financing the VVOB. In 1995, the AGCD subsidised 355 APEFE and VVOB staff in more than 20 countries. The VVOB is more orientated towards technical assistance and intervenes in the forestry or agroforestry sector, in particular by providing ICRAF in Kenya with five of its staff.

Belgium's Royal Museum of Central Africa, which is financed by the Ministry of Scientific Policy, participates in studies of the anatomy and dendrochronology of tropical timber. Furthermore, this museum has the world's second largest collection of specimens of tropical timber. The National Botanical Garden of Belgium, which comes under the Ministry of Agriculture, has been participating in the production of a complete flora of Zaire, Rwanda and Burundi since 1948 (more than one million species have been inventoried to date).

7. PROJECT CYCLE MANAGEMENT

A major problem of development co-operation is the inadequate preparation of interventions, which is why the AGCD has chosen to adopt an internationally recognised methodology that it has called Planning of Interventions by Objectives (PIPO). Some attempt to apply the PIPO method began in the AGCD in 1989. PIPO is closely related to similar logical framework methodologies used in Germany, the Netherlands, the UK and the European Commission, among others. Although the logic of PIPO is not limited to a specific type of problem, in practice the method is especially suitable for technical co-operation projects and investment projects with economic and/or social objectives.

7.1 The stages of the PIPO method

PIPO is structured in two phases (analysis and planning) and several stages. The aim of the analysis is to bring

together and structure the data required for planning the intervention.

The overall objective is chosen from the tree of objectives as the one which is positioned upstream of a series of chains. Several interventions may contribute to it. A single specific objective is formulated for each intervention in order to prevent the intervention from becoming too complex and to ensure that there are no conflicts between several specific objectives.

The assumptions are factors external to the intervention over which it has little or no control, but which are nevertheless important, or even essential, to complete the intervention successfully. If these external factors cannot be integrated into the logic of the intervention, they become assumptions which link together the different levels of the intervention logic. If a majority of the assumptions are negative, it would be better not to begin the intervention. Objectively Verifiable Indicators make it possible to manage, monitor and evaluate the intervention objectively, and the Means of Verification suggest how indicators may be verified.

7.2 Application of PIPO

PIPO has never been applied systematically within the AGCD and has never been imposed. Each geographical department is free to apply it or not as it wishes. It is therefore impossible to determine exactly the percentage of projects planned using PIPO.

Various criticisms have been levelled at PIPO, such as the cumbersome nature of the cycle, which has often caused bottle-necks or delays in implementation. At the participatory meetings where the problems of target groups should be identified, these problems may rather be obscured by the fact that the only local representatives present are the local authorities or group leaders, rather than target group representatives. This can lead to the identification of unsatisfactory project objectives. Finally, PIPO has often been seen only as a phase to be completed at the beginning of an intervention, rather than a tool for monitoring throughout implementation.

A new planning method, called (for the time being) Result-Orientated Integrated and Participatory Management (GIPOR), has recently been drawn up by the AGCD and is currently being examined by the Office of the Secretary of State for Development Co-operation. In particular it aims to smooth the transition between the phases of the intervention cycle and to shorten it while preserving PIPO concepts and applying them throughout the cycle. The use of this method is expected to be obligatory for the planning of future AGCD interventions.

NGOs are no longer obliged to apply PIPO when submitting a project proposal to the AGCD for co-financing. However, certain NGOs are trying to maximise the application of the method and some of them have even produced their own PIPO booklet (e.g. COOPIBO).

7.3 Project evaluation

Few evaluations are undertaken by the AGCD, despite the growing number of applications. The monitoring and evaluation office of the AGCD currently has only two staff, and carried out only two evaluation missions in 1996. The full procedure for an evaluation is very prolonged and often takes more than a year. The

application principles applied by the AGCD are based on those of the OECD. Requests for evaluation of projects originate either from the different geographical departments or from the Sections, or even directly from the Office of the Secretary of State for Development Co-operation. Nonetheless, it seems that certain departments of the AGCD do not go through the evaluation office in order to perform some evaluations of their projects. Nowadays NGOs are more interested in evaluating their projects; evaluation missions are frequently provided for in their budgets with, if possible, an internal evaluation at the half-way point and an evaluation by an independent expert on completion of the project

8 PROJECT PROFILES

8.1. Bilateral co-operation: an example from Peru (Cajamarca)

The AGCD began working in Cajamarca in 1970, initially within the framework of an integrated development project. It rapidly focused its attentions exclusively on the forest sector. Its involvement is envisaged until the year 2001. The financial contribution of Belgian co-operation from 1976 to 1994 amounts to US\$ 12,345,000. Work in Cajamarca has taken place through three related projects, the CICA-FOR project (1976–89); the PPF project (1982–89); and the ADEFOR project (1990–2001). These projects may be characterised as shown in Box 1.

9. CONCLUSIONS AND TRENDS

In the colonial period, Belgium was very active in the tropical forest sector, particularly in the area of research; the forest division of the INEAC developed several types of silvicultural treatments and carried out numerous growth tests on various local and exotic forest species. At that time nature conservation was also a major concern and led in particular to the establishment of several national parks. Subsequently, the importance of the forest sector was progressively reduced in co-operation projects. At present, forestry has become a very minor area and will probably remain so for the immediate future.

Virtually all the actions in the tropical forestry area financed by Belgium depend on the office of the Secretary of State for Development Co-operation. Belgian co-operation currently takes three forms: bilateral co-operation, non-governmental co-operation and multilateral or international co-operation. The administration in charge has been restructured twice since 1991. It is regrettable that archiving of previous AGCD projects has been weak, and no doubt hindered by the restructuring and that, as a result, much interesting information has been lost. It is interesting to note the growing interest that all those involved in development co-operation are now placing on project monitoring and evaluation, so this situation may improve in future.

In the sphere of bilateral co-operation, the new policy of the Secretary of State for Development Co-operation is directed towards the geographical concentration of Belgian aid co-operation on some 20 countries. Among

Box 1 Bilateral co-operation; an example from Peru

Support to *The CICA-FOR Forest Research and Training Centre 1976–89*

AGCD collaborated jointly with the Peruvian 'National Institute of Agricultural Research and Agricultural Industries' to support the centre, contributing US\$ 9,383,000 over thirteen years. The objectives of the support were firstly to undertake silvicultural research, agroforestry research and training; and secondly to create the technical basis for large-scale reforestation to produce pulp for the paper industry.

The results included a large scale programme of silvicultural research in 33 arboreta in diverse ecological regions, where 208 species and 382 provenances were tested. Numerous growth trials were carried out under a variety of conditions. Agroforestry trials were carried out to identify suitable windbreak species to protect the cultivation of cereals and potatoes. The training of forestry technicians and professionals was established.

The Reforestation Pilot Project (PPF) 1982–89

AGCD collaborated with the Government of Peru to implement some of the key findings from the CICA-FOR research project. The financial contribution was US\$ 2,007,000 over seven years. Over the lifetime of this project, the key activities undertaken include the establishment of pine plantations on 3,500 ha in Cajamarca; the construction of over 80 ha of agricultural terraces; and the establishment of 110 ha of irrigated pasture lands. Taking these activities together, the project can be seen as a successful example of integrated rural development.

ADEFOR, the Civil Association for Forest Research and Development 1990–2001

AGCD is collaborating with the Universities of Cajamarca and La Molina, and the Peruvian 'National Institute of Agricultural Research and Agricultural Industries' for this final phase of intervention in the region. Spending from 1990–94 amounted to US\$ 955,000.

ADEFOR's goals are to establish large-scale plantations, sell timber, and use the income to support research, training and environmental activities. AGCD's goals are for ADEFOR to become financially independent, and for it to be recognised as a Regional Training Centre. Belgium will primarily support training until the end of the project.

The achievements of the project have included 7,900 ha of plantations; the creation of an institution which has become the main forestry research and training centre in the Peruvian Andes. It has also been able to benefit from the previous projects funded by Belgium both materially and intellectually.

these, Belgium intends to collaborate in the long term with 6: the Democratic Republic of Congo, Rwanda, Burundi, the Philippines, Bolivia and the SADC region which includes several southern African countries. New aid policy will also be focused on five sectors; health care; education and training; agriculture and food security; basic infrastructure and the consolidation of society. Forestry, which is included in the agricultural sector, will thus fall within the perspective of food security, i.e. essentially within the framework of projects on conservation of soil fertility, preservation of natural resources, and agro-sylvo-pastoral or agro-forestry projects (Moreels, 1996).

As far as non-governmental co-operation is concerned, the NGOs are proposing very few strictly forestry projects, but rather integrated projects in which the forestry sector often occupies only a minor position. The policy of the Secretary of State for Development Co-operation is orientated towards closer collaboration with the NGOs.

Only in the sphere of multilateral co-operation – with FAO – is Belgium now involved in three important forestry projects – in Cambodia, China and Vietnam.

Even the Rio conference of 1992 has not, so far, given rise to the establishment of Belgian projects centred on the conservation of forest ecosystems and the maintenance of biodiversity, despite Belgium's earlier strong comparative advantage in this area.

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ACRONYMS

ABOS	Algemeen bestuur van de ontwikkelingsamenwerking (General Administration for Development Co-operation)	INERA	Congo belge (National Institute for Agronomic Studies of the Belgian Congo)
ADEFOR	Civil Association for Forest Research and Development	IPNCB	Institut National pour l'Etude des Recherches Agronomiques (Zaire) (National Institute for Studies in Agronomic Research)
ADO	Association des ONG (Association for Francophone and German-speaking NGOs concerned with co-financing projects and sending out staff)	ISABU	Institut des Parcs Nationaux du Congo belge (National Parks Institute of the Belgian Congo)
AGCD	Administration générale de la coopération au développement (General Administration for Development Co-operation)	ISAR	Institut des Sciences Agronomiques du Burundi (Institute of Agronomic Science in Burundi)
AMINAL	Administratie Milieu, Natuur en Landinrichting (Administration for the environment, nature and land management)	ITTO	Institut des Sciences Agronomiques du Rwanda (Institute of Agronomic Science in Rwanda)
APEFE	Association pour la promotion de l'éducation et de la formation à l'étranger (Association for the Promotion of Education and Training abroad)	MoU	International Tropical Timber Organization Memorandum of Understanding
BEF	Belgian francs	NCOS	Nationaal centrum voor Ontwikkelingsamenwerking (National Centre for Development Co-operation)
CCPF	Central Committee for the Private Forest	NGO	Non-Governmental Organisation
CGRI	Commissariat Général aux Relations Internationales de la Communauté française de Belgique (General Commissariat for International Relations of the French Community)	OECD	Organisation for Economic Cooperation and Development
CIUF	Conseil Interuniversitaire de la Communauté française (Inter-University Council of the French community of Belgium)	PCSP	Programme de Coopération pour le Secteur Privé (Co-operation Programme for the Private Sector)
CNCD	Centre National de Coopération au Développement (National Centre for Development Co-operation)	PIPO	Planification des Interventions par Objectifs (Planning and Interventions by Objectives)
CNDD	Conseil National du Développement Durable (National Council for Sustainable Development)	PPF	Reforestation Pilot Programme
CODEF	Federation of francophone NGOs concerned with co-financing projects and sending out staff	SADC	Southern African Development Conference
COOPIBO	Ontwikkelingssamenwerking internationale bouworde (International development co-operation)	UNDP	United Nations Development Programme
COPROGRAM	Federation of Flemish NGOs concerned with co-financing projects and sending out staff	UNEP	United Nations Environment Programme
FADO	Flemish Aid and Development Organization	VLIR	Vlaamse interuniversitaire Raad (Inter-University Council of the Flemish Community)
FAO	Food and Agriculture Organization of the United Nations	VVOB	Vlaamse vereniging voor Ontwikkelingssamenwerking en technische Bijstand (Flemish Association for Development Co-operation and Technical Assistance)
GDP	Gross Domestic Product	WFP	World Food Programme
GEF	Global Environment Facility	WWF	World Wildlife Fund
GIPOR	Gestion intégrée et participative orientées vers les résultats (Result-Orientated Integrated and Participatory Management)		
GNP	Gross National Product		
GTICD	Groupe de Travail Interdépartemental pour la Coopération au Développement (Inter-departmental Working Group for Development Co-operation)		
ICRAF	International Centre for Research in Agroforestry (Kenya)		
INEAC	Institut National pour l'Etude Agronomique au		

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Denmark

Paul Kerkhof and Gill Shepherd

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1. DOMESTIC FORESTS AND FORESTRY

1.1 Forest history

Denmark was covered by forests and the human population density was low until early medieval times. From the tenth century onwards the population grew and an increasing proportion of the land was cleared of forest, a process temporarily interrupted during the Black Death. The population density of 20 people per square kilometre in the thirteenth century had doubled by the middle of the nineteenth. Norway and Southern Sweden were part of Denmark for much of this time, and although population densities there were much lower, the trends were similar (Hytönen, 1995).

Livestock keeping in the forests, including pannage, the fattening of domestic swine, is an old practice in Southern Scandinavia. Slash and burn agriculture was widely practised and although it disappeared a long time ago in Denmark it was practised in parts of Scandinavia until the Second World War.

Major changes in the landscape were induced by the introduction of mining and metal industries in areas bordering on the present Denmark. Though these reduced the need for certain imports, more local processing demanded very large quantities of wood and charcoal. Another pressure on the forests was the increased export of timber. By the fifteenth century Denmark had already prohibited the export of oak for strategic reasons. By the sixteenth century wood supplies for Denmark itself were profoundly affected. The King passed six Forest Acts between 1665 and 1733 but they had little effect.

The first attempts to introduce sustained yield forestry occurred in 1762, when two German forestry experts, the von Langen brothers, were engaged by the Danish/Norwegian King. Initial attempts had only temporary effects but the ideas, once introduced, continued to be tried sporadically. By the beginning of the nineteenth century the area under forest had been reduced to 3%, the lowest in Denmark's history (McLoughlin, 1992) and over the next fifty years sustained yield principles were introduced into the majority of Denmark's forests.

The Forest Act of 1805, unlike previous Acts, was successful in preserving the remainder of Denmark's high forests. This was because coal was, by this time, increasingly used as a substitute for fuelwood and pressure on the forests was decreasing. At the same time, reforestation was beginning, primarily with the exotic species, Norway spruce. This increased forest cover to about 12% by 1995 and current Danish forest policy aims to increase it further to 25% by 2100 (MEE, 1994a). Over the last few decades, conventional forestry practice has undergone considerable change to allow more multiple-purpose forestry (Hytönen, 1995). There has also been a growing emphasis on the use of broadleaved species in reforestation programmes (NFNA, 1994).

1.2 Forest tenure and management

One third of Denmark's forest area is publicly owned, mainly by the government but also by counties and local authorities, while two-thirds are privately owned.

Individual ownership declined from 57% in 1965 to 46% in 1990, with a gradual transfer of forest land to companies, associations and foundations (NFNA, 1994).

The National Forest and Nature Agency (NFNA) within the Ministry of Environment and Energy (MEE) is responsible for the administration and enforcement of forestry legislation as well as managing the state forests. It is also in charge of conservation and the protection of the natural and cultural heritage. In collaboration with other ministries, primarily the Ministry of Agriculture and the Ministry of Foreign Affairs (MFA), the NFNA is the main policy-making unit for national and international forest policy (NFNA, 1994).

2. HISTORICAL INVOLVEMENT WITH TROPICAL FORESTRY

Danish universities have traditionally conducted research into the botany of tropical plants. This may be why the emphasis in the first bilateral assistance projects which began in the late 1960s was primarily on tree seed and genetics work. The Seed Centre in Humlebaek carried out much of the initial work on provenance trials and tree breeding. Traditional links between the Kingdoms of Denmark and Thailand meant that Thailand was one of the main recipients of this type of assistance.

Commercial ties also existed in the past between Denmark and countries with tropical forests through the East Asian Company. However, Denmark did not have an empire and does not have the historical ties that are found, for example, between India and the UK.

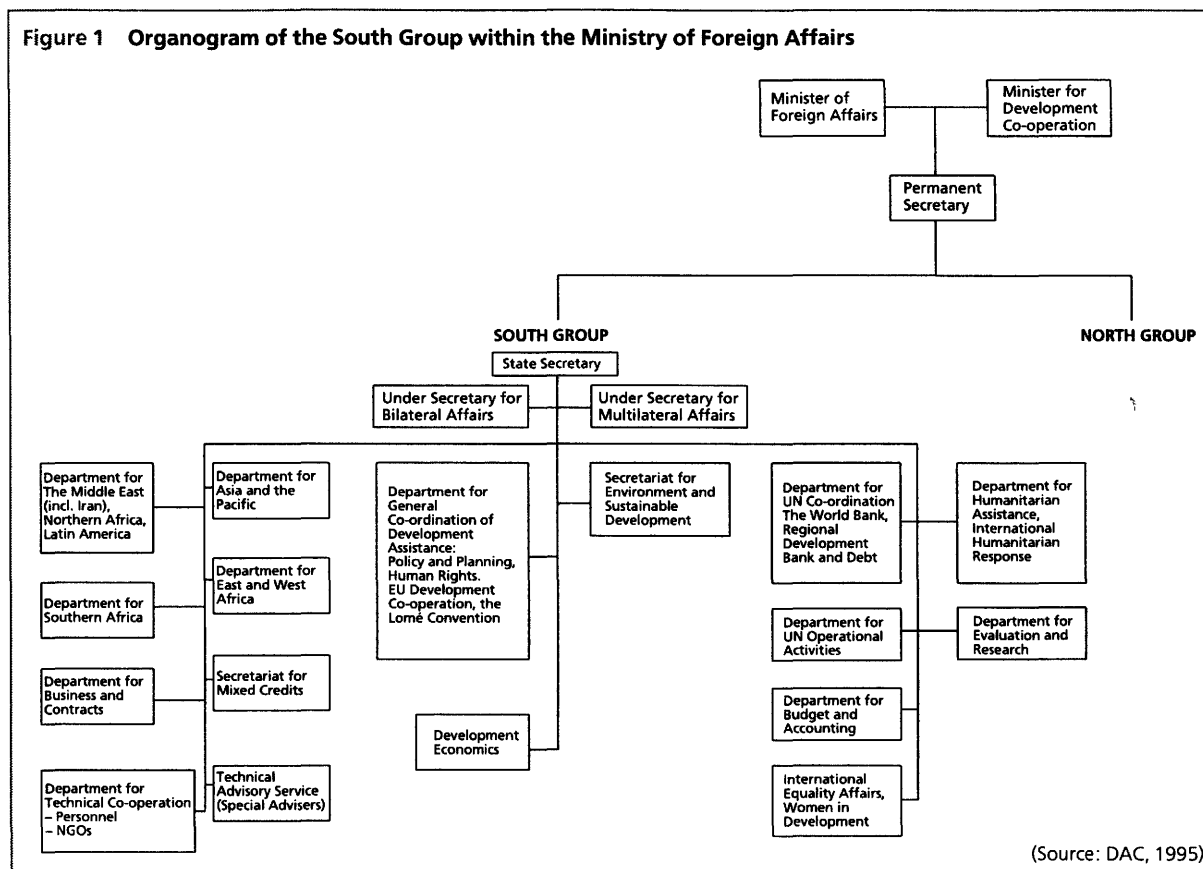
3. STRUCTURE OF DEVELOPMENT ASSISTANCE DELIVERY

3.1 The Ministry of Foreign Affairs

The Ministry of Foreign Affairs (MFA) has been, to a large extent, the organisation responsible for the administration of Danish development assistance. A special agency within the MFA, the Danish International Development Agency (Danida), was responsible for development assistance until a major structural reorganisation in 1991. It was felt that the radically changed international relationships that developed after the end of the Cold War necessitated an integration of development aid with other aspects of international relations such as human rights and trade (DAC, 1995). Danida was therefore merged with the other functions of the MFA. Nevertheless, the name Danida is still frequently used, even inside the MFA. In 1993 a Minister of Development Co-operation was appointed to provide stronger leadership.

The current structure of the Ministry of Foreign Affairs consists of a North Group and a South Group. The latter is responsible for relations with developing countries and with those multilateral organisations concerned with developing countries, as well as for development assistance (see Figure 1). The most important sections of the South Group, as far as forestry is concerned, are the Regional Departments

Figure 1 Organogram of the South Group within the Ministry of Foreign Affairs



(Southern Africa, West Africa, etc.); the Technical Advisory Service (TSA); the Evaluation Service; and the Secretariat for Environmental and Sustainable Development, which has only recently been established.

Given the generalist approach prevailing elsewhere in the South Group as a result of the 1991 restructuring, the Technical Advisory Service has gained in importance (DAC, 1995). The TSA did not employ a forestry specialist until 1986, when a post with a special focus on agroforestry was created within the Agriculture Section. This remains the only forester supporting the entire Danida forestry programme. In addition, since forestry is often a part of agricultural, and more recently, environmental projects, there are other technical specialists who support projects with a forestry component. The environmental section in the TSA has expanded rapidly in recent years, growing from one environmental specialist in 1986 to four in 1995 and seven in 1996 (including one with a forestry background).

Overall, staffing levels have risen at a proportionately greater rate than the rapidly increasing bilateral oda funds they have to manage. In 1994 the South Group had about 400 staff, with a headquarters to field ratio of 2.3 (DAC, 1995). The latter has dropped from 4.2 in 1990 and is a result of the decentralisation of responsibilities from the MFA in Copenhagen to the embassies which took place in 1993 (DAC, 1995). This led to greater local responsibilities in defining programme assistance, and to a disbursement facility known as the Local Grant Authority, which allows embassies to allocate funding to projects costing DKK 3 m. or less.

3.2 The Ministry of Environment and Energy

The Ministry of Environment and Energy (MEE) has recently taken on an increasingly important role in the aid delivery system through its management of the Environment and Disaster Relief Facility (EDRF). Established as the Global Environment and Nature Fund by the Danish Parliament in 1993, the EDRF is administered by a specially created unit, DANCED (Danish Co-operation for Environment and Development), based in the Environmental Protection Agency of the MEE (see Figure 2). DANCED had 11 staff in 1994 and could also call on support from other agencies within the MEE. The National Forest and Nature Agency, in particular, provides policy guidance to DANCED through its Forest Policy Division and the Division for International Co-operation. To maintain contact with local authorities and co-operation partners in its three key areas of intervention, DANCED has established local offices in Bangkok, Kuala Lumpur and Pretoria (MEE, 1995).

3.3 Development assistance commitment

In 1993 Denmark became the world's leading donor in terms of its aid:GNP ratio, which stood at 1.03% (DKK 8,129 m.). The 1% target set by Parliament in 1985 for the year 1992 onwards was thus achieved (DAC, 1995). The increasing trend in official development assistance (oda) (Figure 3) has been facilitated by a revolving five-year planning procedure in which expenditure frames are submitted once a year to parliament by the Government (DAC, 1995). Danish policy ties aid in one specific respect: 50% of the budget overall must be

spent, directly or indirectly, in Denmark (Danida, 1994a).

The EDRF fund is in addition to the aid administered by Danida and the MFA. Beginning with a budget of just over DKK 200 m. in 1994, the EDRF is due to grow to 0.5% of GNP by the year 2002, with funds being allocated annually in the national budget. Within the EDRF, allocations for the environment and for disaster relief are roughly equal, with half the environment funds going to Central and Eastern Europe and half to developing countries (MEE, 1995).

From 1996 different policies and administrative systems have applied to EDRF funds, with 80% of the annual increments in the EDRF being administered by Danida and 20% by DANCED with the aim of reaching a situation in which 60% of the funds are administered by Danida and 40% by DANCED. Danida will administer the funds disbursed in its programme countries and DANCED in those countries with a GNP above the limit for bilateral development assistance (see section 4.1.1) (Danida/DANCED, 1996a).

3.4 Multilateral assistance

Denmark gives high priority to the multilateral development activities of the United Nations system, the international financial institutions, and the European Union development programme. As a general rule, Danish development assistance is fairly equally divided between multilateral and bilateral assistance. In 1994, multilateral aid amounted to DKK 4,091 m. or 42% of total oda (MFA, 1995).

The 1994 Strategy (see section 4.1) highlighted the Government's intention to move away from the principle of burden-sharing on the basis of established contribution patterns to a more selective form of support often referred to as 'active multilateralism' (Danida, 1994a). Those multilateral institutions whose activities are of high quality and which correspond to Danish priorities will be especially favoured. The process of selection is based on assessments of efficiency and effectiveness of the relevant institutions, which Denmark undertakes alone or jointly with other donors (DAC, 1995). Currently UNDP receives considerable support from Danida and Denmark is its third largest contributor (US\$ 90 m. in 1994). Other major recipients are the World Bank Group and the European Union development programme, which accounted for 6.2% of Denmark's total oda in 1994 (MFA, 1995). With respect to the EU, the Danish position is that the Commission should act more as a sixteenth donor than as a supra-national actor with a mandate to coordinate and influence the individual aid programmes of the Member States (Olsen and Udsholt, 1995).

In the environmental field, Danida has allocated DKK 135 m. annually for global environmental initiatives. The largest contribution has been given to the Global Environmental Facility, UNEP, and to UNDP's 'Capacity 21' initiative (Danida/DANCED, 1996a).

3.5 The Danish 'resource base' and NGOs

The 1994 Strategy (see section 4.1) emphasised the intention to make better use of the 'Danish resource base' (Danish civil society) in the development co-operation programme. The 'resource base', which includes non-governmental organisations (NGOs), the

Figure 2 Structure of DANCED organisation

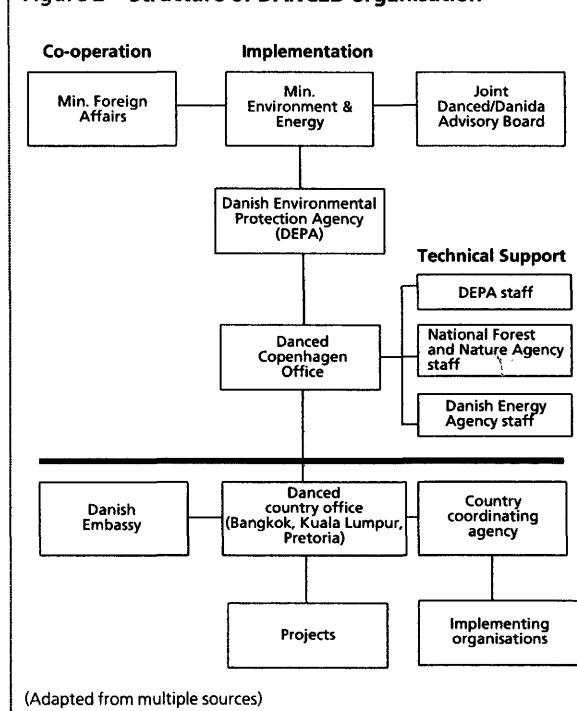
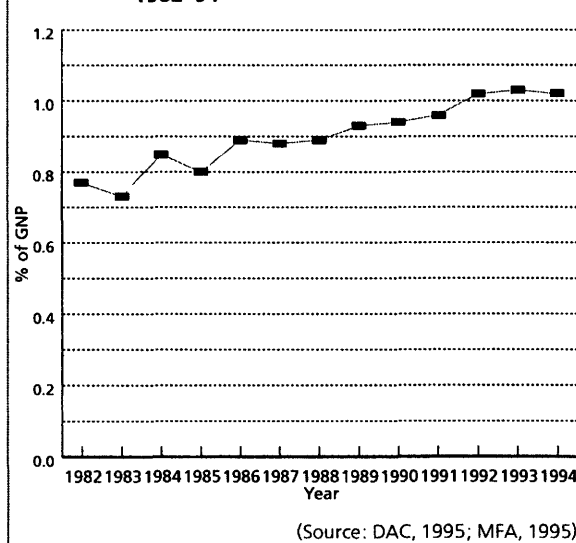


Figure 3: Aid disbursements as a proportion of GNP, 1982–94



business community, trade unions, universities and volunteers, will be more involved in the planning and implementation of aid projects, and 'twinning' arrangements between Danish institutions and counterparts in developing countries are being promoted. It is believed that greater involvement of the Danish resource base is likely to increase the returns from Danish aid.

Of particular importance are NGOs, which are considered to play a vital role in raising awareness of development issues and thus contribute to the positive image of development co-operation among the Danish public and to the general acceptance of high levels of Danish aid to developing countries. NGOs are often invited to comment on draft Danida policies and

strategies (DAC, 1995) and a number of NGO-organised fora, such as the '92 Gruppen' and the 'ANR Resource Base', exist although the level of their influence on Danida policy is not yet apparent.

More than 100 NGOs a year receive funds from Danida to support projects in the Third World. However, four of these (the Red Cross, DanChurchAid, the Danish Trade Union Council for International Development Co-operation and Ibis) received about 60% of all Danida funds disbursed through NGOs in 1992 (Danida, 1994b). Danida has entered into framework agreements with these organisations as well as with CARE-Denmark which signed a project agreement in January 1996 and has since become the major recipient of funds for forestry among the NGOs. The framework budgets vary between DKK 35 and 125 m. per year and are intended to facilitate NGO planning, strengthen dialogue between NGOs and Danida and reduce the administrative workload (MFA, 1995).

The 1994 evaluation of the NGO framework agreements (Danida, 1994b) reported, however, that various of their objectives had not yet been met. A more coherent planning approach had not yet been worked out, and activity plans were generally based on an *ad hoc* project approach. The bulk of funding was used for large traditional projects, rather than small innovative ones. Those NGOs with local representation were judged better able to enter into dialogue with host organisations and to monitor activities closely. NGOs operating via an international structure were found to rely mainly on the capacity of this structure to provide proposals.

In addition to longer-term frameworks, a system of 2-year mini programme agreements ensures flexible funding arrangements for networking NGOs dealing with small projects and many different local partners. Finally, a large part of the funds channelled through NGOs is still constituted by single projects for which applications are processed twice a year. Danida contributes 7% to NGO administrative costs and, since 1995, NGOs have no longer been required to fund part of project expenses (DAC, 1995).

As shown in Table 1, overall about 17% of bilateral aid is currently disbursed through NGOs. DANCED is also becoming an increasingly important donor for NGO projects in the environmental sector. How much of the aid channelled through NGOs is dedicated to tropical forestry is not known, however. CARE-Denmark is the only Danish NGO that concentrates its programme on agriculture, forestry and natural resources. Projects encompass watershed development, agroforestry and integrated development. The strength of this organisation appears to lie in the international CARE system which provides administrative back-up and the expertise which many other NGOs lack (CARE Denmark, 1995). The strategy pursued under its

framework agreement with Danida appears to be a hybrid of Danida policies and strategies and those of CARE International. Several other NGOs, such as WWF Denmark and Nepenthes have rapidly growing natural resources conservation programmes.

4. TROPICAL FORESTRY DEVELOPMENT POLICIES

4.1 The 1994 development strategy

Danish development assistance is based on Regulation No. 297 of 1971 which states that:

The objective of Denmark's official assistance to developing countries is, through co-operation with governments and public authorities in these countries, to assist endeavours aimed at achieving economic growth, thereby contributing to ensuring social progress and political independence, in accordance with the aims and principles of the United Nations Charter and, in addition, through cultural co-operation to promote mutual understanding and solidarity (Danida, 1994a).

This regulation has been updated at various times but the most important policy document currently referred to is *A Developing World. Strategy for Danish Development Policy Towards the year 2000* published in 1994 (Danida, 1994a), and hereafter called 'the Strategy'. This emphasises that the country's development policy encompasses all Denmark's relations with developing countries, economic and political as well as multilateral and bilateral. Poverty alleviation is highlighted as the fundamental principle of Danish assistance to be achieved through socially balanced and ecologically sustainable economic growth, and development of the social sector based on popular participation. It identifies sectoral priorities and cross-cutting themes (see below). Furthermore, the Strategy recognises that international relations have changed completely since the end of the Cold War, resulting in changes in regional focus of development assistance (see section 4.1.1). Finally, it underlines the need for greater involvement by non-governmental actors in the formulation, organisation and implementation of Danish assistance efforts (Danida, 1994a).

4.1.1 Regional priorities

In the past, the geographical distribution of Danish aid has varied considerably. In 1989 a Plan of Action increased the number of programme countries to 25 (Olsen and Udsholt, 1995), with the number being reduced again to 20 by the 1994 Strategy (Danida, 1994a). Programme countries receive special Danish

Table 1: Growth in the NGO share of total bilateral development assistance

	1987	1988	1989	1990	1991	1992	1993
DKK m. to NGOs	367	393	579	524	556	714	755
% of bilateral aid	12	14	17	15	14	18	17

(Source: Danida 1994b)

assistance and much higher levels of aid than non-programme countries. Minor changes in priority occur from time to time. Recently, for instance, Ethiopia was taken off the list and replaced by Malawi. In 1995 there were 13 programme countries in Africa (Benin, Burkina Faso, Egypt, Eritrea, Ghana, Kenya, Malawi, Mozambique, Niger, Tanzania, Uganda, Zambia and Zimbabwe), 5 in Asia (Bangladesh, Bhutan, India, Nepal and Vietnam) and 2 in Latin America (Bolivia and Nicaragua). For most of the remainder of the 96 developing countries which received official assistance in 1992–3, project aid is due to be phased out by 1999 (DAC, 1995).

The selection of programme countries is first and foremost based on the poverty criterion. The 20 countries selected include the 11 poorest and all except one fall within the poorest category, defined in 1993 as having per capita incomes of less than US\$ 1,765 per year (DAC, 1995). Traditionally over 90% of Danish bilateral assistance is allocated to the poorest countries, well above the DAC average (DAC, 1995).

Democratisation and human rights are relatively new criteria for the allocation of aid. Persistent inadequate performance in this area by previous programme countries, e.g. Kenya, has led to a reduction in their aid (DAC, 1995). Other criteria include the possibility for dialogue with the recipient country concerning socially just and ecologically appropriate development; the ability to ensure a central role for women in the development process; Danida's experience with bilateral assistance; and the possible use of Danish goods and services, assuming their competitiveness (Danida, 1994e).

Today, as in the past, over 60% of Danish aid is allocated to Africa south of the Sahara, with Tanzania and Uganda the major recipient countries. In 1993 Danish aid disbursed to these two countries made up 13% of the total aid they received from all the member states of the DAC (OECD's Development Assistance Committee), reflecting clearly the kind of leverage that Danish development co-operation may have in some of its programme countries (DAC, 1995). Asia is the second most important recipient region for Danish aid, receiving 23% of bilateral aid in 1993 (DAC, 1995).

Apart from programme country funding, special Danida funds exist which are disbursed to both programme and non-programme countries. They are for mixed credit programmes; transitional assistance; private sector development; human rights and democratisation; and support through NGOs.

Environmental assistance funded under the EDRF is not restricted to programme countries in the same way that Danida's development assistance is. On the contrary, its initial focus has been on the more affluent developing countries in which economic development is often given a higher priority than the environment (MEE, 1995). Thus, EDRF funds have been concentrated in South-east Asia (particularly Thailand and Malaysia) and, to a lesser degree, in southern Africa.

4.1.2 Sector programme support

The 1994 Strategy requires that a strategy be drawn up for each programme country, identifying 2–4 sectors in which traditional project assistance will, as far as possible, be concentrated. Individual project assistance

will gradually be phased out in favour of Sector Programme Support (SPS). A sector is defined as a distinct and coherent set of activities in terms of institutions, policies and finances (Danida, 1996d). Sectors can be economic sectors (agriculture, industry, transport, etc.), but can also be cross-institutional and/or thematic. Examples of cross-cutting sectors include the Democratisation and Human Rights Programme, the Environment Programme and the Women in Development Programme (Danida, 1996c).

Country strategies and the relevant SPS will provide a longer time framework for broad Danish assistance. The starting point is a national sector policy framework identifying those areas to which Danida can most usefully contribute, along with other donors. The frameworks are not blueprints, but will be subject to continuous policy dialogue. SPS assumes that recipient institutions take on a greater share of responsibility than is normally found in project assistance, and aims to minimise the effects of 'project (or donor) islands'. It also seeks to improve donor coordination and co-operation, and reduce the negative effects of competition between projects funded by different donors (Danida, 1996d).

A major feature distinguishing Sector Programme Support from traditional project assistance is its focus at national level. Another feature is its sectoral focus. As a small donor, Denmark can hardly influence large sectors or several sectors at a time, and needs to concentrate its support if it wants to enter into substantial policy dialogue. This focus on particular sectors may have a negative impact on the holistic nature of many forestry-related interventions supported to date. On the other hand, SPS may address many of the 'externalities' which have often reduced the impact and sustainability of conventional forestry projects.

Agriculture has been selected as a priority sector in 15 of Denmark's 20 programme countries. Forestry, agroforestry and natural resource management will be integrated into the agricultural sector in Eritrea, Kenya, Tanzania, Niger, Burkina Faso, India and possibly Malawi. In Nepal, forestry and natural resources will be a separate priority sector, while the environment sector will be prioritised in Egypt, Bhutan and possibly Nicaragua. While this selection is preliminary and changes are likely, it tentatively indicates that forestry-related matters will continue to be an important component of the agricultural sector under Sector Programme Support.

Some additional project assistance is possible for pilot projects of limited duration. Certain forms of bilateral assistance such as for private sector development and assistance channelled through NGOs will not be in the form of Sector Programme Support.

4.2 Tropical forestry development co-operation

4.2.1 Background

Concern for the environment has become a pronounced feature of Danish society, and thus an important characteristic of Danish development assistance over the past decade. The only major European Union institution in Denmark is environmental (the Environmental Protection Agency). Nordic concern for the

environment first came to international prominence at the 1972 Conference on the Environment in Stockholm. The World Commission on the Environment and Development chaired by the Norwegian Gro Harlem Brundtland published its report *Our Common Future* in 1987 (WCED, 1987). This report aroused a great deal of interest in the Danish Parliament, and in May 1987 it approved a resolution directing Danida 'to prepare an action plan to strengthen the efforts of environmental rehabilitation and natural resources conservation' (Danida, 1988b; Danida/DANCED, 1996a; DAC, 1995).

The Danida *Action Plan for the Environment* was published in 1988 (Danida, 1988b), and six sectoral plans and five country profiles were published in 1988–9. The most important sectoral plans as far as forestry is concerned are *Environmental Issues in Dryland Agriculture* (Danida, 1988a) and *Environmental Issues in Agriculture in Humid Areas* (Danida, 1989) (see section 4.2.2). Although planned, a forestry sector Action Plan was never completed. The 1996 evaluation of the Action Plans is discussed in section 8.

During the time leading up to the 1992 UN Conference on Environment and Development (UNCED), a great deal of interest in tropical forests was aroused among the Danish public and in the political system. The government report, *Sustaining the Tropical Forests, Government policy for a Danish Contribution*, published in February 1992, highlights the importance of sustainable tropical forestry arguing that Denmark has few opportunities to influence the management of tropical forests apart from collaboration through development assistance (MFA, 1992). The Forest Declaration of UNCED was widely discussed in the Danish Parliament, and the government was urged to seek an expansion of the declaration into a legally binding document.

At the Helsinki Conference of June 1993, the Signatory States committed themselves to the preparation and implementation of national guidelines on sustainable forest management. As part of this commitment it was decided that, rather than limiting the issue to tropical forests, Denmark should also have a strategy to conserve its own natural forests, although less than 1% of the country's forests are considered natural. This led to the publication of a *Strategy for Natural Forests and Other Forest Types of High Conservation Value in Denmark* by the Ministry of the Environment (MEE, 1994c). Among other things, the strategy proposed a doubling of the area of forest to around 25% by 2100 (see section 1.1).

Environmental issues in development assistance were further strengthened by the incorporation of Environmental Impact Assessments (EIAs) into the project cycle. A new guide for the application of EIAs was published in 1994 (Danida, 1994d), the number of staff in the environmental section of Danida's technical service was increased, and EIA training was provided at various levels in the organisation (Danida, 1996a).

4.2.2 Action Plans on environmental issues in agriculture

In the 1960s and 1970s Danida's bilateral assistance to forestry was very low, although a significant degree of support was made available through funds-in-trust

assistance. The relatively strong tree-seed activities in Danish forestry are probably one of the main reasons why Danida supported work on tree seed and genetic resources from the late 1960s onwards, albeit at modest levels. Agricultural support, narrowly focused on the supply of inputs and technical assistance, was the key component of Danish aid at this time (Danida, 1996a).

By the late 1980s this had changed. The two *Environmental Issues In Agriculture Action Plans* (Danida, 1988a, 1989), one for semi-arid and arid regions and one for humid areas focused to a considerable extent on forestry and agroforestry assistance. Both recommended the following specific forestry-related interventions:

- more support for forestry and promotion of multi-purpose tree planting and management, and rural tree planting such as woodlots and shelterbelts;
- more emphasis on an integrated cross-sectoral approach focusing on ecologically appropriate farming, integration of leguminous trees, alley farming, incorporation of trees in the farming system, increased assistance for soil and water conservation projects, with the incorporation of forestry or agroforestry;
- improved efficiency in wood energy conservation;
- on communal or government-owned land, focus on the use of a community participation approach to achieve increased conservation of forests and woodland (particularly genetic resources) and the sustainable use of rangelands.

The Action Plans urged the use of a process approach to development instead of the previous blueprint approach, thus allowing a greater degree of flexibility. Improved participation was to be promoted through prioritisation according to local knowledge and local needs. Experimentation should be encouraged and more self-help was advocated instead of transfer of technology and input delivery. Increased local participation in project planning and monitoring was also recommended.

During the second half of the 1980s and the early 1990s a number of forestry and integrated resource management projects were initiated. These took a more holistic approach in line with international trends in agriculture and forestry assistance.

4.2.3 Sector policy on forestry and agroforestry

In 1995 the first *Forestry and Agroforestry Sector Policy Paper* (Danida, 1995a) was published. The main focus of future assistance in forestry and agroforestry would be in three areas: natural resources management, especially in relation to rural development forestry and watershed management; forest seed procurement, gene conservation and tree improvement; and forest conservation and the conservation of biodiversity. The policy paper further specified that Danida support would be undertaken within existing national planning frameworks like the Tropical Forestry Action Plan or Tropical Forestry Master Plan. It reiterated the various principles of the overall Danida strategy (Danida 1994a) concerning capacity building, active local participation, sustainability and the need for long-term commitment.

The forestry and agroforestry policy paper highlighted the following specific objectives (Danida, 1995a):

- increased production of biomass including timber and non-timber forest products in addition to improvements in agricultural production through forestry, agroforestry and soil and water conservation;
- strengthening of institutional policy and strategy formulation capacities;
- improvement in forest management and conservation systems through better use of technology and increased local participation;
- increased revenues from forestry for local communities and local and national authorities;
- provision of modalities for joint forest management;
- improved nutrient and water balance in agricultural production systems;
- rehabilitation of degraded land through tree planting;
- promotion of active multilateralism in support of the global debate on tropical forests.

The policy paper is a sizeable document (72 pages plus annexes) which takes in almost everything mentioned in the 1988/89 Action Plans with respect to forestry and agroforestry. Nevertheless, the emphasis differs and recent issues have been incorporated. A notable difference concerns the strong emphasis on tree seed and genetic resources in the 1995 paper, along with the need to involve the Danish resource base. It consequently puts more emphasis on the Danish tree seed programme. This policy focus had, in fact, already been in effect for a number of years as illustrated by the very high proportion of tree seed projects supported through bilateral forestry assistance (see section 5.3).

As already noted, the Action Plans put considerable emphasis on a process approach to the development of project assistance, with the accent on flexibility, local knowledge and integrated and participatory approaches. The forestry and agroforestry paper does not highlight these issues to the same extent. On the other hand, it has incorporated recently emerging issues such as active multilateralism and tropical forests, and various matters emerging from the new sectoral programme support approach.

4.2.4 EDRF strategy

The environmental half of the EDRF funds were originally targeted at four sectors: cities, forests, biodiversity and coastal zones; with funds to be shared roughly equally between the 'brown environment' and the 'green environment'. In 1996 Danida and DANCED jointly prepared a new environmental assistance strategy for the EDRF, the main features of which include: promotion of the environmentally sustainable utilisation of natural resources and the conservation of nature; prevention and limitation of air, water and soil pollution; and promotion of the sustainable use of energy (Danida/DANCED, 1996a). The target areas for funding have been expanded to include urban development and industrialisation; the sustainable use of energy; agriculture; water resources; forests and wood resources; biological diversity; and coastal zones. With-

in these areas, six forestry-related themes have been identified: energy, including wood and other forms of biomass energy conversion (stoves, etc); agriculture, including sustainable farming; water resources, particularly with respect to watershed protection; forest and wood resources; biodiversity, due to the importance of forests in the selected regions; and coastal zones, with a focus on mangrove forest management.

In addition to some of the points already in the forestry and agroforestry policy paper (see section 4.2.3), this strategy particularly highlights the cross-sectoral, holistic nature of forests and forestry. This is witnessed by the fact that the strategy proposes support for many forest-related activities in sectors other than forestry itself.

To complement their general strategy for environmental assistance, Danida and DANCED have also produced a joint regional strategy for Southern Africa (Danida/ DANCED 1996b). A similar strategy is being prepared for South-east Asia. Within the EDRF, cross-boundary problems are considered a particular priority; consequently environmental problems prioritised by several neighbouring countries will be supported preferentially. In the Southern African region, three of the four priority problems identified are forestry-related, namely:

- agriculture and woodland/forest management, notably deforestation, soil deterioration, loss of water resources and of biodiversity;
- environmental problems in coastal areas, including destruction of mangroves;
- environmental problems related to energy supply, including greenhouse gas emissions and deforestation.

Support for sustainable forest and agricultural management, including agroforestry and sustainable use of forests by neighbouring communities, was also highlighted as was support for integrated coastal management, with an emphasis on management structures.

4.2.5 Draft agricultural policy

Forestry-related activities have often been funded under the broader agricultural umbrella. The agricultural sector evaluation in 1993-4 (Danida, 1994c) concluded that Danida has increasingly supported forestry and land-use/watershed management projects in marginal lands, but that it has been difficult to achieve its objectives. It argued that trade-offs exist between poverty alleviation and environmental improvement, and suggested that more emphasis needs to be put on areas of high agricultural potential. It also suggested that drylands will require subsidies which governments can afford only if a surplus is produced in high potential areas. It noted, however, that the Danish resource base to support dryland programmes is not strong.

The draft Agricultural Sector policy paper (Danida 1996b) does not argue clearly for or against support to areas of low agricultural potential, but emphasises the poverty orientation of Danish assistance. Nevertheless, many of the strategies mentioned revolve around the type of productive agriculture more frequently found in high potential areas. It also notes that support will primarily be given where Denmark has a comparative advantage, which, if the conclusions of the agricultural

sector evaluation are accepted, is not in drylands agriculture.

To date, Danida's agricultural support has been characterised by a sizeable programme in watershed development and soil and water conservation, which constitutes an important part of its total forestry programme. The draft Agricultural sector policy aims to promote the transformation of agricultural support into support for Sector Programmes, in line with the general 1994 Strategy. Future co-operation in the sector will generally be concentrated on a specific sub-sector (particularly smallholder crops and livestock) or on a government support service, at the expense of assisting individual projects (Danida, 1996b). When this comes into effect, it will greatly change the nature of Danish support to agriculture. Many of the more holistic projects initiated under the pressure of the environmental concerns of the latter half of the 1980s, as expressed in the Action Plans, may therefore terminate or change considerably.

The Agricultural sector policy recognises the existence of the Forestry and Agroforestry policy, but also contains a section on agroforestry in which it emphasises the need for research and development in agroforestry intercropping, implying an experimental rather than implementation status. Farmer tree planting programmes, such as woodlots, will be supported in the agricultural sector if they lead to increased production and incomes, and have an advantage compared with alternative land uses. In spite of significant past support for agroforestry and farm forestry in the agricultural sector, the draft policy makes only a fairly cursory reference to these activities.

4.3 Conclusion

Danida's policy discussions in forestry-related sectors appear to be lively. On the one hand, its Sector Programme Support orientation will move the level of its interventions from watershed and local tree planting projects to national-level institutions. Sub-sector support will inevitably require a narrowing focus of assistance, since it is argued that a relatively small donor like Danida cannot provide significant support to many sectors at a time. This will differ from the broader, more holistic aid characteristic of existing district-level projects. It will also prioritise investments in regions in which the Danish resource base is strong, which is apparently not the case for drylands. On the other hand, Danida's overall strategy clearly prioritises poverty, which is particularly relevant in the drylands.

The greatly increased Danish support for the environment through EDRF funds has given increased weight to environmental issues. As a consequence, cross-sectoral approaches are emphasised as a characteristic of environmental support (Danida, 1996a).

5. REGIONAL AND THEMATIC DISTRIBUTION OF FORESTRY PROJECTS

No comprehensive inventory of forestry and forestry-related projects exists. The data presented in the following section have, therefore, been calculated on the basis of a number of different sources. These include

Danida's agricultural sector evaluation (Danida, 1994c), which only provides pre-1994 data; and the environmental sector evaluation (Danida, 1996a), which is limited to 10 out of the 20 programme countries. In line with DAC guidelines, project-specific aid to multilateral organisations (funds-in-trust) has been included as bilateral aid, although it is counted as multilateral aid by Danida.

To cope with the fact that much forestry assistance is in fact provided under a different guise, it was decided to include all projects, the titles of which clearly indicated their forestry or agroforestry nature, including tree seed projects. In addition, all integrated projects or natural resources management projects were included if they had one or more of the following specifications: tree seed; agroforestry; shelterbelts; sawmills; forestry; tree planting; nurseries; or if presented as natural resources management in combination with vegetation, degradation, ecological monitoring, and energy. However, consultation with Danida's technical advisers led to the exclusion of some projects due to their minimal level of forestry-related components.

5.1 Volume of funding

The agricultural sector, including forestry, was important in the early 1980s, accounting for 30% of total Danish bilateral assistance. By 1994 its share had dropped to about 15%. Agricultural assistance is expected to increase to 20% of total bilateral aid by 1999, although real changes are probably less distinct since these figures have been influenced by changes in classification (Danida, 1996a).

A relatively small number of projects involving forestry fall under the remit of the forestry desk. In 1993 only about 1% of the overall Danida budget was devoted to specific forestry activities, a surprisingly marginal amount in view of the emphasis of the Environment and Development Plan of Action (Danida, 1988b) on loss of vegetative cover and biodiversity (Danida, 1996a). However, this does not take account of the complexity of forestry-related funding in Danida, and many integrated projects have a significant forestry component.

An analysis of the number of Danish projects in tropical forestry (forestry alone and those with a forestry component) initiated during the period 1965–95 and funded by Danida or DANCED suggests that forestry, in its broadest sense, is a sector of growing importance (Figure 4).

In terms of project size, forestry projects funded in the 1980s, in particular those supported under funds-in-trust programmes, tended to have fairly large budgets relative to the more modest projects initiated recently, especially those funded through NGOs and DANCED.

5.2 Regional distribution of forestry projects

The geographical emphasis of Danida is clearly on Africa which currently receives 63% of all forestry and agroforestry project assistance, followed by Asia and Latin America (Table 2). The regional distribution of integrated projects with a forestry component (e.g. watershed development, soil and water conservation, and environmental protection projects) also follows this

pattern, with the emphasis on Africa (65%), then Asia (30%) and Latin America (5%) (Danida, 1995b).

The EDRF also constitutes an important source of forestry funding. In 1994 and 1995 two countries, Malaysia and Thailand, were the main recipients of the 25% of the EDRF destined for environmental support to developing countries (MEE, 1995). From 1996, an increased number of countries in South-east Asia as well as countries in southern Africa have received assistance from this rapidly growing fund (DANCED, 1996; Danida/DANCED, 1996a).

5.3 Thematic distribution of forestry projects

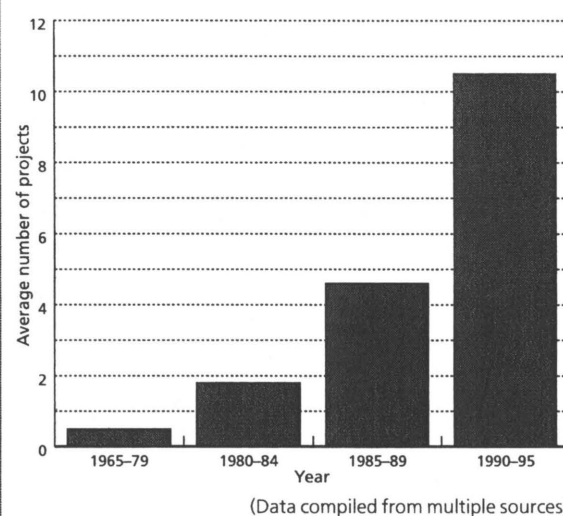
Taking into account all allocations up to mid 1995, tree seed projects are found to have been heavily supported by Danida, constituting 33% of all bilateral forestry-related assistance. Agroforestry support is more modest at 18% of the bilateral projects, but the distinction between agroforestry and other rural development forestry is rarely clear.

Funds-in-trust forestry assistance has been a relatively important feature of overall Danish support to tropical forestry, in particular by means of projects started in the 1980s through the United Nations Sudano-Sahelian Office (UNSO). Tree seed is a minor component in this form of forestry assistance, but agroforestry has greater significance (29% of all funds-in-trust forestry assistance). However, funds-in-trust assistance is being phased out by Danida.

Danida's total support to the forestry subsector to date amounts to around DKK 1,225 m. Total support to integrated projects with an incorporated forestry component is DKK 1,161 m., although it is not possible to specify what proportion of the latter was directly used for forestry activities.

Since 1994 DANCED has allocated DKK 83 m. to forestry and agroforestry projects and DKK 148 m. to projects which include a forestry component. This may not seem a large amount, but almost all projects were initiated in 1995 and many more continue to be identified.

Figure 4 Average number of forestry-related projects initiated each year



6. RESEARCH

Danida has supported research in forestry-related matters primarily through international institutes, and through research carried out in individual projects. The Consultative Group on Agricultural Research has been supported, particularly ICRAF and CIFOR, as well as CATIE, and international institutes such as ITTO and UNSO (Danida, 1994e; 1995b).

Applied research in tropical tree seed and genetic resources has been supported since 1965 through the Danish/FAO Tree Seed Centre, which became the Danida Forest Seed Centre in 1981 (DFSC, 1981). Botanical research has been carried out throughout this period by botanical institutes. A great deal of applied research has been undertaken by individual Danida projects but information is scattered and the quality varies. However, innovative and thorough research has been carried out in various cases (Wardell, 1996).

Table 2 Regional distribution of Danida's forestry assistance, 1965-95 (DKK m.)

		Africa	Asia	Latin America	Denmark	Total	%
BILATERAL	Tree Seed	58.2	14.7	48.7	82.3	203.9	16
	Agroforestry	24.9	19.5	68.0	—	112.4	9
	Other forestry	126.5	109.3	66.1	—	301.9	25
FUNDS-IN-TRUST	Tree Seed	36.7	—	—	—	36.7	3
	Agroforestry	178.8	—	—	—	178.8	15
	Other forestry	352.6	39.1	—	—	391.7	32
Total		777.7	182.6	182.8	82.3	1225.4	100
%		63	15	15	7	100	

(Data compiled from multiple sources)

7. PROJECT CYCLE METHODOLOGY

Until recently, a classic project set-up has been followed, but the 1994 Strategy (Danida, 1994a) requires that the majority of bilateral assistance be provided through programme aid. This has consequences for project cycle methodology, with inevitable upheavals in the aid administration during the transition. Despite the heavy emphasis on programme assistance, major changes in the implementation of development programmes were not effected in 1995. Less than 5% of bilateral aid in that year was executed as programme aid, whilst most of the funds were disbursed through projects. The conventional project cycle methodology is likely to remain important in Danida for some time.

In 1985 some headquarters staff attended a FAO workshop on the logical framework. Discussion was raised about its application in Danida, and since 1989 the logical framework approach (LFA) has become a standard tool in its bilateral programme. Further adjustments have been made regularly and the most recent guide dates from 1996 (Danida, 1996c). The recent changes were made to address the concern that the LFA has sometimes become a straitjacket, unsuitable for the participatory development approach Danida wishes to encourage.

7.1 The project cycle

The project cycle methodology for forestry is identical to that of all other sectors in bilateral assistance. Three stages are characteristic: preparation, implementation and completion, with the project preparation phase prescribed in most detail. A detailed project management manual (DANCED, 1995) has been prepared for DANCED, based on a series of guidelines produced by Danida.

The stages of project preparation often include (Danida, 1993b):

- identification;
- feasibility study, which may be preceded by a pre-feasibility study;
- appraisal, which may be preceded by a pre-appraisal;
- tendering;
- project document;
- financial approval procedures.

The role of the embassy has increased since the decentralisation policy took effect. In particular, project identification, feasibility study and appraisal, as well as implementation and completion, depend to a large extent on initiatives taken at the embassies. Furthermore, the project cycle described below does not apply to projects with a budget of less than DKK 3 m., which are funded from the Local Grant Authority and are entirely an embassy responsibility.

7.1.1 Project identification

Project identification is defined as the identification of the major development problems in a given geographical area, along with possible solutions in the form of a project proposal. The emphasis should be put on key problems that the recipient country wishes to address,

and aimed at those target groups that Danida can support. Proposals are screened in the light of country and sectoral strategies, projected financial allocations and risks. Preparatory studies are undertaken to improve the understanding of problems and possible solutions contained in the proposal. Consultants may be contracted to do part or all of this work. The studies lead to a decision to reject the proposal, or to move on to the feasibility study stage.

The objective of the feasibility study is a detailed multi-disciplinary examination of the project proposal, including its technical, economic, social, ecological and institutional aspects, and the sustainability of the project. External consultants are normally contracted. If the study finds the proposal feasible, a draft project document is produced.

7.1.2 Project appraisal

The project appraisal is a professional evaluation of the project proposed, after the various studies have been completed and before presentation to the financial authorities, with the aim of ensuring rational decision-making and enhancing the conceptual framework of the project. Special emphasis is put on technical, economic, social, institutional and administrative analysis. The development objectives, intermediate objectives, and outputs as well as project resources and their interrelationships are evaluated. The proposal is judged in the light of Danida sectoral and cross-sectoral policies as well as the needs, policies and the absorption capacity of the recipient country. Potential weaknesses are identified and improvements are recommended.

At this stage of the cycle, Danida may decide to invite private consultancy services to participate. Tendering procedures normally involve the shortlisting of three companies, but procedures vary depending on the size and type of work. After the necessary approvals have been obtained, a Memorandum of Understanding is prepared by the desk officer at the embassy, which is normally signed by the head of the embassy and the relevant minister in the recipient country, or their deputies.

7.1.3 Implementation

Project implementation is the responsibility of the organisation in the recipient country, with possible support from Danida technical assistance personnel and monitoring by the desk officer in the embassy. Normally, a three-year Plan of Implementation is prepared by the implementing organisation, which may be tailored to the recipient country's normal planning procedures. This Plan has to be approved by the embassy desk officer as well as headquarters. Annual and semi-annual plans are prepared based on the three-year plan.

Reporting during implementation follows the Logical Framework. Every bi-annual and annual report should explain how the development and intermediate objectives as well as the outputs are being achieved (Danida, 1993c). Reviews are normally prescribed in the project document, and in the case of forestry projects they are often carried out 2–3 years after project commencement.

7.1.4 Completion

The project document normally describes how Danida support will be reduced and terminated during the final project phase. A completion report is prepared by the implementing organisation and the chief adviser, although final responsibility lies with the desk officer in the embassy. The report helps to decide whether minor funds will be provided for continuation of the project, and whether a post-project evaluation should be carried out. A post-project evaluation analyses the preparation, implementation and completion of the project, and determines the relevance of its objectives, achievements, efficiency, developmental effects and sustainability. Such an evaluation should assist in the decision-making on future project assistance.

A major cross-cutting issue in project preparation is the Environmental Impact Assessment Guide of 1994 (Danida, 1994d). The guide is user-friendly and has been introduced at a time when interest in environmental issues has greatly accelerated. Nevertheless, the guide provides guidelines and not operational directives, and its impact is considered to be limited (Danida, 1996a).

7.2 Programme cycle

Sector Programme Support follows a process approach in six stages that are similar to the project cycle stages: identification; preparation; appraisal; approval; implementation and phasing out. Its contents are, however, quite different from the project cycle. Three types of document are required at each stage: the Sector Programme Support document; the Technical Reports, which deal with particular aspects of the sector; and documents that assess particular options for future action. At each stage, the Process Action Plans prescribe who should conduct and who should participate in the process. This helps ensure national ownership (Danida, 1996d).

Danida SPS is still at the stage of description and analysis of the already identified sectors for each programme country. This stage analyses how SPS efforts can be planned jointly with other donors. Within this framework specific projects may be presented for approval. These may include existing Danida-supported projects which need to be adjusted to SPS, or pilot projects falling clearly within the scope of the SPS under preparation.

The outcome of the identification stage should be a tentative Sector Programme Support document, with project documents attached, accompanied by a Process Action Plan. Projects will be redefined in the course of the SPS process and, once the SPS is accepted, approved projects become 'components' of SPS (instead of 'projects'), whilst others are phased out.

Subsequent stages of the programme cycle will not be described here since the process has only just started. In 1995, only 3% of the bilateral assistance subject to SPS was reformed into programme assistance (Danida, 1995). Subsequent stages of SPS may well be adjusted in the light of experience gained over the next few years. The environment as a cross-cutting theme should be incorporated in all stages of the SPS process and in particular during the policy dialogue. However, there is concern regarding the role of Environmental Impact Assessment in Danida's SPS cycle. There is no reference

in the SPS guidelines as to how environmental issues are to be analysed and reflected. It is feared that indicators of success in this respect may become fluid and expendable (Danida, 1996a).

The now rapidly increasing EDRF will not follow SPS procedures but will instead follow the project cycle (Danida/DANCED, 1996a).

7.3 DANCED project cycle

The DANCED organisation is much smaller than that of Danida and basically consists of three levels: the country officer, the desk officer and the director. The DANCED project cycle contains many of the elements found in Danida but it is condensed around these three officers (DANCED, 1995). The country officer is based in the embassy but is not as functionally integrated into it as the Danida desk officer. DANCED is not involved in any project implementation, so that the role of consultancy companies is much greater than in Danida. DANCED funds are for project assistance only and are unconnected to the SPS orientation.

8. PROJECT AND PROGRAMME REVIEWS

Two major reviews have taken place in the forestry-related sectors:

- the Agriculture Sector Evaluation (ASE), which took place in 1993/94;
- the Environment and Development Evaluation (EDE), which took place in 1995/96.

No official Danida review or evaluation of the forestry sector in the narrow sense has taken place to date, but most forestry projects financed under the bilateral portfolio are included in either one, or both, of the above evaluations.

8.1 The Agriculture Sector Evaluation

The ASE (Danida, 1994c) included field evaluations of eight forestry resource interventions in the agriculture sector, of which two belong directly to the forestry desk, while the six others have significant, often dominant, forestry-related activities. The sample covers India, Kenya and Tanzania with an emphasis on dryland areas, but some areas of high agricultural potential were also included. The development objectives of the projects were generally defined as improved living conditions and/or an improved environment, and lesser objectives were the establishment of an improved resource base, the introduction of sustainable management, strengthening of the implementing institutions, and community mobilisation.

The evaluation found that the logic of the LFA was not evident, and, in particular, that it was not clear how measures to improve the resource base, mobilise the communities, etc., would lead to improved living conditions, or what the improved living conditions comprised. It found that no readily available technologies existed for the agricultural conditions in the intervention areas. Instead, projects relied on a combination of existing standard messages and research and development activities, although such R&D has not been systematic.

Box 1 Danida Forest Seed Centre

In 1969 the Danish/FAO Forest Tree Seed Centre was established outside Copenhagen as part of an internationally coordinated programme formulated by the 'FAO Panel of Experts on Forest Gene Resources' in 1968. It changed its name to the Danida Forest Seed Centre (DFSC) in 1981. The DFSC's early aims were to assist developing countries to improve the wood production and other benefits derived from their forests, through the use of plantations of well-adapted species and provenances. In particular, the Centre took responsibility for the collection and distribution of seed of different provenances and the organisation of international trials to evaluate the performance of *Tectona grandis*, *Gmelina arborea* and *Pinus merkusii*. With the growing realisation that the use of industrial wood in the tropics is outweighed by the use of fuelwood and other tree products, DFSC changed its emphasis in the late 1980s towards more support for multipurpose woody species. Regionally, its activities have also seen a shift from South-east Asia towards Africa, with a particular focus on dry-zone species. More recently, in line with growing international awareness of the need for conservation of forest genetic resources (as expressed in the International Convention on Biodiversity adopted at UNCED in 1992), DFSC has increased its emphasis on gene resource conservation.

DFSC concentrates on filling the gaps between research and practical application by (i) collecting know-how and carrying out required research and development; (ii) developing methods for practical application; and (iii) transferring know-how through DFSC's information service, training and direct project support. In the technical field, its activities focus on seed procurement, tree improvement and gene resource conservation. While general advisory and information services are made available internationally, DFSC's assistance is directed primarily towards the programme countries for Danish bilateral assistance. In 1996 it was closely involved with Danida tree seed projects in Eritrea, Niger, Tanzania, Nepal, Nicaragua and, in collaboration with CATIE, in Central America. It also supported projects funded by the United Nations Sudano-Sahelian Office (Sudan, Ethiopia, Uganda) and the Nordic Development Fund (Indonesia). DFSC's basic operational costs are covered by Danida, while most training activities and support for field projects are carried out on a cost-recovery basis.

(DFSC, 1981, n.d., 1995)

The ASE noted the difficulty of assessing the effects of an intervention that seeks to arrest on-going degradation. In many cases there is no indication whether effects should be measured against the baseline situation or the hypothetical situation, had degradation been allowed to continue unchecked. A further reason for difficulty in impact assessment, according to the ASE, is the long-term nature of forestry and agroforestry. The development impact must instead be assessed in terms of the survival rates of trees, and the appropriateness of technologies tested in R&D plots, for later adoption and use by the poor. It also found that off-site effects downstream, whether positive or negative, were generally not measured by the projects.

The ASE concluded that institutional integration is

often less than desirable, mainly because the cross-sectoral approach taken by projects contrasts with traditional compartmentalised implementation by government departments and ministries. However, it noted that, despite inherent difficulties, positive institutional changes may occur in the long term. The project approach also has inherent difficulties, such as possible contradictions between the physical catchment approach and participation.

Finally, the ASE concluded that a strategic choice has to be made between low and high potential areas. Poverty alleviation in the long term requires economic growth which, in the view of the ASE, can currently be achieved only in the high potential areas, given that in many developing countries agriculture is the key economic sector. It recommended investing primarily in agricultural development in the high potential areas, with social support for the poorest especially in the low potential areas.

8.2 The Environment and Development Evaluation

The Environment and Development Evaluation (EDE), carried out in 1995/96, reviewed the 1988-9 Action Plans and assessed environmental issues in the forestry and agricultural sectors (Danida 1996a). It was much more positive than the ASE about the impact of Danida's forestry and integrated land-use management projects and concluded that Danida had successfully included afforestation activities and the conservation of biomass energy sources in some land-use management and forestry projects. It presented much more positive data about biomass energy production in various projects. It noted, for example, a reduction in the work of an average woman of several hours per week combined with a major increase in target group income from forestry in the case of one project. The ASE, however, which evaluated the same project, made no mention of this.

The EDE concluded that the forestry sector's real contribution to GDP, and in particular to the rural poor, is often underestimated. The emphasis of the 1988-9 Action Plans on forestry and agroforestry has not been translated into significant support for this sector (with a drop of 1.3% in bilateral assistance to forestry in 1993). It found that the forestry projects had effectively adopted participatory approaches in rural development forestry, resulting in institutional capacity building and public awareness-raising.

The EDE found that recently proposed Sector Programme Support in the field of agriculture reflects a sub-sectoral bias towards high-potential agricultural production objectives (such as livestock breeding, veterinary support, seed production) at the expense of integrated land-use management approaches. It noted that the poverty focus and the expected environmental impact may suffer from such policy changes, and argued that development assistance through a narrow sub-sector focus, and implemented through a central Ministry, has a poor record in Africa.

The evaluation recommended a policy change whereby 10% of total Danida bilateral disbursements by the year 2001 should be allocated to projects with an emphasis on integrated resource management. The

policy recommendations made in this evaluation differ considerably from those in the Agricultural Sector Evaluation.

The EDE agreed with the ASE that monitoring systems for natural resource management and forestry projects are generally poor or even absent. Baseline data are often lacking, making impact assessment difficult or even impossible. However, it also noted the positive experience of innovative monitoring systems developed in some projects namely, monitoring of hydrological changes under changing land use, participatory impact assessment at village level and farm forestry modelling. The difficulties and complexities of conducting impact studies of resource management interventions are, however, accepted by the EDE (Wardell, 1996).

Finally, the EDE recommended that Danida define more clearly the trade-offs between economic growth and environmental sustainability. It noted that investments in high-potential agriculture may have high immediate returns, but that the actual and expected environmental and social costs of such development are generally not considered. Environmental economic valuation should become standard practice for sector programme support.

A synthesis of the major Danida reviews relevant to forestry presents a number of issues for the future:

- It is essential to establish a thorough baseline of data for integrated resource projects intervening in complex land-use management patterns. Furthermore, significant efforts must be made to develop a reasonably strong monitoring system in the course of project implementation. In the absence of this, impact analysis is hardly possible and external evaluations may arrive at unrealistic and contradictory conclusions. This may endanger the continued existence of such projects and programmes in the overall aid programme, since it leaves policy and decision-makers with unrealistic options.
- Natural resource-type interventions in the drylands often have a relatively limited impact if gauged by traditional measures. Environmental economic valuation should become standard practice for all development assistance including natural resource projects.
- Integrated resource management projects address many complex issues and ought to have the status of R&D instead of implementation. Long-term research commitments involving national and international research institutions should be sought by these projects.

9. CONCLUSIONS

Danish development assistance appears to be unique in many ways. In the first place, the level of public support for aid has constantly increased: to the level of three-quarters of the Danish population by 1995, when Denmark had been the lead donor for several years (DAC, 1995). Secondly, Denmark's follow-up to UNCED with the establishment of a special environmental assistance fund (the EDRF), which will eventually constitute a further 0.5% of GNP, is highly unusual among donors (MEE, 1995). Thirdly, the level of participation amongst the Danish public in develop-

ment aid issues appears to be higher than in many other donor countries. And finally, probably more than in any other donor country, Danish development assistance is marked by idealism (Olsen & Udsholt, 1995).

There are a number of contradictory policies in Danish development assistance. Poverty alleviation as the underlying motive for assistance is not at ease with the 50% tied aid objective. This conflict is seen in the different views expressed in major evaluations, such as whether Danida should or should not provide major support for agriculture and resource management in the drylands. A second area of conflict is the contrast between the poverty alleviation objective of Danida and the environmental conservation objective of EDRF funds managed by DANCED. A major study of Danida's poverty alleviation assistance is currently under way.

Definitional problems inhibit analysis of the tropical forestry and forestry-related support provided by Denmark. Nevertheless, it is clear that forestry has historically been a sector of very limited importance in Denmark itself and there is no history of colonial forestry. This was reflected in the assistance provided up to the 1980s, which largely concentrated on commoditised agriculture. Forestry support has become important only during the last 10 years or so, and mostly in a form which is integrated into wider development objectives, in particular into land, water and environmental conservation. This is mainly because of the greatly increased importance attached by Denmark to environmental conservation.

The emphasis of forestry support has shifted from large funds-in-trust projects to a multitude of smaller projects, many of them implemented by NGOs and the private sector. It can be argued that this has probably improved the quality of the assistance.

Current Danish development assistance is not only determined by many policies and strategies, but also by a host of external and internal interests. The outcome of the process depends on the relative strength and capacity that the relevant actors can mobilise and master.

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ACRONYMS

ASE	Agriculture Sector Evaluation
CARE	Cooperative for Assistance and Relief Everywhere
CATIE	Centro Agronomico Tropical de Investigación y Enseñanza
CIFOR	Centre for International Forestry Research
DAC	Development Assistance Committee
DANCED	Danish Co-operation for Environment and Development
DANIDA	Danish International Development Agency
DFSC	Danish Forest Seed Centre
DKK	Danish Kroner
EDE	Environment and Development Evaluation
EDRF	Environment and Disaster Relief Facility
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GNP	Gross National Product
ICRAF	International Centre for Research in Agroforestry
ITTO	International Tropical Timber Organization
LFA	Logical framework approach
MEE	Ministry of Environment and Energy
MFA	Ministry of Foreign Affairs
NFNA	National Forest and Nature Agency, MEE
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
SPS	Sector Programme Support
TSA	Technical Advisory Service
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNSO	United Nations Sudano-Sahelian Office
WWF	World Wide Fund for Nature

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Finland

Riitta Oksanen, Jyrki Salmi and Gill Shepherd

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1. DOMESTIC FORESTS AND FORESTRY¹

Finnish forest ecosystems are relatively young. During the last glacial period the whole land area of present-day Finland was covered by a thick layer of ice. The retreat of glaciers started around 10,000 years ago, immediately after which vegetation started occupying the uncovered land. The first trees were sub-arctic and boreal broadleaved species. By 6,000 years ago, with a climate warmer than today, Finland was covered by broadleaved forests dominated by temperate species.

Present-day Finnish forests are characterised by mixed but coniferous-dominated boreal (*taiga*) ecosystems. Bogs and moors are common, due to the fairly high humidity (a result of low evapotranspiration; rather than high rainfall) and the relatively flat topography. It is assumed that prior to human intervention natural forest fires and windfalls were fairly common. Consequently, ecosystems were composed of a mosaic pattern of different stages of succession, from recently burnt or fallen areas to old growth climax forests. So-called pioneer species, mainly birch and other broadleaved species, formed the first stage in the succession, gradually replaced by more shade-tolerant species, particularly spruce.

Human population followed soon after the retreat of the ice. However, the population remained extremely small, concentrated along the coast and main inland watercourses. These first inhabitants, the ancestors of the Lapps, were hunter-gatherers who had very little impact on the natural ecosystems. A new wave of immigrants, bringing agriculture with them, arrived from the south and south-east some 2,500 years ago. This farming, based on slash-and-burn agriculture, was initially restricted to the most favourable areas of south western Finland, gradually spreading along the coasts and main inland watercourses. The population grew only very slowly and the slash-and-burn cultivation was virtually sedentary, (rotational), gradually leading to permanent farming.

In the twelfth century the Swedes started colonising Finland. Gradually the Russians from the east (Novgorod) also began to raid Finnish areas. This led the Swedish king, Gustaf Wasa, to encourage the occupation of the interior of Finland in the sixteenth century. He wanted to increase the Finnish – Swedish presence in the vast interior and thus improve its defence against the Russians. Motivated by generous tax incentives, Finnish farmers rapidly started to colonise the previously sparsely populated inland, at the same time pushing the semi-nomadic Lapps north. The colonising of the interior was also greatly facilitated by a new, highly itinerant, slash-and-burn technique which was based on successive debarking, drying, felling and burning of spruce forest, a technique which was extremely productive per labour input, but very low in productivity per acreage. As the population increased, the fields which had been cultivated and abandoned were put first under more sustainable slash-and-burn cultivation, and eventually the best areas were converted to permanent agriculture.

The first commercial forest products were furs, but

boat building for export became a fairly large-scale business by the fifteenth and sixteenth centuries. Tar burning and log exports gained importance in the seventeenth century, facilitated greatly by the ample cargo space in Hansa trade ships returning almost empty to central Europe after unloading their European goods in Nordic, Baltic and Russian harbours.

Sawn wood exports started in the seventeenth century, but they remained very modest until the middle of the nineteenth century, due to the restrictive trade policies of the Swedish Government. The Swedish iron industry also efficiently protected its interest in continued low prices for fuelwood and charcoal, both required in iron processing. The Finnish forest industry gained momentum only after Russia took Finland from Sweden in 1809, and gave the Finnish administration considerable autonomy. The Finnish forest industry really took off in the 1860s after radical liberalisation of the economy and trade by the new Tsar, Alexander II. New steam-powered sawmills were established, soon mechanical pulp mills and paper factories were opened, and chemical pulp mills followed in the 1880s.

The Finnish Senate began to recognise the importance of the forestry sector. However, there were still heated debates about the future of the country and the importance of forestry. There were those who considered that forests were a major hindrance to the economic development of the country, and consequently that they should be felled as soon as possible to make way for promising agricultural opportunities. Misery, backwardness and ignorance were strongly associated with forests and people living in and around them. Others, however, argued that forest resources provided the country's only real exportable commodities and consequently forests should be wisely and sustainably utilised for the benefit of the whole economy. The latter opinion prevailed.

The Finnish Senate recruited a foreign consultant to provide advice on setting up an adequate forest administration. In 1858 Prof. Edmund von Berg, from the Tharandt Forest Academy in Germany, proposed the establishment of a lean and flexible forest service. He also strongly recommended the provision of practically oriented forestry education. His recommendations were duly implemented. Forestry legislation was revised and amended several times. In 1886 a law was passed which stipulated, for the first time, the general principle still in effect that forest should not be devastated (Haataja, 1950). With Independence at the end of the First World War, there was a general move from very strict control to merely prohibiting deforestation. A law on protection of forests in 1922 aimed to protect special forest areas. Recently debate has resurfaced on the level of control necessary, some arguing for the complete removal of state control, others for even stricter control, this time mainly for environmental reasons.

Gradually the forest industry developed into a leading industrial sector of the country. The forestry sector was particularly important in the 1950s and 60s when it contributed more than 15% of GDP. Since then the national economy has diversified significantly so forestry (including forest industries) contributed 9.3% of GDP in 1995 (*Statistical Year Books*, Finnish Forest Research Institute). However, forestry is still very important particularly in terms of exports. Roughly 50% of export

1. This section was written with the help of Helander (1949).

revenues originate from the forestry sector, and the figure is even higher when machinery and electronics directly related to forestry are also included.

Finland is perhaps the world's most forest sector-dependent country in the world and approximately 75% of its land area is covered by forests. For historical reasons, particularly the long and strong tradition of an independent peasantry, more than 60% of forests are owned by private families or individuals. This ownership structure has had a large impact on Finnish attitudes. Finns often regard themselves as forest people. Recent changes in the way society values forest, emphasising non-utilitarian and non-market values, have also had a large effect on the way Finns perceive forests. This has provoked considerable debate on the role of the traditional forest sector.

2. HISTORICAL INVOLVEMENT WITH TROPICAL FORESTRY

Finnish involvement in tropical forestry has a fairly short history. The first involvement in the 1950s and 60s was commercial, mainly aimed at selling Finnish forest machinery to tropical countries. The machinery and mill export efforts soon led to the development of a consultancy business in forestry. Development co-operation began gradually in the 1960s. In the beginning it was at very modest levels, mainly focusing on training. However, forestry was a priority sector of Finnish aid from the outset. With the gradual growth of development co-operation in the late 1960s and 1970s, a great deal of emphasis was given to the use of Finnish machinery and equipment in projects. In the 1980s the emphasis evolved from the export of Finnish machinery to rural development, poverty alleviation, and nature conservation.

One noteworthy aspect of Finnish development co-operation in the forestry sector has been its strong focus on training from the very beginning. The idea was to transfer to developing countries the knowledge and know-how of the Finnish forest sector which were thought to be of high quality. Gradually it was realised that the Finnish models were not particularly well suited to the situation of most developing countries, no matter how excellent they might be in Finland, and that techniques and know-how had to be adapted, and often tailor-made, to suit local conditions. In many cases this meant the design of completely new modes of operation.

The strong role of the forestry sector in Finnish development co-operation is possibly a result of the importance of forestry in the Finnish national economy. This has also meant that purely commercial ties between Finland and tropical countries have continued to increase.

3. STRUCTURE OF DEVELOPMENT ASSISTANCE DELIVERY

3.1 Organisation of the aid programme

Finnish development co-operation is administered through the Department for International Development Co-operation (DIDC) under the Ministry for Foreign

Affairs, (MFA). DIDC was formerly called FINNIDA, this name having been phased out since 1995, although it may still be used in developing countries where it is well-known. The reason for the change was to integrate development co-operation more fully into the Ministry of Foreign Affairs. The distinct career stream in development co-operation within the MFA is also being phased out for the same reason (OECD, 1995: 11).

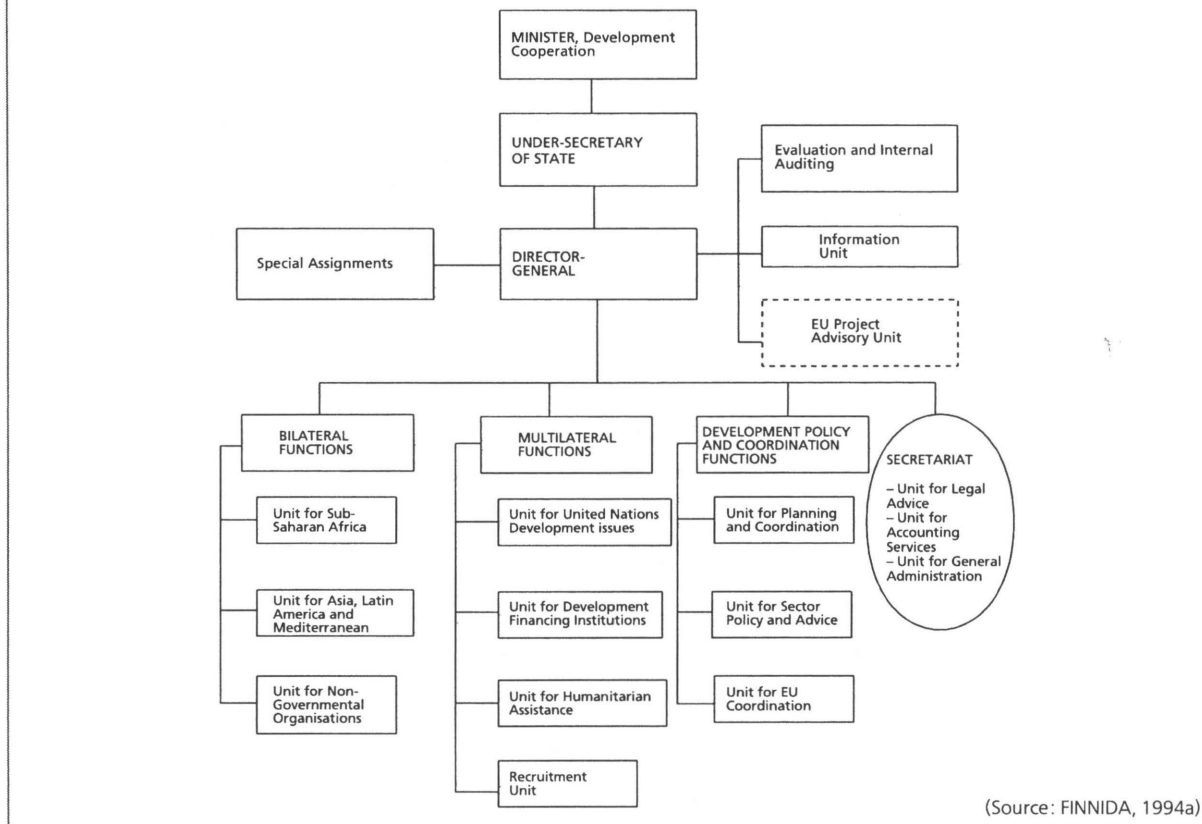
The administrative structure of the Department was last modified when Finland joined the EU in 1995 (see Figure 1). Bilateral and multilateral functions are dealt with in two separate strands. The officials dealing with bilateral co-operation are based in two regional units, one for Sub-Saharan Africa and the other for Asia, Latin America and the Mediterranean. Within these units, the officials have responsibility for (i) general co-operation issues and (ii) projects in a specific region or country. During the 1995 reorganisation a third strand of operations was created for planning and co-ordination, including a new unit for EU co-ordination. In the unit for Sector Policy and Advice in this third strand, there are professionals with an advisory role in specific technical fields (such as forestry, agriculture, environment and education). The post of Director-General of the Department was also reintroduced in 1995.

There is now a unit for Evaluation and Internal Auditing reporting directly to the Director-General. This unit is responsible for wide cross-cutting or thematic evaluations. The responsibility for project-specific evaluations rests with the relevant regional unit. Finland had a Minister for Development Co-operation during the period 1991-94 and again since 1995. The current Minister of Development Co-operation is also the Minister for the Environment, perhaps because he represents the Green Party. The administrative structure of the Department for International Development Co-operation is shown in Figure 3. A separate part of the MFA administers aid to the former Soviet Union. In addition to the staff of the Department in Finland, there are professionals dealing with development co-operation tasks based overseas in the Finnish Embassies and representations.

3.2 Development assistance commitment

The 1980s were characterised by a constant and rapid growth of funds for development co-operation (see Table 1). The average annual growth of net disbursements was 22.3% between 1980 and 1991. Finland attained the UN target (0.7% of GNP) in the early 1990s and net disbursements were 0.80% of GNP in 1991 (FIM 3,760.5 m.). The economic recession during the early 1990s, however, rapidly changed the situation. Between 1991 and 1994 the average annual decline in net disbursements was 26.1%. Net disbursements in 1995 were FIM 1,695.6 m. Up to 1991 the respective shares of bilateral and multilateral co-operation were approximately 60% and 40%, but multilateral aid suffered more from the cuts and its share of net disbursements had declined to 26% by 1994. In 1995 multilateral activities were again up to 43%. As a consequence of joining the EU Finland will contribute to the central EU development budget (about US\$ 40 m. in 1995) and will also contribute to the 8th European Development Fund as part of the Lomé Convention (estimated at US\$ 60-80 m.) (OECD, 1995: 16).

Figure 1: Organisation of the Department for International Development Co-operation, Ministry of Foreign Affairs



Allocations for development co-operation through the EU will be taken from Finland's oda budget with no compensating increase in oda overall. Payments to the EU oda budget accounted for 14% of Finnish oda in 1995. The Finnish Parliament passed a resolution calling for UN contributions to be maintained at the

1992 level. This suggests that cuts are more likely to be made in bilateral rather than multilateral support. Some commentators did suggest that Finnish bilateral aid be phased out altogether but Finland remains committed to maintaining a bilateral programme (OECD, 1995: 17 and Figure 2).

Figure 2 Aid 1985–1995. Bilateral and multilateral volumes, and % of GNP

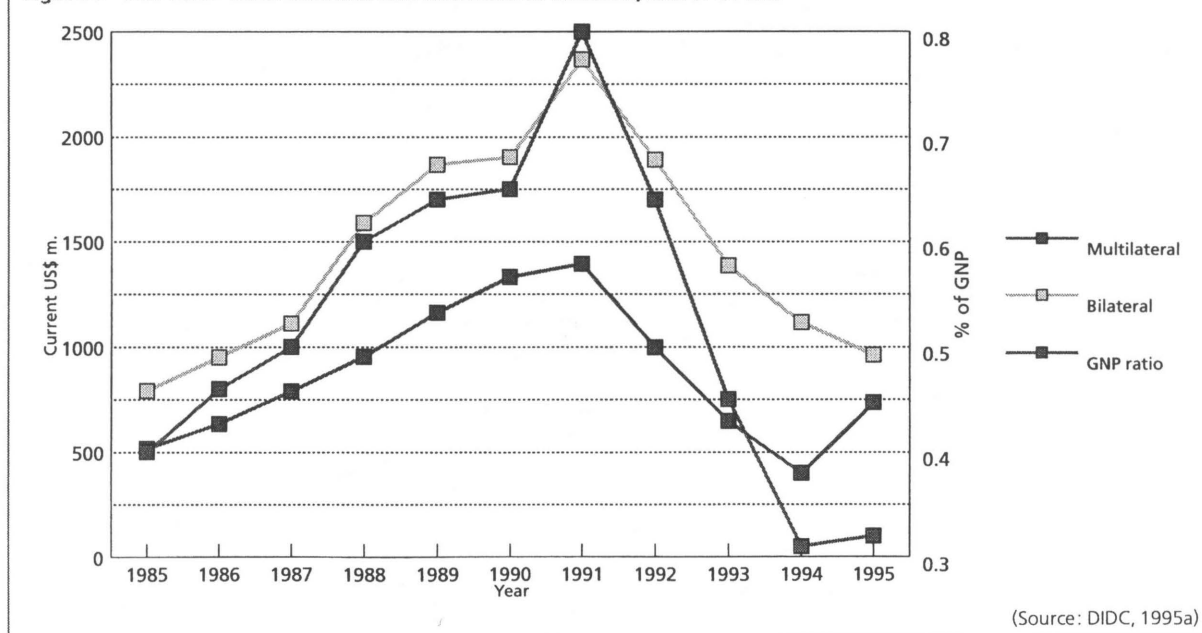
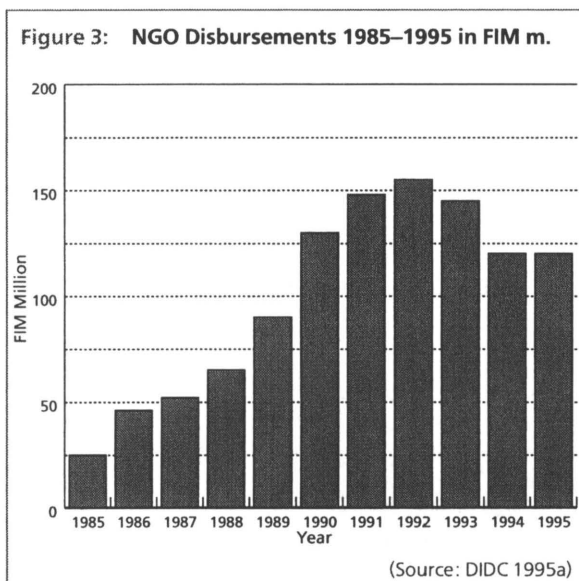


Table 1 Finnish net oda disbursements 1985–1995

Finnish ODA	Year										
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Net Disbursements, FIM m.	1307.1	1585.6	1900.1	2542.5	3031.1	3234.5	3760.5	2887.8	2031.5	1515.1	1695.6
% of GNP	0.40	0.46	0.50	0.60	0.64	0.65	0.80	0.64	0.45	0.31	0.32
Bilateral aid, FIM m.	791.2	951	1110.8	1588.9	1868.7	1903	2367.4	1889.7	1384.7	1115.7	961.3
% of total net disbursements	61	60	58	62	62	59	63	65	68	74	57
Multilateral aid, FIM m.	515.9	634.6	789.4	953.6	1162.4	1331.5	1393.1	998.1	646.8	399.4	734.4
% of total net disbursements	39	40	42	38	38	41	37	35	32	26	43

(Source: DIDC 1995a)



The Finnish Government's decision-in-principle of 12th September 1996 on Finland's development co-operation set the target of increasing the budget for development co-operation so as to attain the level of 0.4% of gross national income by the year 2000. Furthermore, Finland reaffirms its commitment to attain the UN recommendation of 0.7% of national income in the long term.

3.3 Personnel

The DIDC's staff doubled in the 1981–91 period, but a government policy of retrenchment in 1992 resulted in more work being subcontracted (OECD 1995: 19). The total number of staff in the Department declined from 178 in 1992 to 146 in 1996. Of this total, 78 were professionals. Twenty professionals were based overseas in the Finnish Embassies and representations and 13 in the Unit for Sector Policy and Advice. Among them is one adviser for forestry.

3.4 NGOs

Development work by NGOs has been funded since 1974 as part of Finnish development co-operation

through the Non-Governmental Support Programme. The same trend is seen in the allocations for NGO activities as in oda volumes in general: rapid growth especially since the mid-1980s, with some decline in the early 1990s (see Figure 3). The share of NGO support has, however, been growing and was 7.1% of total oda in 1995 (see Figure 4). The government's decision-in-principle foresees a further increase to 10 – 15%. In 1996 support was provided to 120 Finnish NGOs implementing 348 projects in more than 60 developing countries. About 90% of NGO funding goes to Finnish NGOs but international and Southern NGOs are also eligible for support. 75% of project costs are normally provided by the Department and 25% by the NGOs themselves (OECD, 1995: 31). In addition to project activities, NGO support also assists the Finnish volunteer programme, as well as international and local NGOs operating in developing countries, and provides information support. The main sectors of operations are health care, education and other social services (receiving about 80% of funding) (OECD, 1995: 31).

The Finnish Centre for Development Co-operation (KEPA) was established in 1985 to act as an umbrella organisation for implementing the volunteer programme and to provide a forum where aid issues could be discussed (OECD, 1995: 31).

3.5 Pre-mixed concessional credit scheme

As part of Finnish oda, a Pre-mixed Concessional Credit Scheme was launched in 1987 to increase financial flows from Finland to credit-worthy low and middle income developing countries for projects with high developmental impact (see Table 2 and OECD, Finland, 1995: 49). This scheme supports projects to which grant aid cannot be allocated and involves DIDC, the Finnish Guarantee Board and the Finnish Export Credit Ltd (FEC), which is a government financial institution engaged in long-term financing of exports. FINNFUND (the Finnish Fund for Industrial Co-operation Ltd) is a public development finance corporation that provides equity capital, long-term loans and guarantees. It is owned by the Government of Finland (96.9%), Finnish Export Credit Ltd (3%) and the Confederation of Finnish Industry and Employers (0.1%). Starting in 1992 FINNFUND began to make equity and loan

investments in the Central and East European Countries and the newly independent states of the former Soviet Union, particularly in the Baltic region, in addition to existing investment in developing countries (OECD, 1995: 23). Interest subsidies in 1994 were FIM 134 m. and were estimated to be 9% of total oda in 1995 (OECD, 1995: 49). The main recipients of these credit schemes are Asian countries, China being by far the largest recipient (see Table 2). Interest subsidies have been allocated mainly to the industry and energy sectors. The forest industry was the largest recipient receiving 40.2% of the total from 1990–93 (OECD, 1995: 50). Interest subsidies to forestry and forest industries amounted to FIM 63 m. in 1995.

Interest subsidies have been heavily criticised for their distorting impact on international competition. In 1992 FINNIDA published an evaluation of the mixed credit scheme carried out by the Netherlands Economic Institute (FINNIDA, 1992a). As well as the standard criticism of interest subsidies, the Finnish scheme was found to assess project proposals for development content inadequately, resulting in a redistribution of aid from Africa to Asia which had not been effectively monitored. Since then changes have been made in the administration of projects. Projects funded under the mixed credit scheme are now subjected to the same scrutiny as bilateral projects and must be in line with overall Finnish development co-operation strategy (OECD, 1995: 51). However, Finland is now seeking to put an end to mixed credits. Due to existing commitments this cannot take immediate effect, but during a transitional period Finland will attempt to reduce the share of mixed credits as well as restricting them to the transfer of environmental technology and the social sector. New credit approvals dropped from 19 in 1991 to 5 in 1994 with a value one tenth of the 1991 levels (OECD, 1995: 49).

3.6 Volume of forestry sector development co-operation

The trend in the volume of forestry sector development aid follows the general trend in Finnish aid disbursements. Funds used for forestry and forest industry projects increased up to 1991 when a peak of FIM 178.92 m. was reached. Since then forestry sector aid has declined. It is, however, noteworthy that the sector has maintained and even increased its share of the total disbursement of bilateral aid, from 5.4% in 1988 to 8.1% in 1995.

Table 3: Forest sector development co-operation 1988–1995

Finnish ODA	Year							
	1988	1989	1990	1991	1992	1993	1994	1995
Development projects in forestry and forest industries, FIM m.	86.32	92.05	109.36	178.92	114.33	93.51	84.06	78.32
Total bilateral aid, FIM m.	1588.9	1868.7	1903	2367.4	1889.7	1384.7	1115.7	961.3
Forestry sector % of total bilateral net disbursements	5.4	4.9	5.7	7.6	6.1	6.8	7.5	8.1

(Source: DIDC 1995a)

Table 2: Finnish pre-mixed credit scheme by country (as of March 1995)

Country	Number of Credits	Total (US\$ million)	% of Total
China	51	262	44.7
Thailand	6	104	17.7
Zimbabwe	2	44	7.5
India	5	35	5.9
Philippines	1	21	3.5
Mexico	1	21	3.5
14 Other Countries	18	100	17.2
Total	84	587	100

(Source: OECD Finland, 1995, 50)

Forestry plays a minor role today in the Finnish NGO support programme. Out of the 348 projects that were implemented in 1996 via co-operation with Finnish NGOs, less than 20 dealt with forestry issues. A few projects dealing directly with forestry (community forestry, reforestation) and forestry issues are in some cases components of rural development projects (tree planting, nurseries). There are currently 40 development workers based in Mozambique, Nicaragua and Zambia through the Finnish volunteer programme, of whom 3 are forestry specialists. Forestry formed a more important part of the volunteer programme in the past, especially in Zambia.

Interest subsidies provided through the pre-mixed concessional credit scheme are a substantial part of Finnish development co-operation in the forestry sector. Interest subsidies to forestry and forest industries amounted to FIM 63 m. in 1995, 45% of total forestry support (Finnish Forest Research Institute, Statistical Yearbooks of Forestry).

4. DEVELOPMENT ASSISTANCE STRATEGY

4.1 Background

The development of aid strategies for the forest sector

follows the evolution of post-war development theory. In the 1960s and 1970s Finnish development strategy was possibly slightly behind the times, but in the 1980s it was at the forefront in many respects (e.g. in participatory approaches, non-conditionality of aid, etc.).

The early (1960s and 1970s) strategies were based on neo-classical economic growth theories (savings-investment-multiplication effects), popularly known as 'trickle down' development theories. The developing countries were seen as suffering from insufficient domestic savings which resulted in insufficient investment. It was thought that aid could provide the missing capital for the needed productive investment. Industrialisation was considered the inevitable and optimal development path for all economies. Consequently, aid injections were provided mainly to industrial projects. This theoretical background was also convenient from the point of view of Finnish national economic interests. Industrial aid was believed to be creating future markets for the rapidly developing Finnish machinery and engineering industries.

Finnish technical assistance has closely followed global trends. In the 1960s and 1970s technical assistance was mainly based on the provision of individual experts posted to line functions in the recipient organisations. Gradually this personnel assistance has been phased out in favour of project assistance, and recently assistance has been given to larger programmes combining several projects.

4.2 Overall strategies

The Finnish development strategies of the 1960s and 1970s were not clearly formulated nor debated in Parliament. With the rapid expansion of the aid budget in the 1980s, a policy and strategy debate became necessary. The government submitted a White Paper on development co-operation to Parliament in 1984, the main tenor of which was that development aid should reach the UN target of 0.7% of GDP. However, it was only in 1993 that the first explicit development strategy, *Finland's Development Co-operation in the 1990s. Strategic Goals and Means* (MFA, 1993), was published. It is argued that a clear formulation of strategy was undertaken only when it became absolutely necessary; in other words, when the development administration had to start defending the very existence of development aid during the severe budget cuts of the early 1990s brought about by the deep recession in the Finnish economy.

The 1993 development strategy set three major objectives for Finnish aid: reducing widespread poverty in developing countries; combatting global threats to the environment by helping the developing countries to solve their environmental problems; and promoting social equality, democracy and human rights in the developing countries.

Based on this, country strategies were prepared for the main recipient countries (Ethiopia, Kenya, Mozambique, Namibia, Zambia, Tanzania, Nepal, Vietnam, Nicaragua and Egypt). These country strategies were published in the *Report on Development Co-operation to Parliament* (MFA, 1994). No sector-specific strategies were produced to support the overall strategy.

In addition to the general strategy, DIDC has published a number of policy guidelines on various

issues, thus elaborating its strategy on those issues. These policy guidelines have been issued on such subjects as: *Environmental Impact Assessment* (FINNIDA, 1989a); *Environment in Finnish Development Co-operation* (FINNIDA, 1992b); *Guidelines on Gender Analysis* (DIDC, 1995b); *Looking at Gender and Forestry* (FINNIDA, 1993a); *Looking at Gender, Agriculture and Rural Development* (DIDC, 1995c); and *Looking at Gender, Water Supply and Sanitation* (FINNIDA, 1994b).

Several manuals and guidelines of the European Commission are also being widely used and recommended by the Department of International Development Co-operation such as the *Environmental Manual* (EC Directorate General for Development, 1993b).

4.3 Forestry strategies

The forestry sector was the first to prepare a sector-specific strategy. Formal discussion towards the formulation of an explicit forest sector strategy started in 1987, at the same time as the rapid expansion of the development co-operation budget. In the mid-1980s, forest sector aid was some 5% (US\$ 22 m. per year) of total Finnish development aid, and this share and volume were expected to increase.

Rapid tropical deforestation which was widely discussed in the 1980s, brought on to the global agenda by FAO's 1980 global assessment of forest cover (FAO, 1980) was perceived as the main justification for forestry aid at that time. Finnish forestry sector aid was to contribute towards the continued existence of tropical forests via sustainable forestry and conservation. The principal areas for assistance were put forward in discussion papers in various FINNIDA and interest group meetings, and included training, extension, research and institutional strengthening, particularly as regards sectoral planning and resource inventories. Training and education were seen as the most important issues. It is noteworthy that industrial development did not feature in the list of priorities. Since the beginning of Finnish development co-operation in the mid-1960s, the medium-scale mechanized timber industry had been the main target of Finnish aid. Now, it was decided that only small-scale industries, if any, could be supported.

In addition, the awareness of deforestation and environmental hazards in many developing countries led to a shift of aid towards reforestation and soil conservation. The first Finnish-financed reforestation projects had been started in Indonesia and Sudan in 1979. FAO's Tropical Forestry Action Plan and the International Timber Trade Organisation were considered important ventures to be supported. The main target regions were defined as SADCC (now SADC, the Southern Africa Development Conference), East Africa, and South-east Asia. Fifteen target countries (which were the same for forestry as for other aid sectors) were selected: namely Mozambique, Zambia, Tanzania, Egypt, Ethiopia, Kenya, Somalia, Sudan, Bangladesh, Burma, Nepal, Sri Lanka, Vietnam, Nicaragua and Peru.

In reality, the share of forest sector aid stagnated even if the volumes grew (other sectors grew more rapidly). In 1989, the share of forest sector aid was less than 5% of FINNIDA's total bilateral disbursements, and the

aim was set to 8% (FINNIDA, 1989b).

Eventually, FINNIDA published a formal forest sector strategy (FINNIDA, 1991a): *Finnish Development Co-operation in the Forestry Sector in the 1990s*. Forestry was defined as one of the priority sectors in Finnish development co-operation and its target share was raised to 15–20 % of all Finnish bilateral aid. The main justifications given for this were the massive destruction of forests leading to negative social and environmental consequences; the global environmental importance of the conservation of forests; the high potential of forests and forest-based industries to contribute to development; and strong Finnish traditions in the sector and the availability of an internationally competitive resource base.

The objectives of forest sector co-operation were defined as:

- establishing priorities and removing institutional, legal and political constraints to forestry development;
- promoting afforestation, rehabilitation of degraded forest areas, and sustainable management and utilisation of forest resources;
- the establishment and management of appropriate forest-based industries and industrial wood plantations;
- the establishment and management of conservation areas and other activities aimed at maintaining and improving the quality of the environment.

The strategic principles of forest sector co-operation were spelled out as sustainability, with an emphasis on the environment, a rural development orientation, and the promotion of co-operation and coordination, particularly through the Tropical Forestry Action Programme. This meant, *inter alia*, mitigating the negative environmental impact of forestry and forest industries, coordination of forestry and agriculture, an emphasis on rural women, involvement of NGOs and the integration of projects into local administrative systems. The proposed main areas for action included planning for forestry development; reforestation, forest conservation and management; forest-based industries for development; and strengthening forest institutions.

The 1991 sector strategy was enthusiastically received by most of the parties involved, and the strategy paper was duly used in project identification and implementation. However, Finnish aid was soon shattered by the drastic budget cuts, which caused many carefully planned projects to be abandoned and several on-going projects to be reduced.

In theory, the 1991 strategy paper is still in force as DIDC has not published any up-date of the document. However various discussion papers have been presented in different seminars. The most recent, (DIDC 1995d) emphasises that partner countries are responsible for their own development. Finnish aid will only support the partners' expressed will and commitment to jointly stated goals and objectives. The role of Finnish support is seen as the removal of bottlenecks in development. The principles of good governance, accountability, transparency, and participatory formulation and implementation of development programmes are underlined. The same paper defines the following goals for Finnish development co-operation in the forest sector:

- sustainability of supply of forest products and services;
- conservation of forest species and biodiversity;
- alleviation of poverty through equitable economic development;
- sustainability of water catchment values;
- sustainability of the production and use of bio-energy;
- mitigation and control of climate change and other ecological imbalances.

Support for global co-operation is emphasised, particularly as regards the follow-up to Agenda 21, Forest Principles, and the biodiversity, climate and desertification Conventions, as well as the International Tropical Timber Agreement. Forestry issues are seen increasingly as political issues. Similarly, multilateral development co-operation, including that of the EU, is strongly supported.

As regards Finnish bilateral co-operation, the role of supporting National Forestry Programmes (NFP) as a planning and implementing framework is emphasised. Areas suitable for Finnish interventions, under the NFP frameworks, could include the following types of projects and programmes: maintenance and enhancement of forest resources; maintenance of forest ecosystem health and vitality; maintenance and support of the productive functions of forests (timber and non-timber); maintenance of socio-economic conditions, including the recognition of traditional rights. In practical terms, the strategy statements have been translated into projects in community and farm forestry, sustainable management of natural forests, conservation of natural forests, afforestation of degraded areas, training and institutional strengthening and sectoral planning.

Recently, Finnish development co-operation has supported the Intergovernmental Panel on Forests process in selected countries in Africa and Central America. The links between the experience gained from the implementation of field projects and global-level policy processes are frequently emphasised in Finnish discussion. Field projects are often used to test new development ideas and concepts and the experience gained is fed back into the policy process.

4.4 NGOs

NGOs have played an important part in the implementation of Finnish development co-operation in general. There is a large NGO sector in Finland interested in tropical forestry issues and actively participating in critical discussion of forestry sector development co-operation. The role of NGOs as implementers of development projects in the forestry sector is negligible, however. Adequate dialogue between the NGO sector and the Department is considered very important.

In general, the Department emphasises the involvement of all interested Finnish parties (private sector, NGOs, universities, research institutions, etc.) in the planning and implementation of forest sector development co-operation. However, strong guidance and control are retained by the Department. In Finland, the debate on forest sector development co-operation is carried on within the Department itself, in the Committee for International Forest Policy (under the

Ministry of Agriculture and Forestry), the Advisory Board for Relations with Developing Countries and Intersilva (a professional association which discusses international issues in the forest sector) as well as in various NGO fora and the mass media.

During the past few years, DIDC has commissioned several important policy and strategy studies on development. These studies include: *Whose trees? A people's view of forestry aid* (Panos Institute, 1991); *Participation: concept, practice and implications for Finnish development co-operation* (DIDC, 1996a); and *Ownership in the Finnish aid programme* (DIDC, 1996b).

5. REGIONAL AND THEMATIC DISTRIBUTION OF FORESTRY PROJECTS

5.1 Regional distribution

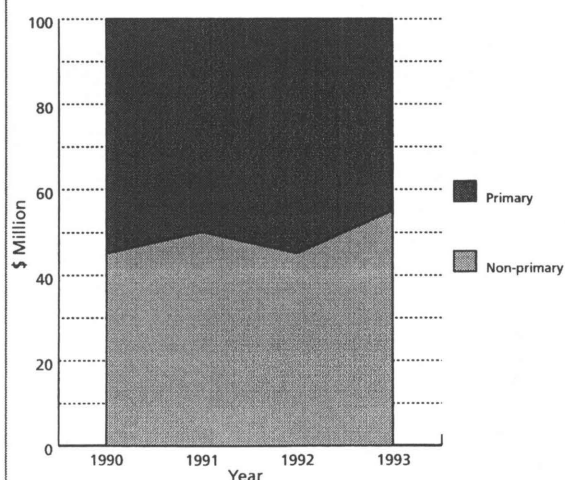
Over the last thirty years the guiding principle of Finland's bilateral co-operation has been, with certain exceptions, to concentrate on the poorest countries. The new development strategy reiterates this policy. As Finland considers the developing country to be the lead partner, its own desire for development is fundamental.

Table 4: Primary co-operation countries total bilateral disbursements 1992–3 (%)

Africa	Asia	Latin America
Egypt 4.3%	Nepal 4.4%	Nicaragua 4.4%
Ethiopia 1.9%	Vietnam 4.1%	
Kenya 5.7%	Bangladesh 3.0%	
Mozambique 6.5%		
Namibia 3.5%		
Somalia 1.4%		
Tanzania 10.2%		
Zambia 9.3%		

(Source: OECD, 1995: 22)

Figure 4: Bilateral oda to primary co-operation countries and non PCCs.



(Source: OECD 1995: 63)

Other criteria used in country selection are the compatibility of the recipient country's development policy with the goals and means of Finland's strategy, and how effectively Finland can administer assistance in the country concerned (OECD, 1995: 22). Primary co-operation countries are those with which Finland engages in long-term development co-operation. There were twelve of these in 1993 (see Table 4).

In the period 1990–93, an average of 44% of bilateral oda commitments was channelled to the primary co-operation countries. This has been concentrated on a few sectors; agriculture (including forestry) received 20% (OECD, 1995: 62) (see Figure 4).

In 1992–3 Finnish aid was given to a total of 96 countries. This (and the relatively small proportion of total aid given to priority countries) is in large part due to the activities of Finnish Export Credit Ltd. and FINNFUND. These organisations have geographical profiles very different from that of the Department as a consequence of a different development co-operation strategy and sectoral emphasis (OECD 1995: 10).

Over the 8 year period from 1988 to 1995 Africa has been the main recipient of Finnish aid to forestry and the forest industry. 41% (FIM 34.1 m.) of the total was spent on projects in Africa. The most important partner countries for Finland have been Tanzania, Kenya, Zambia and the SADC region. In 1995 bilateral projects were also funded in Namibia, the Sudan and Senegal. Regional projects in SADC were bigger than any bilateral projects in Africa (see Table 5).

The share of forestry aid given to Latin America has been growing recently and in 1995 it was the second region in importance after Africa, with its projects receiving 11% of the 1988–1995 total. Mexico and the Central American region have been the main recipients. One-quarter of total expenditure between 1988 and 1995 went to Asia, the most important recipient countries being Nepal, Indonesia, Myanmar, and Sri Lanka. In 1995 there were also on-going projects in Laos, Vietnam and Thailand. The share of regionally unspecified or global expenditure was between 9% and 18% annually from 1988 to 1995 (see Table 6).

Interest subsidies in the forestry sector have been

Table 5: Key recipients of Finnish aid in the forestry sector 1988–1995

Country	Expenditure (1 000 FIM)
Kenya	4085 (12%)
Namibia	2128 (6%)
Zambia	2523 (7%)
Senegal	1893 (6%)
Sudan	1955 (6%)
Tanzania	6904 (20%)
Other	3584 (11%)
Unspecified (incl. SADC)	11028 (32%)
Total	34100 (100%)

(Source: DIDC, 1995a)

Table 6: Forestry aid by region 1988–1995 (FIM m. and %)

Region	1988	1989	1990	1991	1992	1993	1994	1995	Total
Africa	60.7	41.9	64.8	93.3	49.1	44.2	34.1	30.5	418.5
	70%	45%	59%	52%	43%	47%	41%	39%	50%
Asia	14.9	38	23.3	56.5	33.6	17.9	16	17.6	217.9
	17%	41%	21%	32%	29%	19%	19%	22%	26%
Latin America	2.3	1.3	1.9	3.9	13.8	19.8	24.1	23.4	90.6
	3%	1%	2%	2%	12%	21%	29%	30%	11%
Unspecified or global	8.5	10.9	19.4	25.1	17.8	11.7	9.8	6.9	110.1
	10%	12%	18%	14%	16%	12%	12%	9%	13%
Total	86.3	92.1	109.4	178.9	114.3	93.5	84.1	78.3	836.9

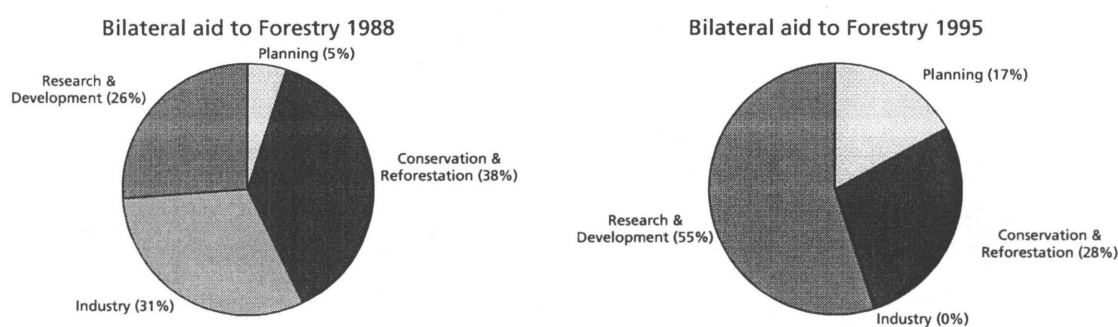
(Source: DIDC 1995a)

Table 7: Forest sector development co-operation by project type 1988–95 (FIM m. and %)

Project Type	1988	1989	1990	1991	1992	1993	1994	1995
Forestry and Forest Industry Planning	4.5 (5%)	13.4 (15%)	11.2 (10%)	18.1 (10%)	14.3 (12%)	6.4 (7%)	7.8 (9%)	13.3 (17%)
Forest Conservation and Reforestation	32.6 (38%)	25.2 (27%)	38.9 (36%)	41.4 (23%)	31.9 (28%)	25.5 (27%)	25.7 (31%)	22.0 (28%)
Forest Industries Development	26.9 (31%)	27.7 (30%)	11.6 (11%)	25.5 (14%)	6.7 (6%)	0.7 (1%)	0.6 (1%)	0.0 (0%)
Research, Institutional Support and Development	22.4 (26%)	25.9 (28%)	47.6 (44%)	94.0 (53%)	61.5 (54%)	60.9 (65%)	50.0 (59%)	43.1 (55%)
Total	86.3	92.1	109.1	178.9	114.3	93.5	84.1	78.3

(Source: DIDC, 1995a)

Figure 5: Bilateral aid to forestry 1988 and 1995



(Source: DIDC, 1995a)

mainly granted to Asian countries, China and Thailand being the main beneficiaries. The total amount of interest subsidies in 1994 was FIM 58 m. and FIM 63 m. in 1995.

5.2 Thematic distribution

In the statistics on forest sector development co-operation, projects have been classified into the following four main categories since the late 1980s:

- forestry and forest industries planning (e.g. support to Forestry Master Plans, TFAPs, NFPs);
- forest conservation and reforestation (e.g. fuelwood, community forestry, forest reserves);
- forest industries development (e.g. sawmills, harvesting);
- research, institutional support and development (including forestry education and training).

Table 7 shows the funds used for the different types of projects over the period 1988–95. Altogether FIM 836.9 m. was used in forestry projects during the 8 year period. The largest amount of funding was for projects that were classified under the research, institutional support and development category. Support to forest industry development has continuously declined and in 1995 no funds were used for industrial projects. Figure 5 shows the change in the types of forestry project supported in 1988 and in 1995.

A general observation on the types of projects funded by Finland in the forestry sector indicates that during the 1990s the projects (or programmes) have a much wider scope than earlier projects and usually integrate several of the above four categories. One single project, for example, may support national-level policy development at the same time as support is provided for community forestry and conservation activities at the regional level in a selected area. Institutional capacity development is often also included in projects, independent of their technical orientation.

6. RESEARCH AND TRAINING

The main strengths of Finnish forestry research in tropical forestry include afforestation techniques, community forestry, dryland forest management, rainforest ecology and research training and planning.

The main research institutions carrying out forest sector related research in Finland are the European Forest Research Institute, Joensuu, the Finnish Forest Research Institute, (FFRI) and the Universities of Helsinki (Faculty of Forestry), Joensuu (Faculty of Forestry) and Turku (Faculty of Biology).

The largest institute which also has greatest resources is FFRI, based in Helsinki and Vantaa, with eight major research stations throughout the country. FFRI has traditionally focused almost exclusively on national forestry issues. However, as a result of personal interests and initiatives, it has carried out some research related to tropical forestry, perhaps the most prominent example being the analysis and modelling of tropical deforestation by Matti Palo and his research group at the Academy of Finland. The European Forest Research Institute is a young but dynamic establishment which by definition focuses only on European forestry issues.

The two faculties of forestry, at the Universities of Helsinki and Joensuu, both have research and teaching interests in tropical forestry, but neither of them has a department for tropical forest issues. The University of Helsinki, however, has a unit with one professor and some research staff for tropical forestry, and this unit has developed considerable expertise, particularly in forestry in arid and semi-arid conditions. Other departments of the Helsinki faculty have professors and research staff with expertise and experience in forest sector issues in the tropics; for example the faculty implemented a 10-year project in Mexico focusing on forest management planning and sectoral development strategies. The University of Joensuu similarly has several professors and research staff with extensive experience in tropical forestry. The faculty of biology at the University of Turku has gained an international reputation for its innovative and high quality research on landscape ecology in the humid

tropics, particularly in the Amazon region.

There is no specific scholarship programme for the study of tropical forestry in Finland. The scholarship programme for developing country students up to and including PhD level was phased out in 1995. The emphasis is now on short-term project-related training (OECD, 1995: 41). The Government of Finland gives only limited support to tropical forestry research in Finnish institutions, instead supporting the international research centres such as the Center for International Forestry Research (CIFOR), the International Center for Research in Agro-forestry (ICRAF), and the Global Environmental Facility (GEF).

7. REVIEWS AND PROJECT PROFILES

7.1 Mid 1980s guidelines on project planning and management

In 1985 a set of project management guidelines was introduced within FINNIDA by the evaluation section: *Project Evaluation, Concept and Guidelines* (FINNIDA, 1985a); *Guidelines for Project Design and Project Document Preparation* (FINNIDA, 1985b); *General Guidelines for Project Appraisal* (FINNIDA, 1985c). These guidelines were based on the logical framework concept. The aim was to ensure that during project formulation all essential design elements – long-term and immediate objectives, outputs, activities and inputs – would be taken into consideration and their interlinkages clearly analysed and presented. The elements were to be formalised during the preparation process into a project design document for which an outline was provided. The idea was to systematise project management by using the project design document as the basis for all project management procedures throughout the project cycle. During project preparation this meant covering and integrating a wide range of elements using the logical framework concept and a variety of project analyses (technical, socio-economic, financial, economic, institutional, environmental and role of women). During implementation the project design document was to be used as a guide for administrative actions and short-term planning and reporting. In this way the consistency of project actions with the stated aims could be maintained. The design document constituted the reference document for evaluating project achievements. Evaluations were justified both by the requirements of accountability and by the need to learn from experience. The lessons learned could be used at the project level to improve implementation and effectiveness but also at the policy level for reorientation and development of new types of programmes.

The 1985 guidelines were administrative tools developed for the use of Finnish aid managers. They have no doubt made some contribution to systematising and standardising both the management processes and the related documentation. Analysing the guidelines today, however, the lack of discussion of the roles of the different actors, be they FINNIDA, the Finnish consultant, the recipient Government agency or the intended beneficiaries, is notable.

7.2 Guidelines for project preparation and design 1991 and guidelines for project reporting 1992

New *Guidelines for Project Preparation and Design* (FINNIDA, 1991b) were elaborated within FINNIDA and adopted in 1991. They have two objectives. First, they aim to establish a systematic and logical planning system for Finnish funded development projects. By taking into consideration the principal factors affecting project success from the very beginning of the planning process, better sustainability can be achieved. Emphasis is also put on the consistency of the projects with realistic development plans and the resources of the recipient country. Secondly, the guidelines introduce and attempt to institutionalise participatory methods in the project preparation phase.

Like those of 1985, the 1991 Guidelines are also based on the logical framework approach. The problem-based and objective-oriented planning methodology presented in the Guidelines is also used by many other donor agencies (NORAD, GTZ, EU, etc.). Several practical tools for base-line analyses are introduced, including, for example, problem analysis, institutional and participation analysis, rapid gender analysis, resource assessment, impact and opportunity analysis and risk analysis as well as guidelines on financial planning and project budgeting. The 1991 document is ambitious in providing guidelines both on project planning and management methodology and at the same time on the planning process. To support the planning process several practical tools for complex planning situations are introduced. These diverse purposes and the wide scope make the document fairly difficult to use. The launching of the guidelines in 1991 was accompanied by an extensive training programme for FINNIDA staff and the Finnish consultants involved in the different phases of the project cycle.

The project preparation and design guidelines were complemented by *Guidelines for Project Reporting* (FINNIDA, 1992c). The reporting system introduced is based on the guidelines for planning. The objectives in creating the reporting system were to promote target-oriented reporting, a forward orientation, and a hierarchy in long-term reporting and to maintain a standard format for all project reports.

The reporting system includes the following regular compulsory reports: (i) operational monthly progress reports, (ii) quarterly financial reports, and (iii) annual progress reports. The monthly report aims at providing immediate and up-to-date information on deviations in project implementation. The objective of the quarterly financial report is to provide information for project cost control and to estimate future costs, especially cash flow, for project financiers. The main purpose of the annual report is to summarise the project's principal achievements and the changes in the project plan during the year. The annual report also analyses more general developments and trends in the project implementation environment.

The reporting guidelines have been criticised because they only serve the needs of the donor agency. Project monitoring processes are not discussed, nor is there participation by different stakeholder groups in the monitoring and reporting function.

7.3 EU Manual on Project Cycle Management

Since Finland joined the European Union, the format and terminology of the *EU Manual on Project Cycle Management* (EC Directorate-General for Development, Evaluation Unit, 1993a) has increasingly been adopted in the planning of the Finnish funded development co-operation projects. A comparative study conducted in 1995, *Finland and EU's Development Co-operation – A Comparison* (DIDC, 1995e) found the EU concept clearer and more comprehensive. Its special advantage is the integration of all phases of the project cycle in the same structure. According to the study, the Finnish guidelines do, however, provide better tools for the different planning analyses, for example institutional and participation analysis and rapid gender analysis.

7.4 On-going development work on new guidelines

When the 1991 Guidelines were adopted, the intention was that they would be used on a trial basis for a period of two years to gain experience that would then be used in revising them. In 1996 a process was started within DIDC supported by an external consultant for revising not only the guidelines on project preparation and design, but more comprehensively, other documentation guiding project management. This process, producing project planning guidelines, guidelines on project monitoring and reporting, guidelines on project evaluation and a revised set of contracts and regulations to guide project work, was finalised and adopted at the end of 1997 (MFA, 1997). The aim has been to improve the user-friendliness of the Guidelines, and to ensure coherence with EU guidelines at the same time.

7.5 NGO guidelines

The Project Support Handbook for Finnish NGOs (DIDC, 1996c), describes the objectives of Finnish development co-operation in general, and the role of NGO support in this context. Instructions are given on the preparation of a project document and on the procedures related to NGO support.

7.6 Project management tools for the forestry sector

Two documents produced by DIDC to support project management in the forestry sector in particular are, *Looking at Gender and Forestry, Operational Issues for Project Planners, Implementers and Administrators* (FINNIDA, 1993b) and *Assessment of Effectiveness of Forest Sector Development Co-operation, Prerequisites in General and Indicators in Particular* (DIDC, 1996d).

7.7 Roles and responsibilities in aid management

The 1993 strategy document *Finland's Development Co-operation in the 1990s* (MFA, 1993), strongly emphasises the responsibility of the developing countries for their own development. It is clearly stated that Finland as a donor can only play a supportive role

in achieving the partner countries' objective of sustainable development. The implementing agencies are therefore always institutions in the partner country.

In DIDC, forestry issues and projects are dealt with by the responsible development co-operation professionals in Helsinki and the relevant Embassy. The services of advisers from the Unit for Sector Policy and Advice are used on the initiative of the officer responsible during the identification and planning of new projects, or of the consultant responsible for project implementation during the tendering and selection process, and during project evaluations.

For the vast majority of Finnish-funded projects a consultant for project implementation is selected by means of competitive tendering. Technical assistance personnel are employed by the consultant and only in exceptional cases directly by the Department. The consultants are either companies operating on a commercial basis or government institutions.

7.8 Project management during the different phases of the project cycle

In a recent evaluation of ownership issues in Finnish aid (DIDC, 1996b) it was found that the concept of the partner country having the leading role was well adopted in practice in Finnish funded projects. In recent years, many practical innovations promoting ownership of stakeholders in partner countries have been established.

Project identification and formulation were formerly carried out by short-term missions and external consultants. Now a lot of initiative and action is expected from the recipient countries themselves. Forestry projects are normally started only in countries where national sectoral priorities have been agreed on. In countries where this has not yet been done, Finland has also supported the definition of forest sector priorities by supporting National Forest Programmes. In actual project formulation the role of, and inputs from, the partner country stakeholders is growing. Finnish support (by the selected consultant) is used to facilitate this process. In most cases this means methodological expertise in the project formulation process and logical framework approach.

When project identification and formulation become country-driven phases of the project cycle, the appraisal phase gains in importance from the donor's point of view. A team of consultants is normally assigned by DIDC for the appraisal. Specialists from the partner country or from the region are often included as team members.

Finnish funded forestry projects are implemented through national or regional institutions in the recipient countries. The Department selects a consultant through competitive tendering to support the implementation. It has become standard practice for the partner country to participate in the tender evaluation and in the selection of the consultant. During project implementation a joint decision-making structure is established with representation from the recipient institutions and either DIDC in Helsinki or the relevant Embassy. Project work plans, annual budgets, reports, etc. are discussed and approved in joint committees. This management structure has increased the flexibility of project implementation. It is

possible to adjust or change the original project plan during implementation through this rolling planning system if changes in the implementation environment or lessons learned imply a need for this. Financial management of all Finnish projects is still the responsibility of the consultant supporting the implementation. Money is not channelled through the receiving institutions.

Project evaluations are conducted as mid-term reviews, at the end of a project phase before the launching of a new phase or as *ex-post* evaluations. Evaluation teams usually include members from the partner countries.

8. PROGRAMME REVIEWS

Mid-term evaluations, or mid-term reviews as they are now called, are carried out almost without exception on most Finnish projects, including those in the forest sector. Mid-term evaluation reports are public documents, thus available to anyone who is interested in them.

Post-project evaluations are carried out on a less systematic basis, mainly when DIDC has a special reason for analysing a project more thoroughly. Such reasons are normally either the wish to learn from an exceptionally successful project, or the need to study what went wrong in a severely criticised project. Such criticism is usually presented by either Finnish or foreign NGOs, the mass media, or a party directly involved in the project implementation. An example of such a post-project evaluation would be a recent study commissioned by FINNIDA from the IUCN on the Thailand Forestry Master Plan (IUCN, 1995).

No overall sectoral review or evaluation of Finnish forest sector development co-operation projects has been carried out. However, in 1991 FINNIDA commissioned the Panos Institute to carry out an analysis of forest sector development co-operation entitled *Whose trees? A people's view of forestry aid* (Panos Institute, 1991). This analysis was based on a study of three projects, the main focus being on the involvement, or ownership as it would now be called, of recipients in project planning and implementation.

DIDC has carried out several thematic and country reviews that also cover forestry projects. It has also commissioned and published two Synthesis Studies on Evaluations and Reviews, one from 1980 to 1989, and another from 1988 to mid-1995 (FINNIDA, 1991c and DIDC, 1996e). These looked at a sample of all FINNIDA projects and each included six forestry projects. Although primarily desk studies the second review had an element of fieldwork.

The 1980s study presented the following main findings. The *effectiveness* of projects has been relatively good. *Impact* was found to be difficult to assess, mainly because the projects evaluated were still ongoing. *Efficiency* was also found to be difficult to measure. *Sustainability* was not discussed in the 1980s evaluations.

The 1988-95 study reached the following main conclusions concerning Finnish-supported development projects, including forest sector projects. Finnish development projects have been fairly effective in the narrow sense of reaching their stated short-term objectives, but very little is known of their actual longer-term impacts.

Efficiency, in the economic sense of the term, and sustainability of the activities seem to have been improving, but there was room for further improvement. Women and gender issues have been given much more attention than before. Environmental issues have been given increased attention. There are some structural weaknesses in the logical frameworks on which Finnish development activities rely.

This second study analysed projects using the following criteria: effectiveness, impact, efficiency, sustainability and WID / gender issues. The following were the main findings on forestry projects.

Effectiveness: Most forest projects had generally been successful in achieving their stated immediate objectives. In common with most other projects, clear physical targets had been reached more effectively than other targets. Most forestry projects, however, seemed to be long-drawn out. Project designs had often been over-ambitious, and anticipated results were hard to achieve. Sometimes implementation lagged behind for reasons related to technical, political or social circumstances.

Impact: Seen against the promise of Finnish forestry expertise and ambitious objectives, project impacts appeared modest. In particular, no evidence could be found of their ability to counteract the alarming devastation of indigenous forests.

Economic *efficiency* was found to be very difficult to assess in forestry projects, and little had been done in this direction in actual project evaluations.

Environmental, institutional and social *sustainability* were found to be on-going concerns in forestry projects. However, most of the projects visited were seen as having little expectancy of immediate sustainability. Obvious trends had been a shift away from the direct deployment of Finnish personnel in efforts such as establishment of nurseries and afforestation, towards institutional support and planning, combined with elements of conservation, and increasing local involvement.

WID / gender issues have been making increasing inroads into forestry projects, if not in an entirely systematic fashion. However, the increased consideration has tended to be limited to promises of special attention to be given to women.

9. CONCLUSIONS AND TRENDS

Despite the fairly short history of Finnish involvement in tropical forestry, Finnish expertise and experience in the sector have substantial strengths. This is probably due to the importance of the forest sector in the national economy in Finland. The Finnish Government has explicitly given high priority to the forest sector in its development aid and this has been reflected in fairly substantial Finnish aid inputs to the sector during the last 20 years. Finland has a high profile in forestry which has given the country a positive image, possibly beyond the true role played by such a small country.

However, Finnish aid has recently experienced extremely rapid changes in volume. During the past few years there has been a real struggle for the continuation of Finnish bilateral aid. This has caused severe difficulties to Finnish consulting companies and other organisations that had invested in the develop-

ment of the sector. On the other hand, these difficulties have forced the Finnish companies and organisations to become more global in their marketing and operations. Forestry has been relatively protected from cuts in spending and has maintained an important place in development assistance.

The role of NGOs in implementing official bilateral assistance is likely to increase in importance and may extend to the forestry sector. Funding will probably continue to be concentrated on a small number of target countries, at least as long as disbursements remain at current levels. With a small budget the importance of projects meeting strategic objectives will continue to be stressed. The role of stakeholders is also likely to increase in importance.

In the international debate on the changing values of societies, the forest sector has gained in importance. The sector has not demonstrated its ability to exploit this new situation, however. There is a need for dynamism and flexibility to utilise new environmental awareness in forestry, and its true globalisation still lies ahead. It is not yet clear if these important opportunities have been recognised in Finnish development co-operation.

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Note: The name FINNIDA officially changed to DIDC in 1995, though both names are still used unofficially, and there has been some lack of clarity about when to use which. For the purposes of this list of references, authorship of relevant government documents has been ascribed to FINNIDA until the end of 1994, and to DIDC from 1995 onwards.

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ACRONYMS

CIFOR	Center for International Forestry Research
EU	European Union
DAC	Development Assistance Committee of the OECD
DIDC	Department for International Development Co-operation (formerly known as FINNIDA)
FAO	Food and Agriculture Organization of the United Nations
FEC	Finnish Export Credit Ltd
FIM	Finnish Mark
FINNFUND	Finnish Fund for Industrial Co-operation Ltd
FINNIDA	Finnish Development Agency (now DIDC)
FFRI	Finnish Forest Research Institute
GEF	Global Environment Facility
GDP	Gross Domestic Product
GNP	Gross National Product
GTZ	German Agency for Technical Co-operation
ICRAF	International Center for Research in Agroforestry
IUCN	International Union for the Conservation of Nature
KEPA	Finnish Centre for Development Co-operation
MFA	Ministry of Foreign Affairs
NFAP	National Forest Action Plan
NFP	National Forestry Programmes
NGO	Non-Governmental Organisation
NORAD	Norwegian Development Agency
oda	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
PCC	Primary Co-operation Countries
SADC	Southern African Development Conference (formerly SADCC)
TFAP	Tropical Forestry Action Plan
UN	United Nations
WID	Women in Development

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France

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FRA

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 overlaid, 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 Francophone 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

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.

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.

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:

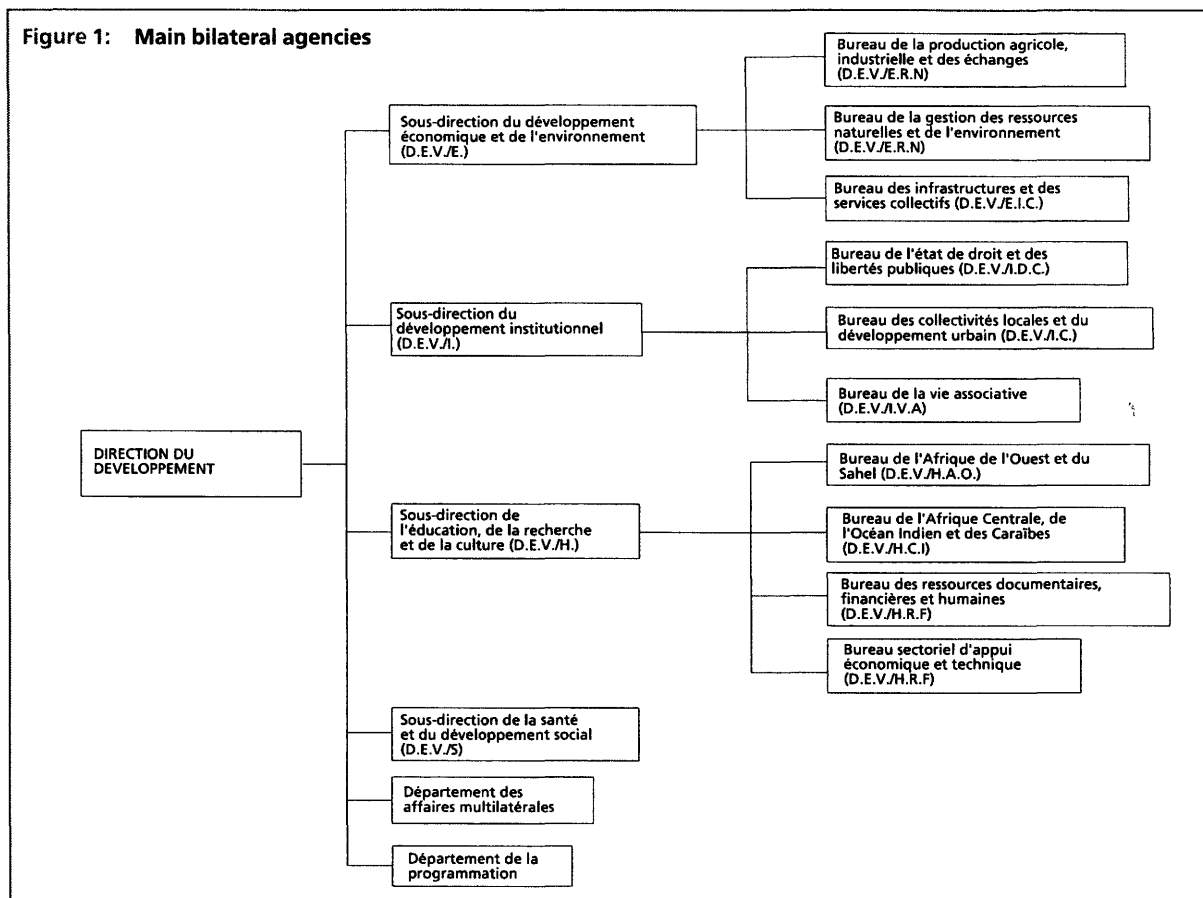
- the *Bureau des collectivités locales (DEV/ICL)* which provides support for the policy of decentralised co-operation (see sections 3.8 and 5.2); and
- the *Bureau de la vie associative* which finances projects in the NGO sector (see sections 3.6 and 5.3).

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 (Yammoussoukro 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 Inter-governmental 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.R.O.P.A.R.C.O 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;

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.

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.

- 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

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)

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 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 *Groupe 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 Rural, 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.

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.R.O.PAR.CO	Société de Promotion et de Participation pour la Coopération		
PSG	Plan Simple de Gestion		
RCA	République Centrafricaine		

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Federal Republic of Germany

Thomas Heindricks and Kathrin Schreckenber

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1. FOREST HISTORY

1.1 Forest cover, type and tenure

Germany has 10,844,000 ha or 29.1% of its land area under forest (BML, 1994). Without human presence Germany would be under almost 100% forest cover, with beech being the dominant species. 5,000 years ago, human impact became the major factor determining vegetation cover and composition. Repeated clearing by fire in the Bronze Age (3,500 years ago) led to the development of the first heath landscapes on the sandy, nutrient-poor soils of northern Germany. During the Middle Ages increasing colonisation led to a rapid decline in forest cover. Forests were converted to agricultural land, used as a source of fuelwood and construction timber, and as pasture for livestock. Forests became less dense as nutrients were lost through removal of litter to fertilise fields and regeneration was severely affected by livestock browsing. By the thirteenth century, forest cover had declined to about 30% (Enquete-Kommission, 1994). Due to timber and fuel shortages, medieval cities introduced simple forms of land use control and began to carry out artificial regeneration, mostly with Scots Pine.

In the following centuries forest cover fluctuated, experiencing temporary increases when wars and disease reduced the human population. By the early eighteenth century, however, the forest area had declined to its lowest level as the population grew, agriculture expanded, and industrialisation dramatically increased the need for timber and wood products for the domestic timber trade, for glassworks, saltworks and charcoal burners, and for export. Many mountain slopes were deforested for their large timber which was rafted downstream to supply Holland's growing ship-building needs (Klose, 1985). The species composition of the remaining forest also changed as an expansion of coppice management to supply the charcoal industry led to a reduction in beech and conifers, which regenerate poorly from stumps.

By the mid eighteenth century wood shortages threatened to restrict further industrial development and gradually led to a rethinking of forest use. This ushered in a period of reforestation and the widespread introduction of sustained yield management systems. In the few remaining forests, beech was re-established as the dominant species. In clear-cut areas, however, reforestation was possible only with less demanding species such as spruce, pine and larch, and in this way a large proportion of cleared land was rapidly reafforested (Enquete-Kommission, 1994). Today, these large coniferous stands are characteristic of the German forest landscape although, particularly in public forests, attempts are being made to convert them into site-specific multi-aged, structurally diverse, mixed forests. Recent years have seen a trend towards increasing forest cover as more and more agricultural land has been taken out of production in rural areas. Near cities, however, pressures for deforestation continue and a

scheme of compulsory compensatory afforestation is in force.

There are several types of forest tenure in Germany. In 1987, 30% of forest in the former Federal Republic of Germany¹ was in the hands of the state (predominantly at the *Länder* level), 24% was communal forest and 46% was in private hands (BML, 1994). Well over half of this private forest is in the hands of 430,000 small owners with wooded areas of below 50 ha each (Grayson, 1993). In the former German Democratic Republic, much of the state forest was private forest which was expropriated after the Second World War and is currently being redistributed to former owners. The final distribution of forest ownership is likely to be similar to that of 1945, i.e. 43% state forest, 8% communal forest, and 49% private forest (BML, 1994).

1.2 Evolution of forest use and forestry

For many centuries, the objectives of forest management were determined by the forest's importance as a reserve of agricultural land and a source of hunted and gathered products vital for subsistence. Only with the evolution from an agricultural to an industrial state did the growing need for wood and timber production give forestry an independent *raison d'être*. The introduction of coppice, coppice-with-standards and high forest management was the first step in a process leading to the development of sustained yield management. Instead of uncontrolled exploitation of individual trees, areas were divided into felling coupes to achieve a more controlled use of timber biomass. Not surprisingly, these developments began in the forests around saltworks and mines where the need for sustained timber supplies was greatest (Hasel, 1985).

Since the beginning of the present century, and particularly since the end of the Second World War, the sustained yield concept has gradually been replaced by a principle of sustainability which comprises not only the sustainable production of timber but also the objective of maintaining the many other forest products and services for the benefit of current and future generations (BML, 1994). A more natural style of management aims to achieve sustainability of all forest functions (use, protection and recreational). In recent years, however, growing public awareness of conservation issues has led to debate about whether the concept of multiple-use forestry – in which all forest functions are promoted simultaneously – goes far enough. Rather than simply focusing on the use-function of forests, there is now a growing demand for 'process-protection', which ensures the protection of all natural processes occurring in forest ecosystems.

1.3 Development of forest science

In Germany the development of a specialist forest science was closely linked to the increasing importance of timber as a raw material during the eighteenth century. Forest science provided the basic knowledge necessary to ensure sustainable management, particularly through planning and inventory methods, but also through silvicultural techniques for establishing, maintaining and harvesting stands.

Men like H.C. von Carlowitz, G.L. Hartig, H. Cotta, C. Heyer and W. Pfeil played a key role in establishing Germany's international reputation as the birthplace of

1. Germany is a federal nation consisting of 16 separate states or *Länder*, each with its own parliament and a high level of decentralised power. Reunification of the Federal Republic and the German Democratic Republic took place in 1989.

forest science and sustainable forestry. Their pioneering work was facilitated by many non-forestry developments, such as the discovery of artificial fertilisers and potash mining, improved breeding and international trading of cereals and wool, and the development of coalmining. All these were important prerequisites for the development of productive forests in that they relieved forests of the pressure to feed the population and provide sufficient fuelwood (Zundel, 1990).

The first academic forestry institutions were established at the turn of the nineteenth century, generally evolving from technical forestry schools like those in Göttingen and Tharandt near Dresden. The training provided by these institutions had a high reputation and its students were employed not only in the German forest service, but frequently also in those of other countries (see Section 2).

1.4 Forest law and administration

Amending and harmonising a multitude of long-standing state laws and locally-specific rules and regulations, a Federal Forestry Act was passed in 1975. This provided a framework within which details were defined by *Länder*-level laws (BML, 1994; Grayson, 1993). The five main objectives of the 1975 Act were to:

- conserve forests for their multiple functions;
- ensure proper management of forests to sustain their direct and indirect values;
- expand the forest area;
- advance the forestry sector;
- strike a balance between the interests of society and the vested interests of forest owners.

The 1976 Federal Act on Nature Conservation made the protection, care and development of nature and the landscape obligatory; it therefore has significant implications for the forest sector. While the two laws complement each other in their aim of sustaining biological diversity (BML, 1994), they also exemplify the growing conflict between an emphasis on the production function of forests, on the one hand, and on their conservation function, on the other.

At the national level, forests are the responsibility of the Federal Ministry of Food, Agriculture and Forestry (BML, *Bundesministerium für Ernährung, Landwirtschaft und Forsten*), with the exception of federal forest lands which, for historic reasons, are under the Ministry of Finance. The BML is responsible for the relevant legislation, collaboration with the *Länder* in the promotion of the forest sector, the coordination of forestry issues of national significance (including national inventories, market information), international forestry affairs, the planning and coordination of national-level research, and publicity work.

At the *Land* level, two main types of forestry administration exist. Much of southern Germany has unitary forest authorities which are responsible for forests under all types of ownership. In some of the northern *Länder*, however, the high proportion of private forest land has resulted in the creation of a *Land* Forest Administration, responsible for publicly owned forest, and a separate Forest Service Administration, which plays an advisory and regulatory enforcement role for the private forest sector (BML, 1994).

2. HISTORY OF INVOLVEMENT IN TROPICAL FORESTRY

In the nineteenth century the quality of German forestry training was widely recognised in Europe, as was Germany's role in the development of sustained yield management systems. German foresters were employed not only in German but also in Dutch and British colonies where they played an important role in the development of tropical forest management systems.

2.1 Activities in foreign colonies

Two focal points of German activity in foreign colonies were to be found in Asia. In 1847 the colonial administration of the Dutch East Indies (now Indonesia) hired two German foresters, Mollier and Nemnich, to establish sustained yield forestry in the Javan teak forests, which were threatened by clearing for population settlement and for the production of timber for shipbuilding. In 1849–50 the two foresters replaced the hitherto unregulated removal of superior individual trees by a system of regular clearfelling of coupes with the retention of protective and seed trees (Mammen, 1964). In 1855 another German, von Rössler, drew up proposals for the reorganisation of the forestry sector in Java and helped to draft a forest law and new silvicultural recommendations, which constituted the beginning of planned forestry in Java (Mammen, 1964). In the years that followed, many German foresters joined the Dutch government service, where their main area of responsibility was the development of inventory and planning methods for ensuring sustained timber production. This tradition came to an end in 1934 when, as a result of the international economic crisis, all foreigners were dismissed from the Dutch forest service.

The second main area of German influence was British India. In 1864 the Viceroy appointed a German botanist, Dr Dietrich Brandis, as the first Inspector-General of Forests. Brandis, who is today remembered as one of the fathers of tropical forestry (BML, 1990), had previously been Superintendent of Forests in Burma where his main task was the safeguarding of teak production (Bruenig, 1996). He wrote the first manual for teak in Burma, introducing new inventory procedures to determine the proportion of teak in the forests. He also developed the *taungya* system of reforestation which combined selection silviculture with the traditional slash-and-burn shifting agriculture practised by the local population. This procedure allowed for extensive establishment of teak forests in the mountain regions and is still in use today, often considered to be the beginning of modern agroforestry (BML, 1990).

In 1867, at Brandis' request, two more German forest administrators, Dr W. Schlich and B. Ribbentrop, entered the British Indian service. Schlich established a central forest management office ('Imperial Working Plans Branch') and, in 1875, founded the specialist forestry journal *The Indian Forester*. His five volume handbook *Manual of Forestry* represents a classic work of forestry education (Mammen, 1964).² Ribbentrop introduced planned forestry in the Punjab, set up the

2. On his return from India, Schlich set up the first forestry school in England at Cooper's Hill in 1885, from where it moved to Oxford in 1905.

administration in several other provinces, and had a decisive influence on the establishment of experimental forestry in India. The first tropical forestry training institution, founded in 1878 in Dehra Dun by Brandis, was expanded by Ribbentrop into a forestry research institute and soon developed into an internationally recognised research and training centre. Towards the end of his period in India, Ribbentrop wrote the first basic forest history text for British India, a work still cited today (Mammen, 1964).

2.2 Colonial forest history

The period of German colonial forest history extended only from 1884 to the beginning of the First World War. In German East Africa, the first forest officers, were active from 1892. Their main concerns were to establish regulated forestry, undertake afforestation and develop management systems for mangrove forests. In Togo, Metzger established a forestry administration and began systematic research into forestry practice in 1906. He designated protection forests and was known for his savanna afforestation projects, particularly with teak.

With its extensive area of primary forest, Cameroon was considered to be the most significant colony for forestry in Africa. Exploration of these primary forests, in particular for their utilisation potential and possible conversion into commercial forests, was the main activity of Wiech, the director of the first imperial senior forestry division in Cameroon, who also attempted to introduce profitable operation to the vast wild oil palm stands in the north of the country (Wilhelmi, 1961, cited in Lemhöfer and Rozsnyay, 1985).

Links between the forestry experiences in Asia, the South Pacific, the German African colonies and Germany itself were maintained above all via the German academy of forestry in Hann. Münden, whose professors Büsgen and Jentsch organised study trips, from 1906 onward, to Indonesia, Cameroon and Togo. In the process, they drew up proposals for local forest management and established several forest reserves (Lamprecht, 1986).

2.3 Objectives and impact of colonial forestry

One of the main objectives of colonial forestry, as of the colonial economy in general, was the production of raw materials for German industry. Forestry measures were devoted primarily to the conservation and establishment of forests with the highest possible proportion of exportable timber. In 1912, Gieseler, the Prussian chief forester, wrote that the aims of forest policies in Cameroon should be to protect existing timber stocks, to establish teak and other valuable timber species, and to exercise control over the use of wild rubber and other forest products. The primary aim of forest conservation was therefore not the preservation of ecological diversity but economic usefulness.

German foresters brought to the tropics their tradition of forest management for sustained timber yields. Certain silvicultural concepts were adapted to tropical conditions, as in the case of Brandis' *taungya* system. Many, however, were applied as in Germany. Chief of

these was the widespread introduction of clearfelling and of the shelterwood system. Both systems were considered important ways of 'bringing under control the ungovernable species richness', and halting the deterioration of the stock brought about by existing practices of creaming only the best trees in each stand (Seibt, 1910). Their results were, however, disappointing and they proved unsuitable for the humid tropical forests.

With the loss of its colonies after the First World War, direct German influence on tropical forestry came to an end. Only after the Second World War, with the reconstruction of the German economy and its growing international influence did its forestry experience again play a more important role within the framework of incipient development co-operation. However, unlike the longer-term colonial powers, Germany's short-lived colonial activities had little obvious influence on the development co-operation which began in the 1950s.

3. STRUCTURE OF AID DELIVERY

In keeping with the country's federal structure, German development co-operation activities are implemented not only by the Federal Government but also by the *Länder* and the municipalities. In the tropical forestry sector, however, federal development co-operation is of particular importance. It consists of approximately two-thirds bilateral and one-third multilateral aid. The Federal Ministry for Economic Co-operation and Development (BMZ, *Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung*) is the key Federal institution responsible for bilateral aid, which is the focus of this chapter. For historical reasons, Germany has an unusual system in which three types of bilateral co-operation – financial, technical and personnel – are institutionally separated, each being implemented by one of a number of specialised development organisations³ discussed in greater detail below (Ashoff, 1996).

3.1 The Federal Ministry for Economic Co-operation and Development (BMZ)

The implementation of early German development co-operation was complicated by the involvement of several ministries (Foreign Affairs, Economic Affairs, Food and Agriculture) with sometimes overlapping areas of responsibility, and by the lack of German experts with experience of conditions in developing countries (White, 1965, cited in Hoffmann, 1980). In 1961 the growing volume of federal activities and the organisational model provided by other donor countries led to the establishment of the Federal Ministry for Economic Co-operation and Development (BMZ).

The BMZ is responsible for managing the federal development co-operation budget, which is fixed by Parliament on an annual basis. It does not directly implement any development co-operation activities or projects. Rather it is responsible for formulating federal development policies; elaborating appropriate guidelines; coordinating all bilateral aid programmes; and

3. The following will deal only with those organisations working in the forestry field.

coordinating activities with other donors and multi-lateral organisations (see Figure 1). The BMZ's budget accounts for about 70% of Germany's official development assistance (oda) (Ashoff, 1996). The remainder is channelled through other Federal ministries, particularly the Foreign Ministry; the Ministry of Education, Science, Research and Technology; and the Ministry of Economic Affairs (Wiemann, 1996).

The BMZ has nearly 600 staff in Bonn and Berlin. In addition to country desks, it has a Division (224, Environment, Resource Conservation and Forestry) which is responsible for coordinating forestry aid. The BMZ has no field offices of its own because the Foreign Ministry does not accept a parallel structure to embassies. Instead, the BMZ posts counsellors for development co-operation to German embassies in those countries (27 in 1993) which are major recipients of German oda (Wiemann, 1996).

3.2 Bilateral financial co-operation

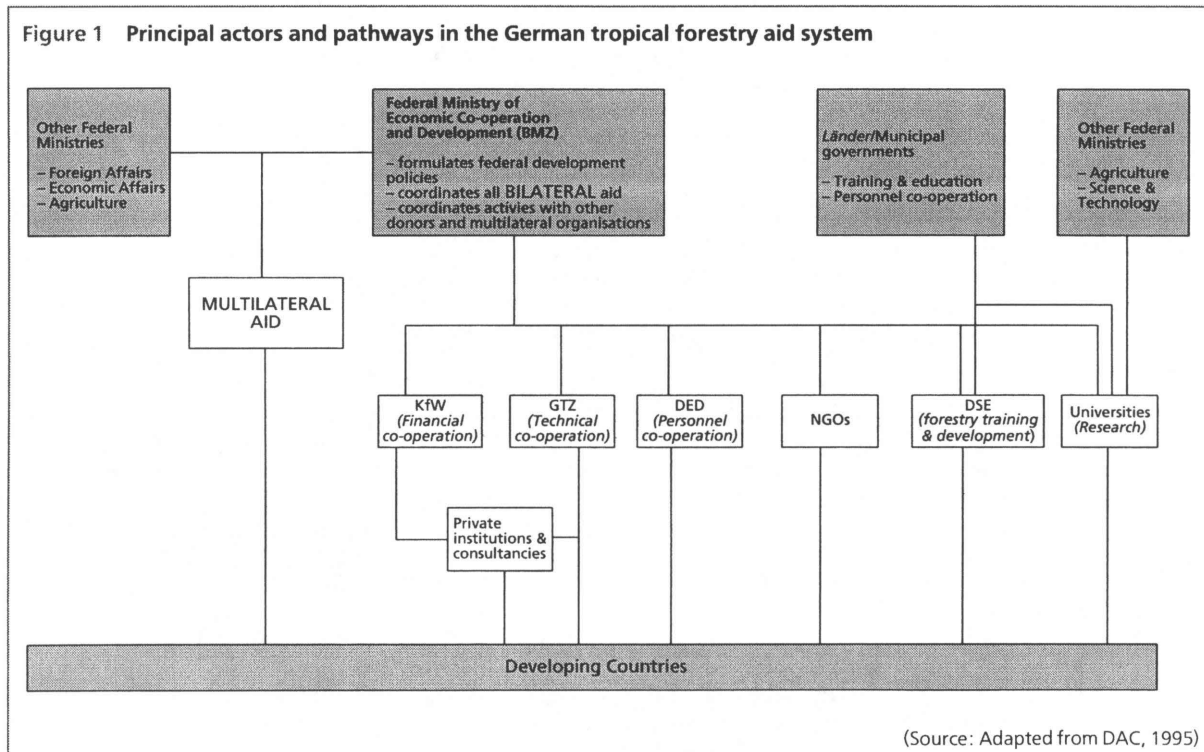
In budgetary terms, financial co-operation, also called capital assistance, is the most important category of development co-operation. Its aim is to promote new investments in developing countries, to increase their overall production potential and improve their social and physical infrastructure. Typically, financial co-operation finances goods and capital investments, such as the construction of roads or other infrastructure, as well as assistance in preparing and monitoring projects. More recently it has become an important instrument of programme aid. In such cases, the focus is on a set of integrated measures which concentrate on a specific sector, region or population group and are implemented as a coordinated package. Typical examples include integrated regional development, rural development programmes, credit programmes for small farmers and programmes to establish and equip basic health care

services (Press and Information Office, 1995).

Financial co-operation differs from technical and personnel co-operation (see sections 3.3 and 3.4) in that partner countries receive a grant or loan for a particular project, which they are solely responsible for implementing. Where necessary, a partner government may choose to seek technical assistance to help in implementation of the project. In effect, financial co-operation is complemented by technical and personnel co-operation which focus on providing partner countries with the human expertise needed to make effective use of financial aid. Although the three types of co-operation are not formally linked, there is a trend towards increasing collaboration (see Section 9).

Financial co-operation is given in the form of grants to countries classified as least developed countries. Other developing countries receive 30–40 year loans at favourable interest rates (0.75–2.0%) (Press and Information Office, 1995). Countries which would normally qualify only for loans, may also receive grants to promote activities in three critical areas: self-help to combat poverty; social infrastructure; and environmental protection measures. As part of the latter, all financial co-operation in the field of forestry is given in the form of grants.

Financial co-operation is administered by the German Development Bank (KfW, *Kreditanstalt für Wiederaufbau*) on behalf of the Federal Government. Established as a public corporation in 1948, the KfW is a bank owned 80% by the Federal Government and 20% by the *Länder* Governments. Its major activity is the promotion of the German economy by granting investment loans and export credits and by assuming guarantees. In the field of co-operation with developing countries, the KfW has 380 staff, 240 of whom are technical specialists including 4 forestry experts. Until recently, the KfW operated exclusively from its head



offices in Frankfurt, but field offices with limited technical support functions are now being tried out in some of the major recipient countries (Wiemann, 1996). First experiences in Cairo and New Delhi are encouraging and may lead to the establishment of offices in other countries (Duve, KfW, pers. comm., 1997).

With the exception of a few older projects, financial co-operation funds have only been used for forestry projects since 1988. Before then, technical co-operation (see Section 3.3) was considered to be the most appropriate way of resolving forestry and tropical forest conservation problems. Forestry projects by their nature usually require more than straightforward capital investments. Whenever possible financial co-operation funds are therefore integrated into national sector strategies (e.g. Tropical Forest Action Plans) or tied to projects and programmes which have already been prepared with support from the GTZ (see Section 3.3), the World Bank or the regional development banks.

Three basic types of forestry financial co-operation can be distinguished:

- projects concerned with sustainable economic use of forests, e.g. large-scale timber afforestation, rehabilitation and enrichment planting of natural forests, support for partner institutions, forest inventories, road construction, plantations and purchase of materials;
- conservation activities, e.g. support for existing or newly designated conservation areas through funding of road construction, boundary marking and purchase of materials;
- establishment of Protected Forest areas, e.g. buffer zone development activities including agroforestry and soil conservation components.

3.3 Bilateral technical co-operation

Technical co-operation aims to increase the productivity of both people and organisations in developing countries by transferring technical, economic and organisational knowledge and skills. It is always carried out in collaboration with government or non-government organisations in the partner countries, with the aim of rapidly enabling them to carry out their responsibilities without external help (Press and Information Office, 1995).

Established in 1974 and owned by the Federal Government, the German Agency for Technical Co-operation (GTZ, *Deutsche Gesellschaft für Technische Zusammenarbeit*) is mandated to plan, implement and monitor technical co-operation measures on behalf of the BMZ. In line with its status as a private limited company, the GTZ also undertakes commissions from other organisations such as partner countries, the European Commission, international financial institutions and other donors (GTZ, no date a).

In addition to a staff of over 1,300 at its head offices near Frankfurt, the GTZ employs some 1,500 field staff and 5,000 locally contracted personnel (Wiemann, 1996). Technical and administrative support for projects is provided by GTZ Service Offices in over 50 countries (Wiemann, 1996). Recently the GTZ has changed its organisational structure, giving more responsibility to its overseas employees. This is intended

to improve efficiency by encouraging the resolution of problems at their point of origin, and by promoting regional networking of technical experts. As with the KfW, the GTZ does not directly implement projects; its staff act as consultants in projects or programmes for which institutions in the partner country are responsible.

Within the GTZ, Division 4240 is responsible for Forest Resources Management and Nature Conservation. Separate Concept Papers have been produced for each of these two 'Activity Areas'. The Division has about 10 professional staff (GTZ, no date b) who act as an in-house consulting agency, supplying technical advice to the country desks which are responsible for individual projects, providing technical backstopping for ongoing projects, and carrying out conceptual planning within the field of forestry and conservation. (GTZ, 1993). Approximately 95 experts are currently assigned to 80 Forest Resources Management projects and an additional 20 experts are working in about a dozen Nature Conservation projects (GTZ, no date b). Activities aim to support the political, institutional, socio-economic and technical processes necessary to achieve sustainable management of forest resources.

3.4 Bilateral personnel co-operation

The development of human resources and expert advice plays a particularly important role in German bilateral co-operation. In addition to the many experts recruited by the GTZ and KfW, over 60 foresters are posted in development projects by the German Development Service⁴ (DED, *Deutscher Entwicklungsdienst*), a non-profit organisation entirely funded by the BMZ. Founded in 1963, the DED was modelled on the American Peace Corps. It is responsible for the selection, preparation and supervision of development workers during and after their 2–6 year posting in projects implemented by partner country institutions. It also recruits German volunteers for the European Volunteer Programme and the United Nations Volunteers.

The main provider of tropical forestry training and development is the BMZ-funded German Foundation for International Development (DSE, *Deutsche Stiftung für Internationale Entwicklung*). The DSE runs courses (both in Germany and abroad) for technical and managerial personnel from developing countries as well as preparing German experts for their work overseas. It also maintains the largest documentation and information centre on development issues in Germany.

3.5 Multilateral co-operation

About one-third of German oda takes the form of multilateral assistance. Its management is shared between the BMZ (international financial institutions and some UN organisations), the Federal Ministry of Foreign Affairs (UN) and some other Federal Ministries (e.g. BML for FAO; Federal Ministry for Economics for the International Tropical Timber Organisation). Four Federal Ministries (Economics, Finance, Foreign Affairs and the BMZ) are jointly responsible for European programmes (DAC, 1995), which receive 20% of total German oda (Michel, 1997). In addition to its statutory

4. Formerly known as the German Volunteer Service.

membership contributions to the EU and UN organisations, Germany also provides funds for a number of international NGOs such as the World Conservation Union (IUCN) and the intergovernmental organisation, ITTO. These may be of a general nature or designated as funds-in-trust linked to specific projects.

Germany considers that the complexity of tropical forestry issues requires a development co-operation approach that goes beyond the level of bilateral projects. Individual projects can be more effective if integrated into programmes, and international activities need to be coordinated within an overall framework. In the view of the Federal Government, the World Bank – as the single most important financial institution active in the field of development co-operation – must play a key role in designing, funding and coordinating international measures and programmes to conserve the tropical forests and develop forestry in the tropics (BML, 1995). Thus in 1991, a German-French initiative resulted in the World Bank (together with UNEP and UNDP) setting up the Global Environmental Facility (GEF) to support measures which contribute to global environmental protection, including tropical forest conservation. With a contribution of US\$ 240 m. (12% of the total), Germany is the third largest contributor to the GEF after the US and Japan (BML, 1995). It was also Germany's Chancellor Kohl who, in 1990, initiated the process which led to the setting up of the World Bank-coordinated 'Pilot Programme to Conserve the Brazilian Rainforest' (see Chapter on DG IB). With multilateral contributions of DM 253 m., and additional bilateral contributions of DM 50 m., Germany funds 60% of the total programme (BML, 1995).

Germany has also supported the WB-coordinated National Environmental Action Plans, playing a leading role in those of Madagascar and Benin. Similarly, it participated in the development of Tropical Forest Action Plans in numerous countries, and supported the FAO coordination office with DM 4.5 m. funds in trust over a period of three years. As the TFAP continued to be heavily criticised, Germany pushed hard for the creation of an independent TFAP Consultative Group (BML, 1993), a wish that was fulfilled to some extent by the establishment of the Forestry Advisers Group a short time later. This informal committee of forestry experts from the development administrations of bilateral donors and multilateral organisations discusses the conceptual principles underlying development co-operation in the field of tropical forestry. Since 1993, the German representative has chaired the group and has consequently provided a much needed impetus for the further development of programmatic approaches to forest conservation (BML, 1995).

Since 1989 the BMZ has funded a GTZ project on 'Support to International Programmes in Tropical Forestry' (TWRP, *Tropenwaldrelevante Programme*) which participates in all international initiatives and global fora on tropical forests in order to feed national-level experiences into the international dialogue. TWRP also supports tropical countries in their efforts to implement relevant international agreements within the framework of their national forest programmes and in line with their development priorities (BMZ, 1997).

3.6 Project implementation by NGOs and consultancies

In the past an average of just over 6% of the total BMZ budget has been devoted to collaboration with NGOs (DAC, 1995). As a rule, government subsidies do not exceed 75% of the estimated funding requirements of such projects, except in the case of pilot projects, which the Federal Government may fund in their entirety (Press and Information Office, 1995). Currently about 150 NGOs are supported by the BMZ, with five political foundations⁵ receiving just under half the funds available for co-financing, and the two main Christian church foundations⁶ receiving a further 41%. The NGOs themselves raise the equivalent of a further 11–12% of official development assistance from their own funds and donations. In the tropical forestry field, however, NGOs play a minor role.

Private consulting companies, on the other hand, are beginning to play an important role in the implementation of German development co-operation, including forestry activities. While the KfW with its small number of forestry specialists has always relied on consultants to assist in the preparation and supervision of projects, the GTZ is now also buying more and more consultancy services 'on the market' (rather than relying on in-house expertise). This trend is in part due to the government's aim of enhancing the efficiency of the public services sector by subjecting it to the performance criteria of the private sector. The GTZ is therefore required to put all development projects out to tender and can only implement those for which its own involvement is clearly advantageous. It is hoped that, by involving a wider range of development experts, the innovatory potential of consultancy companies will help to develop the content of development co-operation further.

3.7 *Länder* and municipal activities

In keeping with Germany's federal structure, individual *Länder* provide about 9% of all ODA (BMZ, 1996a), although this is concentrated primarily on the education sector. Coordination at the Federal and *Länder* levels is assured by the BMZ's Federal-*Länder* Committee on Development Co-operation. Within the forestry field, the *Länder* contribution lies mainly in the funding of several advanced-level training establishments (see Section 6), and in seconding state foresters to overseas development projects. Thus the *Länder* currently provide 40% of the forestry experts employed in personnel co-operation. The GTZ and other implementing organisations are, however, moving towards relying less on staff from the German forest service, preferring to hire more tropical forestry specialists for their projects. The proportion of foresters seconded by the

5. The five political foundations are: the Friedrich-Ebert-Stiftung, the Konrad-Adenauer-Stiftung, the Friedrich-Naumann-Stiftung, the Hans-Seidel-Stiftung and the Stiftungsverband Regenbogen. Though affiliated to particular political parties, the foundations are autonomous in their activities, focusing on political education and support for all types of groups in developing countries, such as trade unions, women's groups and farmers' cooperatives.

6. These are the Catholic Agency for Development, and the Protestant Agency for Development.

Länder will consequently tend to fall in the long term.

German municipalities also engage in development activities in the context of partnerships and local government co-operation (Ashoff, 1996), but play virtually no role in the sphere of forestry. Nevertheless, they do exercise a substantial influence on public policy relating to tropical forests. Thus, the participation of many municipalities in the tropical timber boycott of the 1980s was an important ingredient in the public pressure which led the Federal Government to reconsider its forest development policies and announce its DM 300 m. tropical forest programme in 1988 (see Section 4).

4. TROPICAL FORESTRY DEVELOPMENT POLICIES

4.1 Development co-operation in general

4.1.1 Guiding principles

Basic guidelines for German development policy were adopted by the Federal Government in 1986. They define development co-operation as one of the key components of Germany's overall relationship with developing countries, together with foreign and economic policies. Within the guidelines, the main objective of Germany's development policy is stated to be 'improving the economic and social situation of people in developing countries and developing their productive abilities' (Press and Information Office, 1995). The guidelines stress that the aid relationship must be based on mutual respect of the sovereign political interests of donors and recipients (DAC, 1995).

4.1.2 Volume of aid

Germany is now one of the world's largest donors, providing aid to the tune of DM 14.9 billion in 1994 (BMZ, 1996a), and ranking fourth after Japan, the US and France (Ashoff, 1996). The 1986 guidelines stipulate that, in line with UN targets, the total flow of public and private money to developing countries should be at least 1% of GNP, and that German development aid should aim to reach 0.7% of GNP. However, the combination of a stagnating aid budget and a growing domestic economy have meant that Germany's *oda*/GNP ratio has been falling in recent years (Figure 2), dropping to 0.34% in 1994 and 0.31% in 1995 (Michel, 1997).

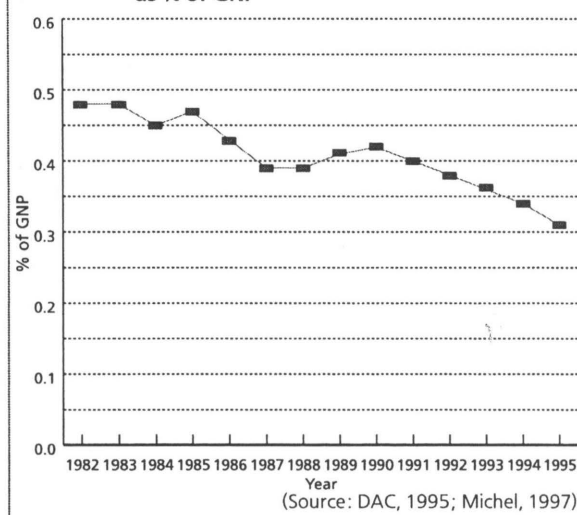
Domestic interests play an important role in German aid. In spite of an earlier commitment to untied aid, there has been a gradual shift towards more tying of aid in the 1980s and 1990s, with 52.1% of total *oda* tied to German supplies in 1993 (Wiemann, 1996).

4.1.3 Regional focus

Bilateral aid is concentrated particularly on sub-Saharan Africa and Asia and Oceania, as shown in Table 1. North Africa and the Middle East also receive a high proportion, a large part of it earmarked for Israel. Overall priority is given to the least developed countries, which may receive short-term emergency aid in addition to longer-term structural assistance.

In 1991 the BMZ took the innovative step of introducing five explicit criteria for the allocation of German bilateral assistance: (i) observation of human

Figure 2: Development aid disbursements (1982–93) as % of GNP



rights; (ii) popular participation in political processes; (iii) stability and due process of law; (iv) market-oriented economy; and (v) development-oriented domestic policies (Press and Information Office, 1995). The application of these criteria has contributed to shifts in *oda* allocations, with increases to countries like Bangladesh, Benin, Chile, Nepal and Zambia in 1992/3 and complete cessation of aid to Haiti, Malawi, Togo and Zaire (DAC, 1995).

In 1992/3 two-thirds of German bilateral *oda* was concentrated on only 19 countries plus the successor States of the former Yugoslavia. In spite of this degree of concentration, German technical co-operation projects were nevertheless being appraised, prepared or implemented in 150 countries in 1992, and financial co-operation projects in 105 countries (Ashoff, 1996). This wide geographical distribution dates back to the Federal Republic's earlier attempts to 'buy friends' by means of foreign aid after the Second World War, especially at the height of its competition with the German Democratic Republic in the 1960s and 1970s (Wiemann, 1996).

There is currently a recognised need to concentrate resources further and a system of Country Concepts

Table 1 Distribution of bilateral *oda* by region (%)

	1982/83	1987/88	1992	1993
Sub-Saharan Africa	33.4	34.2	26.9	33.5
North Africa and Middle East	17.9	17.4	24.7	8.8
Asia and Oceania	31.7	22.9	22.1	28.2
America	13.5	16.9	11.3	14.3
Europe	3.5	8.6	15.1	15.2
(share of Least Developed Countries)	33.2	32.2	24.3	29.0

(Source: DAC, 1995)

was introduced in 1992 as one means of achieving this. Country Concepts are developed by the BMZ as management instruments for aid relations with selected countries in a medium-term perspective, their main objective being to concentrate co-operation with any given country on a few priority areas. Concepts are elaborated by the BMZ together with other Ministries, implementing agencies, NGOs and country experts. Once approved by the Minister, they are binding for official financial and technical co-operation and serve as the basis for the selection of project proposals, the preparation of government negotiations, and for policy dialogue and coordination with other donors. Since 1992 about 40 Country Concepts have been produced as well as a number of regional ones (Wiemann, 1996).

4.1.4 Thematic focus

Between 1989 and 1993 the focus of German bilateral development co-operation was on social and administrative infrastructure and economic infrastructure. About 8% of bilateral aid went to the agriculture sector (including forestry) (Ashoff, 1996). Currently the BMZ has defined three key areas: poverty alleviation, environmental protection and resource conservation, and education, with the promotion of women as a supplementary crosscutting theme (BMZ, 1996a). In some thematic areas Sector Concepts have been developed by the BMZ as frameworks for the activities of implementing agencies. These include 'Rural development' (1988), 'Promotion of women in developing countries' (1988), 'Poverty alleviation through self-help initiatives' (1990), 'Tropical forests' (1992), and 'Health' (1994) (BMZ, 1996a).

4.2 Tropical forestry development co-operation

4.2.1 Development of tropical forest policies

In the 1980s information on the greenhouse effect, the ozone hole and the degradation of tropical forests, and reports such as *Global 2000*, put conservation centre-stage around the world. Environmental awareness and involvement in conservation activities were already very high among the German public. The Federal Government's first *Forest Damage* report in 1985 had initially focused attention on domestic forests. A broadly based citizens' movement demanded public information about the causes of forest damage and called for remedial action. When news of the destruction of tropical forests reached this highly sensitised public, it immediately became a contentious issue. A widespread call to boycott tropical timber was taken up by many public institutions and local authorities. At the same time the tropical forestry policy of the Federal Government was criticised, particularly for its support to private timber companies within the context of development co-operation and the strong emphasis it placed on the utility function within forestry activities (ARA/INFOE, 1989).

The Federal Government reacted by greatly increasing the proportion of forest and environment-related activities within its development co-operation. From 1987 onwards, a number of important measures were taken:

- In 1987 the Bundestag appointed an Enquete Commission to investigate the need for 'preventive measures to safeguard the earth's atmosphere'. It published an influential report (Enquete-Kommission, 1990) presenting the complexity of tropical forest issues and making recommendations for research and actions to be undertaken to conserve the tropical forests. It also obliged the Federal Government to report to Parliament every two years on its tropical forest conservation activities (Enquete-Kommission, 1994). Since May 1990, four reports (1990, 1991, 1993, 1995) have been submitted, detailing ongoing activities and indicating the progress made in implementing appropriate measures at the international, EU and national levels.
- In 1988 the Federal Government decided to increase the budget available for tropical forest conservation and forest development programmes, particularly within the context of technical co-operation. Since then around DM 300 m. of the BMZ's budget has been earmarked for tropical forest activities every year, representing a four-fold increase in the amount available before 1988. Germany thus contributes 15% of all international forestry aid, making it the most important bilateral donor in the field of tropical forest conservation (BMZ, 1996a).
- Since 1988 environmental impact assessments have been obligatory for all development activities. These should ensure that non-forestry development activities carried out in forest areas, such as road construction for example, do not result in unjustifiable damage to the forest resource.
- In 1988, financial co-operation began to be widely used to fund forestry activities. To provide an incentive for partner countries to undertake longer-term forest conservation measures, all financial co-operation in the field of tropical forestry is in the form of grants.
- Since 1989 there has been an increase in the funds made available for research related to tropical forestry (see Section 6).
- In 1992 the BMZ produced a Sector Concept on Tropical Forests (BMZ, 1992) which details the principles, guidelines and criteria underlying its tropical forest activities. This highlights the increased importance of the tropical forest sector within development co-operation in general, by obliging all non-forestry projects to include measures to reduce negative impacts on forest areas.

The public continues to exercise a major influence on policy development. In 1992, 35 environmental conservation associations founded the Environment and Development Forum (*Forum Umwelt und Entwicklung*). Funded in part by the BMZ and the Federal Ministry for the Environment, its primary aim is to coordinate information and educational work, and to challenge Government and Parliament to accelerate implementation of decisions taken at the 1992 United Nations Conference on Environment and Development (Forum U&E, 1995).

Another organisation that has traditionally made important contributions to BMZ policy development is

the German Forestry Association's Committee for International Forestry, founded in 1973. Composed of forestry experts with long-term experience overseas, the committee's concern is to highlight substantive and procedural problems of technical and financial co-operation in forestry and the timber industry, and to provide an impetus for solving them. Industry too, has been active. Thus, in 1992, an influential Tropical Forests Initiative was initiated by the timber industry, the timber and plastics trade union and timber importers to draw up, in co-operation with the tropical timber countries, a certification procedure for tropical timber and tropical timber products originating from sustainable resources.

With a view to creating a broader base of public support for its activities, the BMZ now involves many of these NGOs, as well as the major religious and political foundations, in the elaboration of its country and sector Concept Papers (BMZ, 1996a). One example of this collaboration is the position paper on 'Support of forest populations within the framework of the tropical forest programme', which recognises the particular experience and knowledge of NGOs in this field (BMZ, 1996b).

4.2.2 Development of strategies promoting tropical forestry

Forestry activities have been an important part of German development co-operation since its inception. By 1965 26 projects were under way in Latin America, Africa and Asia. Their main focus was on creating the basis for planned forestry (advisory services in the fields of forest policy, forest legislation, forest administration and the promotion of training); forest inventory as a precondition for the systematic use of natural forests; and assistance in the establishment of plantation forestry, considered to be an alternative to the low yields of natural forest management. Conservation of the environment and species and the particular needs of indigenous forest peoples were considered to be of secondary interest relative to more traditional forestry objectives (BMZ, 1992).

Most early activities consisted of individual technical co-operation projects, implemented through the forest administrations of partner countries. Such projects were often unable to do justice to the complexity of tropical forest issues and – with the exception of some training, inventory and afforestation projects – few produced successful or sustainable results (BMZ, 1992). In recent years, there has therefore been a shift in emphasis in an attempt to tackle the problem of tropical forest degradation more effectively. The current objectives and strategies for tropical forest support are outlined in the BMZ's 1992 Sector Concept on Tropical Forests. This defines the overall goal as supporting partner countries in their endeavours to protect their natural forest resources in accordance with their ecological, sociocultural and economic importance, and to utilise the forestry potential of existing forest areas and suitable afforestation sites for the benefit of the population and the economy, taking into account conservation requirements.

To achieve this overall goal, a number of objectives have been defined:

- To permanently secure indispensable protective ecological and regulatory functions of forest resources (as well as their re-establishment on degraded sites) by means of suitable forest protection measures and natural resource management activities. Important activities include establishment and management of forest reserves, national parks and the like.
- To secure the subsistence of people living in forest areas and improve the means to satisfy their basic needs, and to protect the natural living space and environment of ethnic minorities wherever necessary. Key activities include site-specific land use and agroforestry, development of peripheral areas, improvement of forest gathering systems and establishment of indigenous reserves.
- To achieve the regulated use of the raw material and energy potential of forest areas and afforestable sites to satisfy local needs and the development of handicraft enterprises, industry and export (particularly of manufactured products), taking into account environmental protection and sustainability⁷ requirements. Main activities include site-specific afforestation to produce fuelwood, timber and non-timber forest products; the sustainable use and management of forest stands (inventory, silviculture, resource use and management); and the use, processing and marketing of wood and other forest products.

The BMZ recognises that an essential precondition for achieving the above objectives is the improvement of the general context within which forest conservation and management take place. It is particularly concerned about the many extra-sectoral causes of forest destruction, including national (e.g. poverty, inequitable land tenure, population pressure) and international (e.g. tropical timber trade, foreign debt) factors. Furthermore, it recognises that there are many conflicts regarding the use of tropical forests; that existing economic valuation methods frequently promote the overexploitation of forests; that responsibility for decision-making about forest lands is often divided between several ministries and organisations, all of which may be handicapped by too few personnel and low budgets; and, finally, that forest people often have only a limited capacity to participate in decision-making about their forest homes. It therefore also offers legislative, institutional and training support (BMZ, 1992).

To increase the effectiveness of bilateral tropical forestry development co-operation, the 1992 Tropical Forest Sector Concept outlines a number of guidelines developed by the BMZ in consultation with the GTZ, KfW, NGOs and others, for the implementation of activities:

- Tropical forest assistance measures should be integrated into more comprehensive development and resource protection policies.

7. The BMZ's definition of sustainability includes the requirement that the ability of the forest to function and regenerate should be conserved, and states that complete protection is necessary in the case of forest areas that are indispensable for the survival of indigenous forest populations (BMZ, 1992).

- Bilateral assistance should be linked to the implementation of international programmes such as the ITTO objectives, TFAP and the World Heritage Convention.
- In all cases, activities should adhere to the principles of forest sustainability.
- Activities should only be supported after a thorough assessment of macro- and micro-economic factors, environmental and external impacts.
- Targeted strengthening of institutional structures is needed.
- Operational projects should be linked to the relevant tropical forest policy authorities at the national level in the partner country.
- Projects should aim to encourage active participation of the local population.

4.2.3 Definition of the 'Tropical Forestry' sector

Parliament's commitment to spend DM 300 m. each year on tropical forestry aid made it necessary to monitor whether this target was actually being met. This required a decision on the definition of 'tropical forestry projects'. In 1991 the BMZ therefore drew up the following guidelines:

The BMZ Tropical Forest Programme covers not only the humid tropics (i.e. tropical rain forest) but also the arid areas of the Third World and their vegetation types. In addition to direct forestry

activities (forest conservation and development including training and research), the BMZ Tropical Forest Programme also includes projects in which the forest or tree component plays an important role in the conservation of natural resources. It therefore includes selected projects dealing with watershed management, erosion control, combatting desertification, agroforestry, bufferzone development, etc. (BMZ, 1991, in Sepp and Haase, 1993).

This broad definition provides the basis for the annual list⁸ of projects contributing to the Tropical Forest Programme. The list is drawn up *post hoc*, with projects being given a 'Tropical Forest annotation' by the BMZ's country desk officers responsible for individual projects. There is thus no fixed overall budget for tropical forestry measures; rather, it is hoped that an aggregation of all relevant projects will approach the politically determined total. The list includes:

- all relevant technical and financial co-operation projects, funded by BMZ's country desks;
- a number of funds-in-trust projects (e.g. with IUCN and WWF) that are directly concerned with tropical forests;
- projects funded directly by BMZ's Division 224 from its 'Tropical Forest Conservation Fund' which amounts to DM 20–60 m. per year. Desk officers for countries in which tropical forestry is a priority may apply to Division 224 for support from this fund in addition to their country budget;
- projects funded directly by Division 224 from its 'Sectoral Fund', which is used to fund pilot approaches (e.g. the CIFOR criteria and indicators work) and supra-regional activities (such as some tropical forest research programmes).

The list excludes most of the support given to tropical forest research, projects supported by the 'Study and Expertise'⁹ funds, and much of personnel co-operation. Projects funded through German NGOs and religious or political foundations are also not included, although they may constitute up to 10% of tropical forest development co-operation (Speidel, BMZ, pers. comm., 1996). The list thus does not fully represent all the support provided to the tropical forest sector by the German Government, which must therefore exceed the targeted DM 300 m. per year.

There is no complete description of all the tropical forestry activities carried out by the GTZ, KfW or DED. The GTZ's Division of Forest Resources Management and Nature Conservation has published an outline of its activities (see Section 3.3). This does not, however, give a complete picture of the technical co-operation projects included in the Tropical Forest List, as some of these

BOX 1 Tropical forestry development activities of the German Democratic Republic

No appraisal of the GDR's development aid experience has yet taken place. In part, this is because the former GDR Government did not publish any official data about what it considered to be confidential development activities. Furthermore, following the collapse of the GDR in 1989, all its political structures were adapted to the West German system, thus ending the GDR's development activities overnight.

The GDR's international forestry links (both scientific and administrative) were embedded in the country's foreign policy. Initially, links were established only with other socialist states such as Cuba, Nicaragua, Laos and Vietnam. As the GDR became more widely recognised, however, its international forestry co-operation broadened to include forestry activities through FAO and UNESCO's Man and Biosphere Programme.

The main focus was in the scientific and educational field, based on an active exchange programme. The training of foreign students resulted in close academic ties with countries like Vietnam and Laos. In 1963 a department of tropical forest and wood industries was established in Tharandt, which provided university training for 250 foresters from tropical countries in its first 20 years. The GDR's technical and financial co-operation activities were limited, partly because of its own foreign-exchange difficulties, but experts were sent out to provide direct support in the development of national forestry administrations particularly in Cuba and Vietnam.

(based on Zundel and Schwartz, 1996)

8. It should be noted that this list covers committed rather than actual expenditure on projects in any given year. Since early 1996 any committed funds that have not been turned into useful projects within 8 years are canceled (Speidel, BMZ, pers. comm., 1996).
9. Separate 'Study and Expertise' funds exist for technical co-operation and financial co-operation projects for each partner country. They are used to finance preparatory and feasibility studies and are managed by the country desk officers at the BMZ.

(e.g. integrated rural development or erosion control projects) may be carried out by other GTZ Divisions.

Overall it is clear that there is as yet no comprehensive and unambiguous definition of the tropical forest activities supported through German development co-operation. Instead, the boundaries between the 'Tropical Forest' sector and neighbouring sectors such as agriculture, conservation and regional development remain fluid. On the one hand, this accurately reflects the development guidelines that forestry projects should be integrated into broader activities. On the other, it means that German tropical forest policy is not very sharply defined and claims of spending DM 300 m. a year are difficult to verify.

5. THEMATIC AND REGIONAL DISTRIBUTION OF FORESTRY PROJECTS

The information available on the thematic and regional distributions of projects generally relates either to financial (KfW) or technical (GTZ) co-operation projects. A useful study (Sepp and Haase, 1993) reviewing both was carried out in 1993 by the consultancy ECO for the GTZ. This analysed nearly

all the projects on the BMZ Tropical Forestry List from 1988 to 1992 according to their funding volumes, regional distribution and thematic focus.

5.1 Volume of funding

The total volume of funding committed for tropical forestry projects between 1988 and 1992 was DM 1.56 billion, reflecting the policy target of DM 300 m. a year. Of this about 40% was in the form of technical co-operation, 56% financial co-operation, and 4% funds-in-trust (Sepp and Haase, 1993). Table 2 shows the broad regional breakdown of these funds.

In recent years, financial co-operation has become increasingly important in the tropical forestry field. Thus, in 1995, the proportion of financial co-operation devoted to tropical forestry conservation and reafforestation measures was 6% (Table 3), having gradually increased from zero in 1989 (KfW, 1995a, 1996a).

The apparent discrepancy between the data for total volumes of financial co-operation funding in Tables 2 and 3 is because the data in Table 2 (based on the BMZ tropical forestry list) refer to funds earmarked for specific projects at intergovernmental negotiations, whereas the KfW statistics (Table 3) refer to actual expenditure. The difference for particular years is thus the result of the project evaluation process and the

Table 2: Funds approved in the context of the BMZ Tropical Forest Programme for technical co-operation (TC), financial co-operation (FC) and funds-in-trust (FIT) (DM m.) 1991-5

		Africa	Asia	Latin America	Europe	Supra regional	Subtotal	FIT	Total
1991	FC	98.4	84.0	16.0			198.4		198.4
	TC	51.0	21.6	34.3		21.6	128.5		128.5
	Sum	149.4	105.6	50.3		21.6	326.9	41.0	367.9
1992	FC	67.0	47.0	103.0			217.0		217.0
	TC	45.7	20.1	22.3		15.8	103.9		103.9
	Sum	112.7	67.1	125.3		15.8	320.9	3.1	324.0
1993	FC	49.0	42.0	15.0			106.0		106.0
	TC	60.3	41.4	43.5		20.5	165.7		165.7
	Sum	109.3	83.4	58.5		20.5	271.7	3.1	274.8
1994	FC	54.0	49.0	26.0			129.0		129.0
	TC	58.0	24.1	36.8	2.5	6.6	128.0		128.0
	Sum	112.0	73.1	62.8	2.5	6.6	257.0	1.5	258.5
1995	FC	17.5	27.0	80.8		10.0	135.3		135.3
	TC	44.5	29.0	13.7		23.0	110.2		110.2
	Sum	62.0	56.0	94.5		33.0	245.5	8.2	253.7

(Source: BML, 1995; BMZ, 1997)

Table 3: Annual financial co-operation commitments for tropical forestry projects 1991–5

	1991	1992	1993	1994	1995
DM m.	27.5	95.4	166.7	94.2	186.5
As % of total FC commitments	2	4	6	3	6

(Source: KfW, 1995a, 1996a, 1996b)

negotiation of project contracts (see Section 7), which can take a long time and during the course of which planned funding volumes for projects may change (Duve, pers. comm., 1997).

In addition to funding financial and technical co-operation projects, the BMZ also contributes to tropical forestry through debt-for-nature swaps, which are currently worth over DM 200 m. per year. Between 1993 and 1995 such agreements were concluded with 11 tropical countries (BMZ, 1997).

5.2 Regional distribution

In the period 1988–92, 44% of tropical forestry project funding went to Africa, 31% to Latin America and 22% to Asia. Figures for 1995 were fairly similar at 41%, 26% and 23% respectively (BMZ, 1997). While technical co-operation projects were fairly evenly distributed between the continents, financial co-operation projects were particularly concentrated in West Africa and South America (Sepp and Haase, 1993). Of 47 ongoing forestry financial co-operation projects in 1995, 25 were in Africa, 13 in Latin America and 9 in Asia (KfW, 1995b).

Comparing projects begun before 1988 with those begun between 1988 and 1992, Sepp and Haase (1993) found that, while the funding proportion for Africa had not changed, there had been a definite swing from Asia to Latin America. This could be accounted for primarily by the high allocation of financial co-operation funds to Brazil within the framework of the Brazilian Pilot Programme.

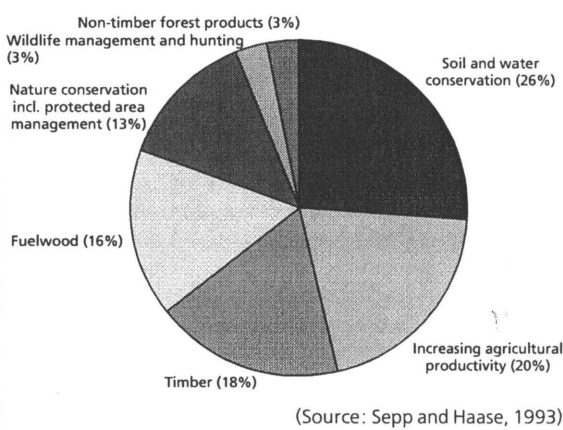
Within Africa a similar level of support is provided to each region, while Asian funding is targeted at Southeast Asia, and Latin America has seen a shift in funding from Northern to Southern countries. Distribution of funds by ecological zone differs in each continent, with dry forest being the most important in Africa, rain forest in Latin America, and mountain regions in Asia (Sepp and Haase, 1993). On the whole, the BMZ's particular concern about the fate of the rain forests means that assistance is increasingly being concentrated on moist regions (BMZ, 1997).

5.3 Project distribution by thematic nature

Within the current DM 300m. p.a. Tropical Forest programme, the thematic focus is on natural forest management, afforestation, agroforestry, institutional strengthening, rural development, combatting desertification, and protection of watersheds (BML, 1995). Many projects are of an intersectoral nature.

For projects begun between 1988 and 1992, the principal stated economic objectives are shown in Figure 3 (Sepp and Haase, 1993).

Figure 3 Principal objectives of forestry projects begun between 1988 and 1992



The average number of aims per project was 2.4, pointing to their frequently intersectoral nature. As might be expected, soil and water conservation was particularly important in dryland projects as was fuelwood production, while nature conservation (and protected area management) occurred mainly in the rain forest zone. In many projects conservation activities were integrated into measures to ensure sustainable regional development, e.g. the combination of specific forest conservation activities with development in adjacent buffer zones.

An analysis of the thematic components of 157 projects (79 in Africa, 36 in Latin America and 32 in Asia) found that each project had an average of 6 out of a possible 29 components (identified at a workshop on the basis of the GTZ classification). Institutional strengthening was a component of 60% of projects and another 44% were involved in some kind of forest inventory, diagnosis or planning. Training and capacity-building were mentioned by 50% of projects in Asia and Latin America but only by 25% of those in Africa. Controlling erosion was a component of a third of all projects in Asia and Africa but was less important in Latin America. The reverse was true for environmental awareness-raising which was most important in Latin America, where it was a component of 35% of all projects. Over half of the Asian projects were concerned with social forestry, whereas protected area management occurred primarily in Africa (Sepp and Haase, 1993).

Although a period of five years is a short time to determine trends, Sepp and Haase (1993) were able to compare the 52 projects which had begun before 1988 with the 105 which began between 1988 and 1992. There was a clear increase in the number of projects dealing with conservation. This agrees with figures showing that the increase in financial co-operation projects in the tropical forestry field since the late 1980s is accounted for primarily by resource conservation and protected areas projects (KfW, 1996b). Another trend appears to be towards increased management of existing natural forests, with less focus on afforestation. This appears to be contradicted by the large proportion of projects concerned with 'establishment of forest resources' in 1995 (see Table 4). The heading is

misleading, however, as it predominantly includes agroforestry projects. The Table, in which project components are categorised according to BMZ criteria, demonstrates just how broadly tropical forestry is defined in Germany, with fully one fifth of projects dealing with 'rural development, combatting desertification and watershed management.'

5.4 Project size and duration

The KfW used to support relatively large projects, which were criticised for being unwieldy and too high-risk. This has changed in recent years due to the growing proportion of projects in social sectors and forestry which have smaller funding volumes than traditional infrastructure or industry projects. Thus, between 1990 and 1995 the average size of all financial co-operation projects decreased from DM 23 m. to DM 17 m. (KfW, 1996a), with a lower average of DM 15 m. in the forestry sector (KfW, 1995b). Tropical forestry technical co-operation projects tend to be somewhat smaller, averaging DM 4–6 m. (GTZ, no date b), reflecting the different nature of the two types of project.

The average duration of financial co-operation projects in general is 11 years (from preparation to the final evaluation about 5 years after the end of the investment phase) (KfW, no date). The average duration of technical co-operation projects is 7.3 years (GTZ, no date c), although forestry projects tend to last about two years longer than this and, if preparatory phases are included, can easily extend beyond ten years (Sepp and Haase, 1993). This reflects the BMZ's conviction that forestry projects require a long-term commitment.

6. RESEARCH AND TRAINING

6.1 Research

In its first report to Parliament in 1990, the Federal Government highlighted the insufficiencies of existing tropical forest research. Basic research on tropical ecology had been carried out largely independently of bilateral assistance in developing countries, while applied research was generally limited to the concrete tasks of specific projects. A major research effort was called for (BML, 1990). Increased resources have since been provided from such a multitude of public and private donors that it is impossible to gauge the total volume of tropical forest research funding in Germany.

This includes the BMZ-funded establishment of the 'Tropical Ecology Accompanying Programme' (TÖB) in the GTZ in 1992. This supra-regional project provides information relevant to tropical ecology (particularly tropical forest ecology), supplies technical experts and supports applied research by development co-operation projects and German and local institutions, universities and NGOs (GTZ, 1996). Originally slightly less applied in nature is the programme of interdisciplinary 'Research into Tropical Ecosystems' funded by the Federal Ministry of Education, Science, Research and Technology (BMBF). This includes the SHIFT programme ('Studies on Human Impact on Forests and Floodplains in the Tropics'), which received DM 35 m. between 1989 and 1996. Growing out of a 30-year history of German-Brazilian co-operation in the field of tropical ecology research, the SHIFT programme supports basic and applied collaborative research with a number of Brazilian research institutions at sites in the Amazon, the Pantanal, and the coastal forests of the Mata Atlântica (BMBF, 1995). A dozen or so research projects,

Table 4: Regional and thematic distribution of approved financial and technical co-operation projects (by components^a), 1995.

Thematic category (as defined by BMZ)	Africa	Asia	Latin America	Supra- regional	Total	(%)
1. Conservation of forestry ecosystems	28	5	13	2	48	(20%)
2. Management of natural forests	16	10	11	1	38	(15%)
3. Establishment of forest resources, incl. agroforestry	19	19	18	2	58	(24%)
4. Institutional development (training, research, policy advice)	14	12	10	10	46	(19%)
5. Rural development, incl. combatting desertification and watershed management	27	5	13	6	51	(21%)
6. Biodiversity conservation			1	1	2	(1%)
Total number of project components	104	51	66	22	243	(100%)
Number of projects	77	42	48	19	186	

(Source: BMZ, 1997)

^a Some projects have more than one major thematic component and may therefore be counted under more than one thematic category.

primarily in South-east Asia and Africa, are also under way at the Institute for World Forestry, a component of the BML-funded Federal Research Institute for Forests and Forest Products (BFH, *Bundesforschungsanstalt für Forst- und Holzwirtschaft*) in Hamburg.

To improve the coordination of tropical ecology research in general, the BMZ and BML jointly established the Committee for Tropical and Subtropical Agriculture (ATSAF, *Arbeitsgemeinschaft Tropische und Subtropische Agrarforschung*) in 1990. This aims to promote agricultural, including tropical forest, research, strengthening the contribution of the Federal Republic and its research institutions in this area and raising public awareness of the main issues. Until 1996, ATSAF was also the home of the European Tropical Forest Research Network.

6.2 Education and training in tropical forestry

Within Germany three basic types of forestry education are available: a 2–3 year apprenticeship, a 3–4 year technical college diploma, or a 4–5 year degree at one of four universities – Freiburg, Göttingen, Tharandt and Munich. Many graduate foresters then have a two-year period of in-service training in one of the *Länder* forest administrations. This is followed by a Civil Service examination leading to a ‘*Forstassessor*’ (forestry official) qualification, a necessary prerequisite for those wishing to become senior forestry civil servants or to pursue an academic career.

In keeping with its long history, German forestry training is very thorough. Until recently, however, it has focused almost exclusively on temperate and specifically German forestry. This is changing as aid agencies seek to recruit foresters with tropical training. Thus the University of Freiburg now has a tropical forestry option as part of its forestry degree and has set up a course of tropical forestry lectures for Ph.D. candidates. The University of Göttingen runs a two-year MSc on ‘Integrated Tropical Agriculture and Forestry Sciences’ and the University of Tharandt offers a two-year English language MSc course in ‘Tropical Forestry’ (DSE, 1990). Some *Länder*, such as North Rhine-Westphalia, offer overseas internships as part of their in-service training, and the GTZ itself includes a number of foresters in its two-year training programme for ‘project assistants’.

The main provider of forestry training courses for personnel from developing countries is the Food and Agriculture Development Centre (ZEL, *Zentralstelle für Ernährung und Landwirtschaft*) of the DSE. This organises specialist courses and seminars both in Germany and in association with BMZ-sponsored tropical forest projects.

7. PROJECT CYCLE MANAGEMENT

7.1 Project identification and agreement

Concrete projects and programmes involving financial and technical co-operation develop during the course of an intensive exchange between the Federal Government and partner countries. The basic stages in this process are:

- As a background to intergovernmental negotiations (held every one or two years), the BMZ develops **national plans**, based largely on Country Concepts where these exist, to assist in the medium-term planning of co-operation measures with a specific country. National plans translate development policy principles into concrete priorities for development activities. Taking into account the partner country’s own development efforts and the activities of other donors, specific recommendations are made for co-operation measures, including rough targets for the volume of financial and technical assistance (Press and Information Office, 1995).
- At the **intergovernmental negotiations** (preceded by many consultative meetings), partner countries make a formal application to the German Government for assistance for specific projects or programmes. In most cases these proposals have been elaborated together with German embassy development counsellors, or jointly with GTZ (‘Pre-ZOPP’ or ZOPP1¹⁰) and KfW experts. Where proposals are insufficiently documented, the Federal Government may ask the GTZ or KfW to make a preliminary report to indicate whether the project is worth pursuing. In GTZ parlance this is termed the ZOPP2 or ‘Appraisal-ZOPP’ stage (see Table 5). If this feasibility study is positive, funds may be provided by the BMZ for the KfW or GTZ to assist in the preparation of a more complete proposal. The negotiations produce a jointly approved provisional project list.
- The proposed projects and programmes are then submitted to an appraisal on the basis of terms of reference elaborated during the ‘feasibility stage’. This appraisal (the ‘Partner-ZOPP’ or ZOPP3 in the case of the GTZ) takes into account: (i) whether the proposal is in line with the Federal Government’s development guidelines, its sectoral priorities, and the partner government’s development objectives; (ii) the volume of funding requested and the proposed implementation structure; (iii) the economic situation of the partner country and a needs assessment for the proposed project or programme; (iv) the technical design of the proposal including an environmental impact assessment; (v) the legal, organisational, management and financial capacity of the organisation carrying out the proposed project or programme, and its ability to continue with the activity after German support has ceased; possible consultancy and training needs; (vi) the personnel, material and financial inputs of all the partners; (vii) the economic, socio-economic and cultural impact of the proposal; and (viii) an assessment of risks and the probability of successful achievement of the proposed objectives. This confidential appraisal report is submitted to the Federal Government, together with a recommendation as to whether the proposal should be funded, to what amount and under what conditions.
- The Federal Government then decides whether to

10. See Section 7.3 for a discussion of the ZOPP (*Zielorientierte Projektplanung*) methodology.

Table 5: Individual steps in the various stages of ZOPP (objectives-oriented project planning)

	ZOPP 1 'Pre-ZOPP'	ZOPP 2 'Appraisal ZOPP'	ZOPP 3 'Partner ZOPP'	ZOPP 4 'Take-off ZOPP'	ZOPP 5 'Replanning ZOPP'
Time input depending on size of project	1 day	1–2 days	2–5 days	3–10 days	3–10 days
Participation analysis (determines interests, expectations and concerns of all people involved with project)	Limited information, specify only major groups	Information still limited, but list as comprehensive as possible, indicating gaps to be filled by appraisers	In-depth analysis	Review and supplement participation analysis, structure co-operation relationships	Review documents from ZOPP 4 and supplement, if necessary, particularly when redesigning project
Problem analysis and objectives analysis	As comprehensive as necessary but not too detailed, identify information gaps	Refer to ZOPP 1, but review gaps and indicate where more information is required	Resolve open issues, assess relevance of problems/objectives	Review and intensify existing analyses, prepare ongoing monitoring of problem situation	Review in the light of new problems encountered or modifications planned
Discussion of alternatives	Where sufficient information available, identify and assess alternative project approaches	Depending on the directives of the client/BMZ	If overall goal and project purpose cannot be achieved, appraisal result is negative. If result is positive, examine implementation alternatives at activity level	At activity level if applicable; depends on content of implementation offer/commission	Conduct in particular when redesigning project
Project planning matrix (PPM): summary of objectives/activities	Overall goal, project purpose, results/outputs, no activities	Pre-formulate activities	Binding definition of overall goal, project purpose, results/outputs; formulate activities	Determine activities, plan of operations and detailed internal project work plan	Reformulate overall goal, project purpose, results/outputs and activities
Result of ZOPP stages 1–5 is the basis for:	Preliminary offer/formal preliminary commentary	Terms of reference for appraisers	Project implementation offer	Concretisation of ZOPP 3; PPM as basis for plan of operations	New offer and/or basis for plan of operations

(Source: GTZ, 1991)

fund the proposal and whether it should be implemented by the KfW or the GTZ, or (increasingly) whether joint implementation is more appropriate. A positive decision is followed by an **inter-government agreement on individual projects**.

- The implementing agency (KfW or GTZ) is then responsible for signing **operational agreements** with the executing organisations in the partner country. It is also required to submit regular reports to the government, as well as a final report once the project has been completed.

There are thus three tiers of agreements for each project: (a) framework agreement between governments (covering all financial and technical co-operation projects); (b) individual project agreements between governments; (c) operational agreements between the GTZ or KfW and the executing organisation in the partner country.

7.2 Project implementation – Financial co-operation (KfW)

The investment phase of financial co-operation projects cannot proceed until all necessary agreements have been signed and any conditions regarding the disbursement of grants or loans have been met. The KfW often experiences difficulties in achieving the planned hand-over of its projects, usually because of the restricted capacity of national forestry departments to implement the project. Problems may occur where partner countries are unable to provide, or delay provision of, promised contributions, e.g. where political priorities or forest department staff may have changed. This then requires additional feasibility studies which may further delay implementation. Where necessary, the national executing agency may commission a consultancy firm to prepare the project in detail and supervise its execution. This is generally done on the basis of competitive

bidding limited to Germany. The contract may only be awarded with the approval of the KfW, which examines the technical, organisational and personnel qualifications of the applicants and the financial standing of the consultancy firm (KfW, 1995c).

At the end of the investment phase, the KfW carries out a 'final follow-up' analysis of the use of the funds, inspects the work that has been done and examines any discrepancies between the actual costs and execution time and the original plan. As the success of the project is measured, to a large extent, by how long its effects last, a further 'final evaluation' is carried out after the project has been operating for 3–5 years (KfW, 1995c).

7.3 Project implementation – Technical co-operation (GTZ)

The GTZ uses six main instruments in planning and implementing projects: objectives-oriented project planning (ZOPP), economic assessments, plans of operations, monitoring and evaluation, progress reports, and progress reviews. Most of these instruments are used in some way by other donors and will not be described in detail here. The ZOPP methodology, however, is so closely identified with the GTZ that it deserves further discussion.

The essence of ZOPP is that it involves teamwork, with all potential participants collaborating in planning the project, with the help of an independent facilitator. It aims to:

- formulate the basis for a project, arriving at clear-cut definitions and a common understanding of the problems which the project is intended to eliminate;
- provide a clear and realistic definition of the means for achieving the desired end, thus creating a working basis which is binding for all involved;
- create a basis for monitoring and evaluation;
- improve communication and co-operation between the project partners and the GTZ.

There are various planning steps for the purpose of project preparation (ZOPP 1–3) and implementation (ZOPP 4–5) as shown in Table 5. The main document to emerge from this process is an increasingly detailed project planning matrix or logical framework.

The ZOPP methodology has been a central management tool for GTZ projects since 1983. Experience has shown, however, that it is easy to concentrate on the planning content of ZOPP to the detriment of its role as a process for improving communication and the participation of all project stakeholders (GTZ, 1995). Furthermore, the ideal of maximum advance planning is not always appropriate in a complex and rapidly changing development environment. The GTZ therefore intends to apply the process more flexibly. Better results are expected from a minimal planning framework, limited to strategic goals and input ceilings and leaving as much as possible to a joint learning process during implementation (GTZ, 1995).

Just as the ZOPP methodology has come in for scrutiny within the GTZ, so has the project concept. The traditional concept of sector and country-specific projects continues to dominate German bilateral development co-operation. Within the GTZ, however, staff

are being encouraged to test more open and more integrated forms of development assistance such as:

- programmes which involve several national and international organisations and have easily interchangeable subcomponents;
- self-help efforts supported through open funds;
- private sector initiatives promoted through highly flexible financing, consultancy and training instruments (GTZ, 1995).

8. REVIEWS AND PROJECT PROFILES

The BMZ's evaluation unit regularly examines the effectiveness of German development co-operation by means of spot-checks on selected projects (2% of all measures financed in 1990/91) (Wiemann, 1996). In 1993 50 efficiency control measures were carried out, including 40 evaluations of individual projects or programmes, 5 thematic evaluations and 5 thematic cross-section analyses. Although the findings of individual evaluations are basically confidential, Parliament and the public are kept informed via the publication of condensed cross-section analyses of all the evaluations in a series of *BMZ Aktuell* publications (Wiemann, 1996). There has been no specific forestry sector evaluation other than the review of projects carried out by Sepp and Haase in 1993 (see Section 5).

The GTZ carried out an evaluation (GTZ, no date c) of the 128 projects it completed in 1993, nearly one-third of which had specific environmental and resource conservation objectives. About four-fifths of all projects were assessed as having successfully or adequately achieved their development policy aims. To increase this proportion the report recommended a more in-depth assessment of the political, economic and institutional framework during project preparation, as well as the introduction of an 'orientation phase' to precede implementation. It also proposed a shift from training individuals to capacity-building for institutions. Finally, it advocated greater devolution of responsibility for planning and implementing projects to local GTZ offices and projects themselves in order to ensure more flexible implementation of activities.

The KfW evaluation of all financial co-operation projects which had their final evaluation in 1992/3 produced broadly similar results. Of the 153 projects and programmes, 71% were considered to be successful from the point of view of development policy. Projects in the agriculture (including forestry) and industry sectors showed an above-average rate of failure, mostly due to a difficult external environment (e.g. excessive host government intervention, questionable economic policies). The economic, social and political context of projects was found to be critical in determining their success, as was the institutional capacity of the executing organisation in the partner country. To overcome the latter problem, the report suggested that some projects might need to be preceded by a phase of institutional strengthening through the GTZ, and recommended that resources should be concentrated within key sectors in partner countries (KfW, no date).

BOX 2 Ethiopia: Shifting aid priorities

German involvement in forestry co-operation in Ethiopia demonstrates the shift from an early focus on afforestation to an increasing concentration on training and then on forest policy advice at the national level, followed by a complete shift to working at the regional level.

German forestry advisers were first invited to the then Abyssinia by Emperor Menelik II in 1907. At that time 'modern' forestry consisted of the establishment of *Eucalyptus* plantations around larger cities to provide fuelwood and construction timber. The remnants of these early interventions can still be seen around Addis Ababa today. Afforestation was similarly the focus of Germany's first forestry development project, which began in Ethiopia in 1959 and was managed by the precursor of the GTZ until 1965. Following the drought of the early 1970s, a new project was launched in 1974 with the twin objectives of increasing afforestation (with the planned production of 500,000 seedlings per year) and combatting erosion. Food-for-work programmes involved local populations in constructing terraces and maintaining tree nurseries. 1986/7 saw a change in the focus of technical co-operation from that of providing local-level technical inputs to the provision of forestry advisory services. A training centre was renovated and a system of in-service training concentrated initially on producing a cadre of national foresters with the necessary skills to manage nurseries and lead inventory teams. The focus shifted again when policy advisers were brought in to

help in the drawing up of forest policy guidelines, the identification of protected areas and the development of appropriate management plans.

By the early 1990s, however, it became clear that Germany's long-term involvement in Ethiopia's forestry sector had done little to halt or reverse the country's rapid deforestation rates. Even the 300,000 ha of afforestation and 400,000 km of terraces and soil bunds implemented since 1974 could not combat the effects of a long war followed by the demobilisation of Africa's largest army. Notwithstanding successful experiences in areas such as Jelo-Muktar, Setema Forest and Mount Yegof, the decision was taken in 1994 to end one of Germany's longest-running development projects. During the intergovernmental negotiations of that year, Germany outlined the conditions that would have to be in place before further technical co-operation in the forestry sector could be contemplated. These included laws to protect the remaining forests, enforcement of forest legislation, resolution of tenure questions, greater participation of local populations in forest management, incentives for afforestation, and decentralisation of forest administration from Addis Ababa to the regions. Although renewed national-level co-operation still awaits these changes, the possibilities for a new phase of forestry co-operation at the regional level are being tested with an integrated forestry project in Abada/Dodola.

(Adapted from Adelman, 1994)

BOX 3 Mexico: Sustainable timber harvesting

The Quintana Roo project in Mexico is typical of many German forestry co-operation projects. Not only was it a long-running project (15 years) with a large research and training component, but it also embodied the conviction of German foresters that timber harvesting, if managed in a sustainable way, can be a vital component of forest people's livelihoods.

As early as the late 1970s a technical co-operation pilot project was established to look for alternatives to the existing over-exploitation and destruction of the humid forests in south-eastern Mexico. The project concluded that successful management would have to be in the interests of local people, offering them viable prospects for the future. In 1983, when the governor of the State of Quintana Roo handed an expired timber concession of over 500,000 hectares to local village communities (*ejidos*), the *Plan Piloto Forestal* project was set up to give ten *ejidos* the opportunity to develop a permanent community forest management system. The Mexican-German team of advisors were asked to support the *ejidos* in learning and deciding for themselves how to manage the forest and the resulting income.

Taking a highly participatory approach, unusual for its time, the GTZ project provided technical advice to enable *ejidatarios* to: inventory the forests and stocks of timber; draw up plans for sustainable forest management; divide the forest into different land-use zones including areas for protection; apply appropriate methods of tree-felling, extraction and regeneration; and develop plans for the protection of wildlife and for eco-tourism. In addition to this technical support, the GTZ strategy also emphasised the institutional and policy basis of community forest management. One of the important institutional developments was the establishment of the Society of Ejido

Forest Producers (SPFE), which coordinated policy, extension, research and marketing strategies. Following a careful process of dialogue involving a radical change in State attitudes to community forestry extension an agreement was reached between the Ministry of Agriculture and Natural Resources, SPFE and the GTZ which gave SPFE the responsibility for providing paid extension advice to individual *ejidos*. Taking a pro-active approach, SPFE also began to take a lead in setting market prices in the State, and successfully lobbied for the removal of State subsidies which had acted as a disincentive to investment in both the sawmills and the forests. The initially sceptical State forest authority began to appreciate the advantages of the new forest management system and gradually delegated more of its forest supervision and protection roles to SPFE's foresters.

Progress was not always easy. As incomes from the forest began to increase the *ejidos* had to establish mechanisms to distribute profits, especially in the form of an improved communal infrastructure. Particularly problematic was the need to balance the desires (and profits) of *ejidos* with different types of resources (size of forest and species composition) and with different traditions and management goals (such as the indigenous Mayan groups). Certain technical issues also required further research such as the question of how to process and market hitherto unused timber species, and how to improve regeneration of mahogany, the most important local species. By the early 1990s, however, the project was no longer technically or financially dependent on GTZ, and today over 50 *ejidos* in Quintana Roo and neighbouring states are managing their forests according to the model developed in the *Plan piloto forestal*.

(Richards, 1992; GTZ, 1997)

9. CONCLUSIONS AND TRENDS

Germany has a long-established international reputation as the birthplace of sustainable forestry and its foresters were widely employed in the forest services of various colonial powers. Chief among these were the Dutch and the British, and it was in Burma, India and Java that German foresters developed tropical forest management systems that were to form the basis for forest management throughout the Asian and African colonies.

Today, Germany remains influential in the forestry field, contributing 15% of total international forestry aid, thus making it the most important bilateral donor. This large volume of funding is in part due to pressure from a well-informed and environmentally active public. Germany also plays a key role in supporting several important multilateral programmes such as the Global Environment Fund and the Brazilian Pilot Programme, both of which it was instrumental in initiating. This reflects Germany's belief that the extreme complexity of forestry issues can only be tackled in an integrated manner, where possible within the framework of national strategies or international programmes.

Within its bilateral tropical forestry co-operation activities, Germany has been tending away from the early technically oriented projects which focused on forest inventories, afforestation and individual training. Instead, in recognition of the many extra-sectoral factors that underlie forestry problems, it is increasingly looking for ways to tackle the political, institutional and socio-economic context within which technical solutions can be attempted. There is thus a trend away from straightforward forestry projects to integrated projects in which the forestry component is one of a number of complementary development options.

A similar trend in favour of a programmatic approach is in conflict with Germany's unusual institutional separation of financial and technical co-operation (Ashoff, 1996). Traditionally, technical co-operation implemented by the GTZ was considered to be the most appropriate way of tackling tropical forestry issues. Since 1988, however, when Chancellor Kohl announced a large increase in funding for tropical forestry activities, financial co-operation measures (implemented by the KfW) have come to predominate in the forestry field. Although theoretically quite separate, in practice the distinctions between the two are becoming less and less clear, particularly in forestry where partner countries often lack the capacity to implement large capital assistance projects without a certain amount of accompanying technical expertise. Recent years have therefore seen increasing collaboration between financial and technical co-operation, e.g. in the respective funding of protected area demarcation and the development of an adjacent buffer zone.

Close collaboration is necessary to overcome the limitations imposed by a highly differentiated development co-operation system, in which the division of labour between the BMZ and the major implementing agencies (KfW and GTZ) is not always clear. Different approaches to the funding and definition of forestry projects by the three institutions make it difficult to obtain a complete overview of German tropical forestry activities. On the other hand, this pluralism, which also

involves a multitude of NGOs, private foundations, the *Länder* and municipalities, is a strength in that it allows for the flexibility to tackle a range of complicated issues in a variety of ways.

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ACRONYMS

ATSAF	Arbeitsgemeinschaft für tropische und subtropische Agrarforschung (Working Group on Tropical and Subtropical Agricultural Research)
BFH	Bundesforschungsanstalt für Forst- und Holzwirtschaft (Federal Research Centre for Forests and Forest Products)
BMBF	Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie (Federal Ministry of Education, Science, Research and Technology)
BML	Bundesministerium für Ernährung, Landwirtschaft und Forsten (Federal Ministry of Food, Agriculture and Forestry)
BMU	Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety)
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (Federal Ministry for Economic Co-operation and Development)
CGIAR	Consultative Group on International Agricultural Research
DED	Deutscher Entwicklungsdienst (German Development Service)
DSE	Deutsche Stiftung für Internationale Entwicklung (German Foundation for International Development)
EC	European Commission
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GTZ	Deutsche Gesellschaft für technische Zusammenarbeit (German Agency for Technical Co-operation)
ITTO	International Tropical Timber Organisation
IUCN	World Conservation Union
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
NGO	Non-governmental organisation
oda	official development assistance
SHIIFT	Studies on Human Impact on Forests and Floodplains in the Tropics
TFAP	Tropical Forestry Action Plan
TÖB	Tropenökologisches Begleitprogramm (Tropical ecology accompanying programme)

TWRP	Tropenwaldrelevante Programme (Support to international programmes in tropical forestry)
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WB	World Bank
ZOPP	Zielorientierte Projektplanung (objectives-oriented project planning)

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Greece

Constantine Varelides and Michael Richards

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1. FOREST HISTORY IN GREECE

Greece is a predominantly mountainous country with a land area of some 13 m. ha, approximately half of which is forested. About half the forested area is classified as industrial forestry, with a total standing volume of 138 m. cubic metres, 56% of which is coniferous (31% fir, 10% black pine and 15% other conifers) and the remainder beech (20%), oak (17%) and other broadleaves (Ministry of Agriculture, 1992). The rest of the forest area is composed of evergreen broadleaves used mainly for grazing and fuelwood. Nearly two-thirds of the total forest area is owned by the State, the rest belonging to local communities, monasteries, private sector groups and individuals.

The Greek Forest Service was established in 1836. Initially it focused its efforts on identifying the productive forest areas, and bringing them under management. This involved the opening of virgin forests, and introducing silvicultural methods to restore forest areas degraded through over-cutting and grazing. The Forest Service has had to counter the problem of erosion in particular, much of the industrial forest area being located in the mountainous areas, as well as along the northern border. Another important activity was the reforestation of the bare hills (due again to over-cutting and over-grazing) in and around towns and cities. The wooded hills of Athens are a legacy of this period of activity.

In the 1950s, the emphasis was on the control of erosion resulting from the terrain, over-grazing and lack of forest cover. This involved engineering works (reducing gully slope, dams, jetties, etc.) to reduce the speed and damage from the torrents, and vegetation recovery in the catchment areas. For example, narrow hand-made terraces called '*gradoni*' were planted on steep eroded banks, pines were replanted in the catchment areas, and poplars and willows were planted in the gulleys. In order to tackle the over-grazing problem, the Forest Service developed mountain meadows to compensate for loss of grazing land. This required a considerable extension effort, as well as replanting with desirable fodder species.

At the same time poplar cultivation was promoted throughout the country. State and private plantations were created where there was sufficient underground water, using improved clones, vegetative propagation, mechanical site preparation and tending methods, and fertilisation, based on the work of the Forest Research Institute of Thessaloniki. Sand-dune stabilisation was another activity of the early 1960s, with a major project in the coastal dunes of the western Peloponnese. After preliminary work with fences and grasses, the area was planted with acacias, pines and eucalypts.

In the late 1960s and 1970s, the focus was on extensive reforestation through industrial plantations, particularly on the mountain slopes, involving the use of heavy machinery. The main species used for the upland plantations was black pine (*Pinus nigra*) and for the lowland areas, maritime pine (*P. pinaster*), brutia pine (*P. brutia*) and eucalypts on frost-free sites. Land reclamation on mining sites is another important recent forestry activity.

Fire prevention and suppression has been, and still is, an issue of great importance in Greek forestry. To

reduce the danger, fire breaks and watering points are combined with extension work through the mass media; daily forecasts on fire risk are issued in the summer. The Forest Service is responsible for coordination of the suppression forces (fire brigade, air force, infantry and the general public) as well as having its own forest fire brigade.

Today, in response to international and domestic environmental pressures, the focus of the Forest Service has shifted to recreation forests, national parks and protected areas. Recreation forests have been created in the vicinity of the main towns, as well as in areas suitable for outdoor activities such as skiing, mountain walking, bird watching, river fishing, etc.

Forestry activities are supported by two Forest Research Institutes (in Athens and Thessaloniki). Professional forestry training takes place at Thessaloniki University and three Polytechnics (Drama, Karditsa and Karpenisi), while forest guards, fire fighters, and game-keepers are trained at Forest Service Schools.

2. EVOLUTION OF GREEK INVOLVEMENT IN TROPICAL FORESTRY

Arguably the main commonality between the domestic experience and tropical forestry lies in some of the silvicultural principles involved in maintaining the ecological relationships. The interaction of terrain, climate and ecology has been well-studied and practised in Greek forestry, providing a good basis for understanding some of the complexities in tropical areas, particularly in the drier savannah areas. The experience of afforestation of dryer sites, erosion and fire control, dune stabilisation, grazing management and grass-roots extension would appear to be particularly relevant, as reflected in the nature of the bilateral projects and consultancy missions described in section 5.

Lacking colonial links and only recently an aid donor, Greece has had little contact over time with the tropics, except as a result of importing tropical timber. Its interest in tropical forestry has come about mainly through membership of UN organisations like FAO and UNDP, and the more sectoral ITTO, IUFRO and Silva Mediterranea, and attendance at international fora such as UNCED and associated environmental Conventions like the Paris Convention on Desertification (Ministry of Foreign Affairs, 1991). Greece has also provided forestry experts on several FAO and EU project missions, as well as for longer-term assignments, including, for example, FAO missions to Jordan (forest genetics) and Djibouti (forest recreation), an EU mission to Nigeria (range management), and a long-term posting on a World Bank-supported afforestation project in Nigeria.

3. STRUCTURE OF AID DELIVERY

Development assistance has gradually increased in recent years, reaching US \$189 m. or 0.15% of GNP in 1996, with a target to reach 0.2% of GNP in 1997 (Ministry of National Economy, 1997). However, this aid is primarily orientated to the Balkan States, the countries of the former USSR, and the Middle East, so

very little goes to tropical countries. Less than a quarter of Greek aid has been in the form of bilateral aid, 76% of the 1996 commitment being to the EU and other multilateral organisations. Bilateral official development assistance (\$45 m. in 1996) can be broken down as follows:

• Financial assistance:	\$32.2 m.
• Technical co-operation (including forestry) and operational costs:	\$6.7 m.
• Food aid:	\$5.3 m.
• Emergency aid:	\$0.3 m.

The Ministry of National Economy is responsible for managing Greece's aid programme. It devolves the financial and management responsibility for technical co-operation projects to Ministries with the appropriate technical capacity; in the case of forestry this means the Ministry of Agriculture. There is no sectoral allocation for forestry.

It should be noted that the structure of technical co-operation aid delivery is largely based on food and emergency aid, and could prove inadequate for larger technical assistance projects which involve more than the payment of salaries, travel expenses and equipment bought in Greece and transported out. For example, there is no provision as yet for handling an independent aid project budget.

Project appraisal and evaluation of government-supported projects are normally carried out by experts in the appropriate Ministry. In terms of administration, forestry projects are normally handled by the EU and International Relations Development Assistance Department of the General Secretariat of Agricultural Policy in the Ministry of Agriculture. The Department consults the appropriate section of the General Secretariat of Forests (also in the Ministry of Agriculture) for appraisal and evaluation of a forestry aid proposal. The General Secretariat of Forests either carries out the task itself or asks for technical assistance from the Forestry Research Institutes or the universities. The final go-ahead is given by the Ministry of National Economy endorsing the recommendations of the Ministry of Agriculture.

Appraisal and evaluation of non-governmental projects follow the procedures set by the financial sponsor of these projects. Some consultancy firms have undertaken forestry tasks as part of other major projects (see section 5). Other small consultancy firms undertake the appraisal and implementation of forestry projects inside Greece and may gradually expand their overseas

operations. Currently, however, there is no Greek forestry consultancy firm in the international market.

NGO aid, based on fund-raising and EU finance, is also limited to the provision of technical assistance and equipment, but on a much smaller scale. Most Greek NGOs are small charities focusing on emergency, food and medical aid. Although there have been some agricultural projects, such as work with livestock co-operatives in Kenya (by ELINAS) and the establishment of a model farm in Zaire (Greek Orthodox mission), there has been no forestry project to date.

4. STRATEGY

Greek experience in tropical forestry has so far been limited mainly to involvement with multilateral agencies and individual experts on project missions. In general, technical co-operation projects are identified on an *ad hoc* basis, mainly by Greek foresters participating in multilateral missions or working as in-country advisers. The decision to support a particular project is based on an assessment of the funds available (in competition with other sectors), the existence of appropriate Greek technical expertise, and the receptivity of the recipient country to the project idea.

The current general trend in Greek public opinion to reduce government involvement in favour of the private sector may promote a more flexible and efficient approach in the aid programme involving independent agencies. A second important influence is the rise in social and environmental awareness, which has shifted interest away from state-managed industrial forestry to NGO-based or grassroots agroforestry and community forestry programmes. The involvement of NGOs, which are mainly charities, tends to attract public sympathy.

As regards country selection, regional preference is for the Balkan countries, followed by countries of the former Soviet Union, the Middle East, and only then Africa, Asia, etc. However, the system is flexible enough for a well-presented project to be approved, whatever its geographical location. The kinds of projects favoured currently by Greece are those in which the country's forestry research and development experience can be used. Thus, afforestation, industrial plantations, range management, erosion control, combatting desertification and agroforestry are likely areas of focus in the future.

5. FORESTRY PROJECTS

Four main types of tropical forestry involvement can be identified: bilateral projects, long-term advisory posts, a number of consultancy missions for multilateral agencies, and private sector projects. Three bilateral projects involving technical assistance, training and equipment were identified, the latter two being still at the planning stage:

- a 1992 afforestation project in Inner Mongolia, China, involving the University of Joannina, Greece (see section 8);
- a 'Tropical Forest Protection' project in Benin, with a 1997 budget of \$25,000;
- a 'Tropical Forest Ecosystems' project in Africa, with a 1997 budget of \$62,500; this project, to be

Table 1. Greek official development assistance (oda) 1993-96 (US \$ m.)

	1993	1994	1995	1996
Bilateral oda	15.1	32.5	26.9	44.5
Multilateral oda	75.4	89.6	125.4	144.2
Total oda	90.5	122.0	152.3	188.6
% of GNP	0.10	0.12	0.13	0.15

(Source: Ministry of National Economy)

implemented by the Forest Research Institute of Athens, aims to recover degraded savannah ecosystems in the Sahelian zone.

A private sector project involving forestry activities was a road construction and land stabilisation project in Libya, involving the EDOK-ETER Company (1980–83). The forestry component involved a 20 ha nursery with about 2–3 m. plants, sand dune stabilisation, erection of 500 km of windbreaks, and roadside planting.

6. RESEARCH AND TRAINING

The main research interests of the two Greek Forest Research Institutes in Greece (Athens and Thessaloniki) include forest management and economics, silviculture, forest genetics, forest protection, forest hydrology, forest ecology, land reclamation, forest recreation, wood technology and mountain meadows. The recent allocation of bilateral aid funds has facilitated some joint research projects with developing countries. Some research is also carried out at the forestry schools.

There is a university level forestry school in Thessaloniki. The forestry degree requires five years of study, including practice in the university and state forests. There are also three polytechnic-level forestry schools. Tropical forestry as such is not included in the curricula of Greek forestry schools, although elements of it, especially relating to dry savanna conditions, are found in such courses (within the forestry training) as ecology, silviculture and hydrology. Qualifications for lower cadres such as forest guards, forest fire fighters and game keepers are obtained in training, usually over a six month period, within the Forest Service.

7. PROJECT CYCLE MANAGEMENT

Project identification can occur in a number of ways:

- through individual professional contacts with the recipient country (this is the most common way in practice);
- in the form of a government-to-government request, as part of a general bilateral aid agreement which is channelled by a Greek representative in the country to the Ministry of Agriculture;
- from an international organisation;
- from an independent agency looking for partners.

Project ideas are normally submitted to the Ministry of Agriculture, which vets the project in terms of Greek technical and financial support capacity, the expected impact of the project, and whether it is environmentally sound. When the initial appraisal by the Ministry of Agriculture is positive, a preliminary costed proposal is worked out, and submitted to the recipient country for its response. It can then be finalised into an implementation plan, which is sent to the recipient country for final approval. Financing can then be approved. This procedure has proved adequate for the small technical assistance projects currently undertaken by Greece.

The Technical Adviser (usually from Greece, or recruited internationally), apart from advising the national project manager on technical matters, is responsible to the Greek government for the progress

of the project, keeps the donor accounts, arranges (in collaboration with the project manager) consultancies, training and any other matter affecting the use of aid funds. In effect (s)he co-manages the project on Greece's behalf.

Constraints identified in the current system, in terms of its capacity to manage larger forestry projects, include the need for an independent project budget and accounting system, decentralisation and flexibility in project management, staff appraisal reports, and detailed monitoring and evaluation procedures. No evaluations by independent agents of Greek forestry projects have so far taken place.

8. PROJECT REVIEWS

The 'Use Rare Earths' project for the afforestation and prevention of desert expansion in Inner Mongolia, China

This project revolved around a particular method of planting developed at the Greek University of Joannina and called 'Kallidendron' after its inventor. It involves a planting medium consisting of soil, fertiliser and a water-absorbing compound that helps the plant survive water stress and grow satisfactorily in dry conditions. This technology had already been demonstrated in a number of African and Middle Eastern countries.

This 1992 project was included in the Sino-Greek Scientific and Technological Co-operation Agreement, and was implemented jointly by the Science and Technology Commission of Inner Mongolia and the University of Joannina. The Greek contribution included technical assistance, the provision of agrochemicals and training. The Chinese contribution included the trees and labour for planting. Some 15,000 fruit and forest trees were planted on seven experimental sites. Apart from the local training, a study tour in Greece was arranged for four people.

9. CONCLUSION

Greek involvement in tropical forestry has been limited mainly to participation in international organisations and fora, small technical assistance projects, and the contributions of Greek experts to multilateral missions. However, this involvement is gradually expanding. Greek technical assistance, based on the country's forestry background, has mainly concentrated on dryer tropical areas, and particularly on ecological and silvicultural aspects of reforestation. The present structure of aid delivery in the Ministry of Agriculture is adequate for small-scale forestry projects, but would need to be improved for larger projects. Most project requests come through individual professional links. Consultancy firms have yet to be used in forestry aid, but it seems likely they will be in the future, building on their considerable experience with domestic forestry projects.

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ACRONYMS

DAC	Development Assistance Committee of the OECD
Dr	Drachma
ELINAS	Greek Institute of Solidarity and Development
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GNP	Gross National Product
ITTO	International Tropical Timber Organisation
IUFRO	International Union of Forestry Research Organizations
MFA	Ministry of Foreign Affairs
MNE	Ministry of National Economy
NGO	Non-Governmental Organisation
oda	official development assistance
OECD	Organization for Economic Cooperation and Development
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme

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Note on currency: on 1 September, 1997, US\$ 1 was equivalent to Dr 284.79.

Ireland

Philomena Tuite and David Brown

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1. DOMESTIC FORESTS AND FORESTRY

The history of Ireland is reflected in the history of its forests. The rural idyll which characterises external perceptions of Ireland belies a land which is one of the most deforested in Europe, and whose deforestation has been, to a significant extent, a manifestly political phenomenon. Ireland, never itself a colonial power, was long a colony of another European nation (Britain). This dependent status, and the injustices and hardships which accompanied it (most notably the Great Famine of 1845–9), have had their influence on Irish attitudes to humanitarian aid. They have contributed to the solidarity which many Irish people feel with the developing world, a solidarity underwritten by Ireland's long history of missionary work and its prominent role in international peacekeeping and humanitarian affairs.

1.1 The history of Irish forests

In Irish folk history, the country was known as '*Fidh-Inis*', the wooded isle. The remains of ancient forests found at great depth in Irish boglands are evidence of widespread and undisturbed forests during early human habitation. The Mesolithic peoples (6000 BC) were hunters and gatherers who concentrated seasonally around forest edges, lake-shores and the coasts. Forests in the lowlands were dominated by oak, ash, elm and yew associations, with widespread hazel. Willow, birch and alder forests were found in the wetter sites while pine was found on the higher ground.

Three thousand years later, the Neolithic agriculturalists arrived from the northern regions. These were cultivators and pastoralists who rapidly cleared the land for tillage (mainly oats) and for pastures. Hazel, ash, hawthorn and holly were common firewood species. Hazel nuts were also an important part of the human diet, and hazel scrub was maintained as wood pasture (Rackham, 1986).

Bog development was the most important early factor in forest change in Ireland. As the boglands developed, starting about 5,000 years ago, species dominance shifted. Large areas of forests comprising oak, birch, ash, alder, yew and pine were colonised by bogs. Hazel became widespread, and formerly abundant species, such as elm and Scots pine, declined rapidly under human influence.

1.1.1 Ancient laws of land and woodland

The Brehon Laws, dating back to the seventh century AD, are the oldest known land laws in Ireland. Under Brehon law, there was no concept of private ownership or land transfer. The dominant concept was of land use, and with the right of use came certain obligations. Penalties could be imposed for poor management of trees, and tree listings and classifications were included in the Brehon Laws. The ancient population, the Celts, treated woodlands as commons, held jointly by the members of a tribe. Early management systems may have existed for species such as hazel coppice (used for wattle) and hazel and elm woodlands for wood pasture.

1.1.2 The Norman influence

The invading Norsemen (eighth–eleventh centuries) and later the Normans and Anglo-Normans (from 1169)

abandoned traditional land and timber laws and introduced the concepts of possession and dispossession of land. Leasing and sub-leasing of land were introduced. The Normans contributed substantially to forest decline, with large-scale forest clearances from 1200 AD, mainly in the most fertile areas (O'Carroll, 1987). Clearing for year-round grazing was widespread, and felling for fuel and construction placed heavy pressure on the woodlands. A trade in the export of Irish oak emerged by the late fourteenth century, and continued for 300 years and more (McCracken, 1977).

1.1.3 Forest exploitation, 1500–1800

The English Tudor dynasty (1485–1603) adopted a policy of conquest in Ireland, confiscating Irish lands and transferring them to English settlers. Ireland's forests acted as refuges for both the Irish and the Tudor armies. In the late sixteenth century, Queen Elizabeth I of England ordered the destruction of Irish forests and woodlands, as a means of gaining greater control over the territory. Timber exploitation was encouraged, and this gave a boost to the English shipbuilding industry.

At the start of the seventeenth century, 12.5% of the country was forested. Two hundred years later, the cover was less than 2% (McCracken, 1977). There were three main causes of this deforestation. The first was the high domestic demand for wood, wood products and fertile arable and grazing land, as new settlers arrived from England and Scotland, and new towns and villages appeared. The second factor was the growing export trade in Irish timber, mainly oak. And thirdly, industrial development was also a voracious consumer of wood. From the sixteenth century, industries such as iron-smelting and glass-making were heavy users of charcoal. One ton of iron required 2.5 tons of charcoal – the equivalent of roughly an acre of 5-year old oak coppice (Neeson, 1991). Industrial growth in Britain and Europe also created a demand for other export products, many of them dependent on wood or wood products (casks for transport, bark for tanning skins, etc.).

As the Irish forests declined, imports of timber increased. By the late 18th century almost all of the country's need for softwoods was coming from Norway and Russia (at this time, Ireland had no softwood supply of its own), and from the mid 18th century, it was also importing quantities of ash, beech and oak from England, and mahogany and ebony from Central America and West Africa.

1.1.4 Estate afforestation, 1700–1800

The Dublin Society (later the Royal Dublin Society) was formed in 1731, and in 1741 introduced a premium scheme for afforestation which lasted for forty years. Its beneficiaries were mainly large landowners who, experiencing new-found security of ownership, began to invest in the development of their properties (Neeson, 1991). Regular planting premiums were introduced in 1765 for the planting of oak, ash, elm and pine, and in 1783, these were increased for enclosed plantations of not less than 10 acres, supporting 2,000 trees or more per acre. Other planting schemes were introduced over the next two decades. In the period 1766–1806, an estimated 25 million trees were planted, largely as a result of the Society's efforts.

1.1.5 The Act of Union and 'absenteeism'

With the Act of Union in 1800, the United Kingdom of Britain and Ireland came into being. As London replaced Dublin as the capital of Ireland, so was there a rise in the distinctive Irish phenomenon of the 'absentee landlord'. Rents were increased to support the landlords' extravagant lifestyles, and years of harsh living for the Irish tenant farmers ensued, characterised by evictions, insecurity and food shortages (O'Brien, 1977). The independence movement grew in the countryside, fuelled by tenurial insecurities and land repossession.

Around this time attitudes to tree species selection began to change. Interest in conifers as a quick-growing and cheaply-maintained alternative to the oak grew steadily, aided by a shift in demand, as iron ships began to replace the traditional oak-built vessels. This period was a watershed not only for the oak but for the character of natural woodland in Ireland. The demise of the oak stimulated a fresh approach to the denuded landscape. Scientific interest was nurtured in exotics such as Douglas fir and Sitka spruce from the Americas, which thrived on difficult acid soils. Plans were stalled, however, as climatic and social conditions in the 1840s led to a national potato blight and a five-year period of great deprivation and suffering.

1.1.6 The Irish Famine, 1845–9

The Great Famine resulted in the death of almost one million people from hunger and disease, and led to the start of a movement of mass emigration of 2 million people, mainly to Canada and the United States (Kee, 1981). In the short term, the decline in the country's population, from 8 million in 1841 to 6 million in 1851, changed the national population structure, and substantially reduced the number of small tenant family members dependent on subsistence farming.

1.1.7 Movement for Land and Social Reform

A national Irish movement in an organised sense had its beginnings in 1793. The common perception among many Irish people was that trees represented a tangible sign of land dispossession. Decades of persecution resulted in a strong focus on land and land rights by the majority of the Irish population who were predominantly tenants with little security of tenure.

The Famine years provided a stimulus to political solidarity at home and led, ultimately, to increased access to external financial support from the emigrant community. The land agitation movement grew in strength from 1879 onwards, and secret agrarian societies transformed themselves into an efficient and organised Land League. The Land Acts of 1881 and 1885 met some of the demands of the Land League by giving tenants fairer rents, guaranteed tenure and free sale, with compensation for land improvements made during tenancies. Substantial transfer of ownership followed the Land Purchase Act of 1903. This required landlords to sell to tenants if 75% of them were willing to purchase, and credit for purchases was made available by the state. In the period 1903–1920, 9 million ha changed hands. By 1917, a true Irish farmer class had emerged, and two-thirds of all farmers owned their own land.

1.1.8 Land transfer and its impact on forestry

While the passage of the 1903 Act was a welcome move in terms of land and social reform, its effects on forestry were less positive. Under the new law, landowners were unable to retain ownership of the trees on any land they were forced to sell. Though a woodland preservation scheme was introduced, this was severely underfunded. Landowners, realising that they had little chance of adequate compensation, destroyed large acreages of private woodland and sold the timber to the sawmillers. In effect, landlords sold their former woodlands as purely agricultural land.

The ex-tenants who became the new owners likewise had little incentive to preserve their trees. Many of them needed quick revenue and income from annual crops. Almost three-quarters of the sawmills which existed in 1907 came into being in the aftermath of the Land Acts of 1881 and 1903.

1.2 The development of Irish forestry

1.2.1 Towards a national forest policy

In 1907, a Departmental Committee on Forestry was established whose report, in 1908, laid some of the foundations for an Irish forest policy. The area under woodland in Ireland was estimated to be roughly 1.5% of the total and was shrinking, with only 400 acres planted annually. The Committee's main concern was that once land passed to tenant farmers, it was irretrievably lost to afforestation. It strongly recommended that the government assume responsibility for the acquisition of land for forestry development. The 1908 report envisaged roles for both state and private ownership in forestry development. Links were established with both Germany and France, and there was strong interest in scientific forestry.

With the creation of the Irish Free State in 1921, forestry was assigned to the Department of Lands and Agriculture. A modest programme of government afforestation was undertaken, with plantings growing from 200 ha in 1922 to 1,600 ha by 1933. Private woodlands continued to be neglected, however, with uncertainties as to the future of the timber export trade to the British market, and many reverted to grazing land. The new government recognised afforestation as a priority and encouraged a programme of replanting. The types of land available to afforestation were mainly marginal for agriculture. The principal species planted during the early years of the Free State were Scots pine, European larch and Norway spruce. The Forestry Act of 1928 sought to limit felling on private lands, and a planting subsidy was introduced.

During the Second World War, firewood demands increased as coal imports were restricted. Despite delays in seed supply from North America, 2,000 ha were planted annually throughout the war. By 1948, the long-term strategy of the government included a planting target of 10,000 ha over a 40-year period, in order to secure the country's softwood supplies. With developments in deep ploughing techniques, afforestation on the western peats began in the early 1950s. Two species, Lodgepole pine and Sitka spruce were planted on these peats and exhibited fast growth and high increment. By the year 1959–60, the annual planting target was achieved.

Economics came to feature strongly in Irish forest policy from the late 1950s. The need for efficiency was stressed in the 5-year Economic Expansion Programme of 1958. Maximum economic returns (rather than maximum wood production) were to be the goal. State forest lands increased substantially from the 1950s onwards; by contrast, private forest enterprise among small farmers was negligible. By the 1970s, the forest industry was severely affected by the international oil crisis, and falling prices coupled with rising production costs led to a recession in the industry. In 1973, Ireland became a member of the European Economic Community. Land prices rose sharply, and this affected the acquisition of land for forestry.

1.2.2 The growth in the private forest sector

When Ireland joined the European Community in 1973, the total forest area under private ownership was 81,963 ha (Purcell, 1979). By 1994, the area was 127,000 ha, 24% of the total forested area (COFORD, 1994). One of the major factors contributing to this expansion was the changing economic situation for 'conventional' agriculture. Surpluses, high market support costs and a decline in world demand all indicated poor prospects for traditional agricultural products and encouraged growing out-migration from the rural areas. Ireland benefited from the structural funds available to less developed areas of the European Community. Diversification was established as a rural development strategy, and the importance of forestry in rural wealth creation was recognised in Irish development plans (FOP, 1994).

At farm level, the major incentive to tree planting was provided by the guarantee of regular income in the short term, rather than the prospect of high future returns. Response had been poor under the first EC-assisted scheme, the Western Package Scheme, which covered only establishment costs (and almost half of the beneficiaries were investment companies rather than farmers). But private plantings improved dramatically with the introduction of increased grant levels and a compensatory allowance in 1987, as well as three new schemes which widened the eligibility of planters and the areas covered, and guaranteed income from plantation establishment for up to 15–20 years. Additional schemes were introduced in the early 1990s. These included grants for woodland improvement and reconstitution, assistance for co-operatives, and a forestry partnership scheme in which ownership of land is retained by the farmer but planted by the State Forestry Board, Coillte. Income received from all these schemes is tax-free.

The overall investment in private forestry since 1982 has amounted to IR£80 m. (of which IR£56 m. was from European Community financial assistance). In the decade to 1993, the area of private planting was 110,820 ha, 44% of which were covered by EC and Irish Government schemes. Investment companies dominated the planting programme in the period 1982–8, but these have gradually given way to private farmers, and by 1993 75% of all plantings fell into the latter category. Co-operative bodies have played an increasing role in the past decade. This is a new development; unlike many other European countries, Ireland lacks a history of co-operative forestry.

1.2.3 Irish forestry today

The forest sector in present-day Ireland comprises an expanding state and private sector with a combined forest area of 570,000 ha, 8% of the land area. This represents an eight-fold increase since the turn of the century. Ireland is still, however, the least forested country in the European Union. Coillte owns 390,000 ha (68%) while the remaining 180,000 ha are under private ownership. Ireland has the second largest proportion of forest in public ownership in Europe, surpassed only by Greece. It also has the highest per capita afforestation rate in Europe, with annual planting exceeding 20,000 ha. In recent years, over 60% of total afforestation has been in the private sector, with farmer plantings accounting for 85%.

Sawmilling capacity and technology have also expanded progressively in the last decade. Total wood production is currently 2.4 million m³ per annum. It is expected that, within 10 years, the wood processing industry will become one of the most important Irish industries.

1.3 The institutional framework of forestry in Ireland

Responsibility for forestry development now lies with the Irish Forest Service, under the Department of Marine and Natural Resources. The Department's responsibilities include national forest strategy, the development of private and public forestry, forest protection, support for research in forestry, multiple-use forestry and relations with the European Commission. The Forest Service is the forest authority in Ireland, and is the main body in the Department dealing with international forest conventions and agreements. It handles relations with the International Tropical Timber Organisation, and represents the government on the Intergovernmental Panel on Forests of the UN Commission for Sustainable Development.

2. HISTORICAL INVOLVEMENT WITH TROPICAL FORESTRY

2.1 The tropical timber trade

Never having been a colonial power or a major trading nation, Ireland has had little historical involvement with tropical forestry, except through the timber import trade. Imports of tropical hardwoods amounted to 70,000 tonnes in 1994, valued at £37 m., mainly from Ghana and Côte d'Ivoire.

2.2 The Irish missionary presence in the tropics

The strength of Irish missionary organisations (mainly Catholic, but not exclusively so) has been a long-term feature of Irish social and cultural life, and has provided the main means for its involvement in developing countries. The Irish missionary presence has been an entry point for both Irish bilateral and non-governmental organisations, and helps explain the geographical profile of much of Irish official and non-governmental aid (see section 3).

While education and health have been key sectors for development work by missionaries, forestry, agroforestry and agriculture have also figured to some degree. This is particularly the case in Africa (countries such as Kenya, Tanzania, Uganda, Zambia, Zimbabwe and Ghana). In South America, NGO-supported missionary work in the tropical forestry sector (in Brazil, Chile and Paraguay) represents the major Irish government funding to the sector on the continent (see section 4.2).

3. STRUCTURE OF DEVELOPMENT ASSISTANCE

3.1 Development Assistance Commitment

Until the 1990s, Irish overseas development assistance (oda) was small in volume and declining; the oda/GNP ratio fell from 0.28% in 1986 to 0.16% in 1991 and 1992. Almost two-thirds of the aid programme was taken up by contributions to the multilateral agencies, including the World Bank and the European Community. The appointment of a coalition government in 1993, and pressure from the junior partner, the Labour Party, to increase social expenditure, led to a pledge to increase Ireland's oda to 0.2% of GNP in that year, and by 0.05% thereafter, in support of a movement towards the UN target of 0.7% of GNP ('Programme for a Partnership Government', 1993-7). One result has been a steady increase in the bilateral programme (by 60% per annum).

In absolute terms, however, the Irish official aid programme remains small. In 1995, total multilateral and bilateral expenditure stood at only IR£106 m. (0.29% of GNP). There is no provision for programme

(budgetary) support to partner countries. Irish oda is in the form of grants and is not tied to procurement of goods and services from Ireland (OECD, 1995).

Aid expenditure for 1993 and 1994, broken down by sector, is indicated in Table 1.

3.2 Organisation of the aid programme

3.2.1 Irish Aid¹

Irish Aid is the name of the official development service of the Irish Government. Irish Aid is administered by the Development Co-operation Division (DCD) of the Department of Foreign Affairs (DFA), headed by an Assistant Secretary under a Minister of State with responsibility for overseas development co-operation. There are three sections within the DCD, 'Bilateral I', 'Bilateral II' and 'Multilateral Aid', each headed by a Counsellor.

The Bilateral Aid section has four First Secretaries – effectively Desk Officers – each with responsibility for a different group of countries. The four groupings are:

- Lesotho, Mozambique and South Africa
- Sudan, Ethiopia and Uganda
- Tanzania, Zambia and Zimbabwe
- Other partner countries, including Cambodia, Rwanda, Somalia and the former Yugoslavia.

There are seven 'priority countries': Ethiopia, Lesotho, South Africa, Tanzania, Uganda, Zambia and (since 1996) Mozambique.

Matters relating to emergencies and NGO co-financing are dealt with by the relevant Desk Officer. The Division has an Evaluation and Audit Unit, the staff of which formerly included a Rural Development and Natural Resources Adviser whose responsibilities covered tropical forestry. However, the officer in question was reposted in 1996, and was not replaced. Development Co-operation Offices (DCOs) in the priority countries are staffed by a First Secretary and by national personnel. Programme Officers deal with in-country support in each DCO.

There are two First Secretaries in the Multilateral section in Dublin, responsible, respectively, for EU and UN matters.

Funding of Irish Aid derives from two sources: a 'Central Fund', under the Department of Finance, which covers the EU Budget and the World Bank; and the 'Departmental Votes'. The Vote for International Co-operation is administered by the DFA and includes contributions to the European Development Fund (EDF), the UN General Budget, the Bilateral Aid Fund, the Irish Volunteer Programme – the Agency for Personal Service Overseas (APSO), other development organisations and emergency relief. The Vote for Agriculture includes the Irish contributions to the EU's quota for the Food Aid Convention, the World Food Programme and FAO. Many of the contributions to international organisations are mandatory, the exceptions being the Votes for Agriculture, Finance and Foreign Affairs.

Table 1: Distribution of Ireland's oda, 1993-4 (IR£ m.)

	1993	1994
A. Administration	1.1	1.4
B. European Union	17.9	25.1
<i>of which:</i>		
EU Budget (Development Cooperation)	10.9	17.2
European Development Fund	7.0	7.9
C. United Nations and World Bank	8.9	10.6
D. Bilateral Assistance	26.8	38.1
<i>of which:</i>		
Bilateral Aid Programme	16.8	24.7
APSO	4.7	7.0
Emergency Humanitarian Assistance	4.5	5.8
Refugees	0.8	0.6
Total:	54.7	75.2
<i>Total as a % of GNP</i>	<i>0.20</i>	<i>0.24</i>
	[GNP: £27.5bn.]	[GNP: £30.95bn.]

(Source: Irish Aid, 1994)

1. Following the change of government in 1997, the Irish Aid programme is being reorganised. The following section takes account of the changes up to July, 1997, though further changes are expected later in the year.

An *Inter-departmental Committee* (IDC) coordinates the aid efforts of the various departments, and includes representatives of the Finance and Foreign Affairs Ministries.

The *Irish Aid Advisory Committee* (IAAC) was established by the Department of Foreign Affairs in 1993. This is an independent body whose brief is to advise the government on matters of policy, aid strategy and the effective delivery of aid. It also commissions research on issues of relevance to the Aid Programme and, where appropriate, arranges for publication of research findings. There are no forestry professionals on this Committee at present, although it does have NGO members with experience of tropical forestry development work.

The IAAC initiates projects on specific topics of relevance to Irish aid. Each of these is directed by a Steering Committee comprising members of the IAAC and external appointees with appropriate experience. A report is submitted by each Steering Committee, and is often presented for discussion at a public meeting before being sent on to the Minister along with the Committee view. Each year, the IAAC organises a National Forum on a current topic of development aid, which provides an opportunity for dialogue and exchange between the government and the NGO sector.

3.2.2 The Agency for Personal Service Overseas (APSO)

APSO is a government agency established in 1973, the primary mission of which is the transfer of skills to developing countries by qualified Irish people, usually on two-year assignments. It also has a number of other functions, including co-funding of Irish personnel working overseas for other agencies (particularly Irish and international NGOs); staff training; maintaining a resource centre to support development organisations and workers, including consultants, overseas students, etc.; and educational grants for returning volunteers. It also acts as the Irish agent for United Nations Volunteers (UNV) and the European Volunteers for Development (EVD).

In 1995, APSO made 1,226 placements overseas, 43 of which were in agriculture and forestry. Almost all the Irish Aid or NGO personnel working in forestry projects have participated in APSO training. Funding for post-graduate research has included a study of pastoral agroecosystems in Kenya (1985) and Miombo woodland ecology in Tanzania (1989).

APSO, in collaboration with the Department of Crop Science, Horticulture and Forestry of University College, Dublin (UCD), has been responsible for two initiatives in recent years with regard to tropical forestry. In 1990, it organised and funded a study tour of forestry projects to Lesotho and Zimbabwe for final-year undergraduate students at UCD. And in 1993, it facilitated a study visit organised by UCD to the International Council for Research into Agroforestry (ICRAF) in Kenya.

3.2.3 Higher Education Development Authority (HEDCO)

This was founded in the late 1970s within third-level

colleges and universities to coordinate their role in overseas development co-operation. HEDCO has been involved in coordinating a number of multilateral projects and has managed some co-financed projects on behalf of the World Bank and its associated Economic Development Institute. In addition, it manages a number of projects for the bilateral programme, for which it is paid management fees. It has an advisory capacity in the placement of overseas fellows at Irish third-level colleges. For example, in 1994, two overseas students, from Ethiopia and Lesotho, were studying for an MSc in Forestry at UCD, under the Bilateral Fellowship Programme. Eight other students were on parallel courses in other rural development fields.

HEDCO also works in development education in Ireland.

State Agencies Development Co-operation Division (DEVCO)

This was established in 1975, with a view to promoting aid in areas appropriate to the Irish 'pool of expertise and competence'. Irish expertise has suffered from a very low participation rate in the management of bilateral programmes (only 2-7%). The strategy of DEVCO is to focus on long-term development, and on sectors whose potential is under-utilised. This latter category includes forestry. Two new commercial units have been established, one of which promotes the export of services by the agriculture and forest sector.

3.3 Personnel

Since 1996, there has been no professional officer at headquarters level responsible for natural resource management and forestry. The appointment of rural development specialists (rather than career diplomats) as Programme Officers to some of the Development Co-operation Offices (DCOs) in priority countries is a relatively new development, which indicates the government's concern to professionalise its aid delivery at field level (see section 4.1, with reference to the case of Ethiopia).

3.4 The NGO sector

The NGO sector has long been, and remains, a significant conduit for the management of both Irish and EU funds to tropical forestry and related fields. In overall terms, NGO expenditure exceeds that of the Bilateral Aid Programme (BAP). In 1990, the figure was almost twice that of the BAP, at IR£25 m. Roughly half of this comes from co-financing by the EU, bilateral donors and other international agencies, and the rest from private donations. In the region of 60% of expenditure is accounted for by two NGOs, Concern and *Trocaire* (Gaelic for 'mercy'). The other major Irish NGOs include *Gorta* ('hunger' or 'want'), Goal, Self-Help Development International (SHDI) and the Irish Foundation for Co-operative Development (IFCD). The Irish NGOs are formed into a confederation known as DOCHAS (formerly, CONGOOD).

Geographically, Irish NGO programmes are found in Africa, Asia and South America. On a regional basis, sub-Saharan Africa is the priority area, although there has been an increasing volume of support in recent years in South-east Asia, particularly Cambodia, Laos and

Bangladesh, from agencies such as Concern and Trocaire.

Some of the principal Irish-based NGOs are briefly reviewed below:

CONCERN (officially, 'CONCERN-Worldwide') is a 'voluntary non-governmental organisation devoted to the relief, assistance and advancement of peoples in need in less developed areas of the world. It seeks to concentrate on the poorest people in its countries of operation and seeks also to engage the peoples of both donor and recipient countries more fully in the practical struggle against poverty and injustice in the world'. Its origins were in the Nigerian Civil War (1966–70), when a request for assistance was made by the Holy Ghost Missionaries working in the area of Biafra. It has since built up an international reputation for its speedy and professional response in emergency and relief work.

Trocaire, the Catholic Agency for World Development, was established by the Bishops of Ireland in 1973 to 'express the concern of the Irish Church for the needs and problems of the developing countries and the issue of justice involved'. The agency has two main aims: 'to help those in need in developing countries and to make Irish people more aware of those needs and our duty in justice towards them'. The key values of Christian social teaching inspire its work: 'respect for human dignity; freedom from injustice and poverty; active promotion of equity and equality . . . ; participation of all in the work of justice and development; . . . justice as the basis of all actions' (Trocaire, 1993). Though its main emphasis is on long-term development, it has played a major role in humanitarian crises in countries such as Somalia and Rwanda. Except in emergencies, Trocaire is not an operational NGO but works in collaboration with overseas partners (usually other NGOs or community groups); in emergencies it also works with host governments. It is also involved in public education and lobbying on development issues in Ireland.

Self-Help Development International (SHDI) was established in 1984 in response to the Ethiopian famine, and relief and prevention of famine were central to its original aims. Its Board includes representatives of the Irish Farmers' Association, the Irish Countrywomen's Association, *Macra na Feirme* (young farmers' organisation), *Teagasc* (the agricultural advisory service) and other prominent rural associations and groups. Self-help through development is the overall aim of the agency. Its approach involves setting up a tripartite co-operation between the local farming community in the host country, the relevant agricultural authorities and the agency staff (who are all nationals of the host country). Elected committees represent the local farmers. Farmers identify their own problems and the agency focuses on addressing the issues they have raised.

Gorta was established by the Department of Agriculture in 1965 as a permanent body born of the FAO-linked Irish Freedom from Hunger Campaign. Gorta was Ireland's first non-denominational development agency, specifically established to channel Irish goodwill money to the developing countries. It has fund-raising committees in every county, and is the Irish sponsor of the annual FAO-sponsored World Food Day.

Gorta provides only long-term assistance through small projects; unlike most Irish NGOs, it is not

involved in relief and emergency aid. It focuses on agriculture and food-related projects, following a philosophy of prevention of famine and food shortage through small-scale projects aiming at self-sufficiency and self-reliance. It mainly works with missionary groups and finances materials, equipment, infrastructure (nurseries, training centres, bridges, etc.) and educational programmes. At present, there is only one expatriate working for Gorta in the developing world; skilled national staff are employed where necessary, although reliance is placed on existing government personnel wherever possible.

3.4.1 NGO co-financing scheme

This is a scheme by which the Irish Government co-finances NGO projects. At present most of the funds allocated under the scheme support small-scale, one-off development projects of a type in which the BAP would not normally be involved. The limit of co-financing is normally 75% of the cost of the project up to a maximum of IR£100,000, but most grants are much smaller than the ceiling amount. The scheme has traditionally been oriented towards the social sectors, but includes rural development and community forestry. It favours projects with a 'basic needs' approach, with long-term sustainability (rather than, say, emergency relief). The scheme is mainly directed at projects proposed by Irish or Irish-linked NGOs, but will also consider applications from developing country and other NGOs 'if they are exceptionally worthwhile' (DFA, 1995).

The scheme is managed by an NGO Co-financing Committee, chaired by the Counsellor for Bilateral Aid-I in the DFA, and with a membership drawn from Irish Aid, APSO and IAAC. NGOs have no representation, though dialogue is maintained through a National Forum on Development Aid and other means. The Committee meets quarterly. Two months advance notice is normally required of NGOs seeking to make an application for funds.

Block grants. Since 1994, a block grant scheme has been available to a 'small number of NGOs which have demonstrated a significant track record in development projects and involvement in the Official Aid Programme' (DFA, 1995). At present four NGOs receive DFA block grants. These are CONCERN, Trocaire, Goal and Christian Aid; the first two are implementing forestry projects under the scheme. The change towards the allocation of block grants has been interpreted by some observers as a welcome move towards programme funding and away from a project-by-project approach.

An evaluation of the NGO Co-financing Scheme was carried out by DFA in 1996. It is likely that multi-annual funding will become available under the Scheme in the future.

3.5 The commercial private sector

There is a small number of commercial companies, either public sector with a profit orientation or private sector. Coillte is representative of the former type, and EDC of the latter.

Coillte Teoranta, the Irish Forestry Board, was reconstituted as a limited company under the Forestry Act of 1988, and began operations in 1989, the shareholders being the Minister for Finance and the Minister for

Agriculture, Food and Forestry (both acting *ex-officio*). Coillte's long-term goal is to ensure that an internationally competitive timber processing industry is developed in Ireland.

Coillte's commercial involvement in tropical forestry has developed only recently, mainly through tendering for World Bank consultancies. Through its association with the former International Development Ireland Ltd (IDI), it has become involved in projects in Kenya, Fiji and Tanzania. Coillte provides expertise, through staff secondments with Irish Aid, to the Government of South Africa, as well as to some of the states of Eastern Europe, and has previously provided technical assistance to Tanzania. In Kenya, it provides silvicultural, management, engineering, procurement and harvesting expertise to the Institutional Strengthening Plantation Management Project, a US \$80 m. project funded by the World Bank.

Environmental Development Consultants Ltd (EDC) is an Irish-based international consulting company, which provides services in project management and training in the environment and development sectors. Its clients include the European Commission, the World Bank and Irish Aid.

4. DEVELOPMENT ASSISTANCE STRATEGY

4.1 Official aid strategy

The challenge for the official Irish aid programme has been to deploy what are, in absolute terms, small amounts of money to good effect in an international arena dominated by much larger states and agencies, with much more substantial resources and influence.

The principal instrument for aid delivery is now the bilateral programme. In recent years, this has seen a shift from a policy focus on 'hi-tech', relatively sophisticated, intensive programmes, heavily dependent on Irish technical assistance and mainly provided by consulting firms (for example, dairying and road-building schemes), to a less intensive approach, focused on the social sectors and livelihoods issues, and integrated with local management systems in the partner countries. Relief work represents a focal area in Ireland, whose importance can be attributed to the country's long traditions of missionary work and of social concern, its small independent status, and its influential roles in international emergencies and policing activities. Relief work is increasingly seen as part of a long-term commitment and strategy, leading from relief to rehabilitation and thence to sustained development.

Irish NGOs form an important national constituency, and currently receive IR£11.5 m. from the official aid programme (more than 10% of the total aid volume). Ireland also funds development work directly through the bilateral programme, on a government-to-government basis, work which is managed by the overseas embassies.

The official programme has many of the characteristics of a quasi-NGO: relatively unconstrained by national commercial constituencies; relatively small commitments of funds at project level; a broad area focus (particularly unusual for a bilateral donor); and a

high degree of flexibility in management. Paradoxically, this flexibility is seen as a major reason for the continuation of the official bilateral aid programme, rather than (as would be feasible, given the low volume) its re-routing through the NGOs. As NGOs become more constrained by the conditions imposed on their operations internationally, so, it is argued, is room created for a small government programme able to operate in an adaptable and responsive way.

Given the relatively small amounts of money available to Ireland's developing country partners (the largest programme, Ethiopia, receives less than IR£7 m. per annum from Irish Aid), the accent is firmly placed on an area-based approach. Except in one instance (Lesotho), this is seen as offering the most effective use of low aid volume in the context of a participatory philosophy.² The Ethiopia programme involves two area-based projects, both entirely integrated into national structures, with no expatriate technical assistance. The programme is supported by two Irish Programme Officers based in the Embassy, and by a small number of technical specialists (all Ethiopian).

Forestry is not – *qua* forestry – a major programme focus for Irish official aid, and there are no earmarked sectoral funds. It has been found difficult to give priority to forestry in small area-based programmes with low expenditure, and shortage of technical staff also limits the potential for forestry development.³

Nevertheless, forestry does enter into the programme as an important sub-component, albeit without firm financial targets or sectoral commitments. Forestry represents approximately a third of all expenditure in a small programme in Sudan (see section 8.2). In Ethiopia, conservation issues (including forestry and reforestation) are important components of the programme in Tigray, less so in the second project area, Sidama. Forestry is a small but increasing component of the Tanzania programme, in relation to work in social forestry (see section 8.1).

In terms of multilateral aid, forestry expenditure is represented by funding to the CGIAR centres (c. IR£500,000 in all, of which IR£100,000 is given to ICRAF). Doubts have been expressed in some quarters as to the effectiveness of such small contributions to the international research agencies, given the other demands upon Irish Aid.

The 1996 IAAC report, '*Irish Aid involvement in Sustainable Agriculture, Rural Development and Food Security*', had considerable relevance to the tropical forestry sector. This placed tropical forestry and agroforestry within the context of sustainable agriculture. It argued that 'the emphasis in forestry development should be on a *livelihood* approach, rather than a

2. The Lesotho programme covers a range of activities, often relatively narrow and focused, in a variety of sectors, including rural water supply, bridge-building, roads, technical education, health screening and disease control. Work was completed in 1994 on construction of a National Environment Centre at Masianokeng, to serve as a base for environmental educational activities.
3. As one indication of the small size of the labour pool: the recent recruitment by Coillte of 7 forestry experts for work in Kenya is said to have virtually cleared the pool of available, uncommitted forestry expertise in the country, at least temporarily.

narrow commercial approach'. In relation to development, the report used a series of case studies (none of them Irish Aid-funded) to emphasise:

- the inadvisability of nationalising forest land without due consideration of issues of community involvement and forest rights (India);
- the need for appropriate research and development support in relation to traditional agroforestry systems, such as the miombo *chitemene* systems (Zambia);
- the weakening of village land tenure systems and rights through the creation of State Forest Reserves, and the irrelevance of plantation forestry approaches to many community-level needs for forest products (Lesotho).

4.2 NGO strategies

The traditional preoccupation of Irish NGOs with emergency relief work, and the expertise which the country has developed in this field, have implications for forestry strategy. By and large, Irish NGOs are most active in drylands areas of Africa (Ethiopia, Sudan) and other areas with marginal and fragile environments (Rwanda, parts of Tanzania, Lesotho). Development programmes have tended to emerge out of emergency relief work, and have figured either as a short-term strategy to secure the basic needs of vulnerable populations (often, in the initial stages, as food-for-work schemes) or as part of a longer-term process to reconstitute the assets of the poor. In several projects, forestry and reforestation activities have been undertaken in support of these strategies.

Some of the CONCERN projects provide 'classic' examples of the ways in which famine relief provides an entry point for long-term work. The 'dual nature' of these programmes (short-term relief and longer-term development) has implications for their management, the accent being on a fairly broad, area development approach. The primary beneficiaries are the 'poorest of the poor' (now tending to be replaced in agency thinking by the 'absolute poor').

In recent years, Trocaire has focused increasingly on issues of entitlements and tenure in its development work. Its 1996 *Guiding Principles for Overseas Programmes* notes:

The importance of forests and trees in protecting the environment, providing food and fuel and precious genetic resources is now widely recognised. However the destruction of forests, mainly through unhindered commercial exploitation and population pressure continues unchecked in much of the developing world. It is the poor and marginalised who suffer the most from loss of forest cover, both in terms of fuel and food resources and environmental damage. The issue is closely bound up with entitlements to the forests which [are] rarely recognised by governments [with regard] to those who live there. Often these are minority groups of indigenous peoples who have no voice in the existing power structures. Efforts to combat deforestation supported by NGOs link an awareness-raising approach on environmental and justice issues with management approaches to ensure sustainable exploitation of the forest resources.

Reforestation in rural areas is approached on a community basis which tries to find ways to encourage planting and protection of useful species by individual farmers. (Trocaire, 1996)

Gorta's policy of concentration on small projects, long-term (rather than relief and emergency) assistance, and support for established partners, particularly missionary groups, leads to a rather different profile from NGOs such as the two discussed above. In the forestry sector, investments have tended to be on single-theme projects in limited areas: tree and agricultural nurseries (19 out of 28 projects), community plantations (2/28 projects), reforestation (3/28) and agroforestry (4/28). This agency seeks to 'fill à gap', as many international agencies are no longer involved in development projects which operate on small budgets. Small projects are viewed by Gorta as easier to manage, with lower overhead costs and greater effectiveness in aid delivery.

5. REGIONAL AND THEMATIC DISTRIBUTION OF FORESTRY PROJECTS

The overall distribution of tropical forestry projects funded by official and NGO sources in Ireland, in the period 1984–96, is indicated in Table 2.

5.1 Official aid programme, 1994

Regional and thematic distribution of the official aid programme for 1994 is shown in Table 3.

Expenditure on forestry projects is not indicated in the Official Aid Statistics, except by reference to the project title. Thus, the 'Community Forestry' Project in Sudan accounted for IR£182,157 of the Sudan total (37%); 'Gairo Agroforestry Project' and 'Tanga Conservation', respectively, IR£114,040 and IR£289,984 (4% and 9.5%) of the Tanzania total; and Tigray Reconstruction, IR£254,143 (19%) of the Ethiopia total. It is likely, however, that significant forestry expenditures have been made within other projects, though there is no clear indication of forestry relevance in their titles.

5.2 Distribution of NGO projects

Among the NGOs, CONCERN provides the most substantial support to tropical forestry. Since 1984, a total of 13 forestry projects have been implemented in Africa and Asia with co-financing from the DFA, EU, the UK DFID (ex-ODA), Comic Relief and internal sources. Projects are usually operational, fairly large in size and (by NGO standards) of relatively long duration. The African-based projects have the longest histories. With the exception of the Tanzanian projects, early involvement in the sector in Africa was set against a background of successive food shortages, famine and, in some instances, regional conflict. Five projects are currently under way in forestry, to a total value of IR£2,887,725 (mean expenditure per project IR£481,286). These cover objectives such as:

- increasing the availability and accessibility of

fuelwood and wood products to target families, and promoting sustainable land-use practices (2 projects in Tanzania, begun in 1983 and 1985);

- increasing fuelwood and timber availability, protecting land from soil erosion, and increasing crop production in an environmentally sustainable way (Ethiopia, begun in 1984);
- improving the quality of life of the community by various means, including the promotion of reforestation and soil and water conservation (Ethiopia, begun in 1984);
- improving household food security and income, and improving village level management and control of indigenous forestry resources (2 projects – Cambodia, begun in 1991 and 1992).

Gorta's preference for much smaller initiatives is underlined by the small size of its forestry projects (mean, IR£7,161). A total of IR£200,575 was expended on 28 forestry projects in the period 1988–96, in Africa (Ghana, Kenya, Nigeria, Tanzania, Uganda, Zimbabwe), South America (Brazil, Chile, Honduras, Paraguay), and India. In addition, a total of IR£202,871 was spent in the same period, all in Paraguay, on projects which, while not specifically designated as 'forestry', involved resettlement of farmers in forest areas and thus had implications for the sector (5 projects, mean £40,574).

5.3 Official co-financing of NGOs

Co-financing of NGOs under the Bilateral Aid Programme involves a total of 279 projects to a value of IR£3,978,043 (1994). The mean value per project is IR£14,258. Major conduits for co-financing are missionary organisations (139 out of 279 projects – 50%) and the five main Irish NGOs – CONCERN, Goal, Gorta, SHDI and Trocaire (58 out of 279 projects – 21%). Other NGOs and charities account for most of the remaining projects. Very few of these projects would appear – at least from their titles – to be concerned with forestry matters. Only about 20 projects (7%) have titles which suggest possible forestry components ('integrated rural development', 'beekeeping', etc.), to a total value of IR£454,594. Only two specifically mention forestry or conservation themes; these are the Trocaire El Viejo Reforestation Project in Nicaragua, for which co-financing of IR£10,000 was provided, and the SHDI's Conservation Based Rural Development Project in Shoa, Ethiopia (IR£75,000).

6. FOREST RESEARCH AND TRAINING

6.1 Forest research

COFORD, the National Council for Forest Research and Development, was established by the government in 1993. COFORD coordinates all forest research in Ireland. It aims to stimulate appropriate and cost-effective research to secure long-term industrial viability and optimise social and cultural developments associated with forestry. Supported by EU funds, it engages in international networking and monitors progress to ensure effective transfer of technology. COFORD also

Table 2: Tropical forestry projects, 1984–96:

Region	Irish Aid	NGOs	Coillte	Totals
Africa	9 ^a	28	1	38
Latin America	—	10	—	10
Asia	—	3	—	3
Totals:	9	41	1	51

^a 6 projects initiated since 1994.

Table 3: Official development assistance programme, 1994 – summary of expenditure

Official Aid	Expenditure (IR£)
A. Geographical programmes	
Lesotho	3,185,093
Tanzania	3,054,973
Zambia	3,144,177
Sudan	494,414
Uganda	681,561
Ethiopia	1,310,926
Other Countries	3,424,820
Sub-Total – A	15,295,939
B. Democratisation	486,820
Co-financing with	
Multilateral Agencies	1,155,360
Co-financing with NGOs	3,968,043
Development Education	675,367
Training/Fellowships	622,367
Grants to Organisations & Courses	691,917
Programme Support	1,057,196
Sub-Total – B	8,656,931
Total:^a	23,952,870

(Source: Irish Aid, 1994)

^a Actual expenditure is slightly less than the total commitment of IR£24,705 million as indicated in Table 1.

acts as the 'contact point', and informal forum and facilitator, for governmental and non-governmental bodies with regard to both temperate and tropical forestry.

In 1993, COFORD joined IUFRO, the International Union of Forestry Research Organisations. It was appointed the Irish node for ETFRN (European Tropical Forest Research Network) in the same year, in which capacity it supports the Network's aims to promote the wise and sustainable management and protection of tropical forests and woodlands.

6.2 Higher education and training in forestry

The only forestry expertise at university level in Ireland is provided by the Forestry Section of the Department of Crop Science, Horticulture and Forestry at University

College, Dublin. Tropical forestry is a very minor component of the 4-year undergraduate course, though it is represented at post-graduate research level (MSc and PhD). An informal link arrangement between UCD, the Department of Foreign Affairs and ICRAF in Nairobi has permitted a number of post-graduate research projects to be undertaken in East Africa, with DFA/ICRAF support.

7. PROJECT CYCLE MANAGEMENT

Until recently, there was no formal requirement for *ex-post* evaluation of Irish Aid projects, most of which were of a long-term nature 'with no fixed timetables for completion' (OECD, 1995:27). Projects were (and continue to be) reviewed on a three-yearly cycle by the Evaluation and Audit Unit ('E and A') of the DCD (formerly the Planning and Evaluation Unit). All project reviews are submitted to the Project Appraisal and Evaluation Group (PAEG). This is a sub-committee of the IDC and consists of representatives of the Departments of Agriculture, Finance, Health, Education and Foreign Affairs. It meets regularly and acts as a management committee for the bilateral aid programme. It is also responsible for appraising the major project proposals. Financial approval is through the Department of Finance. The forest sector is not formally represented on this committee.

Outside of the E & A and PAEG procedures, there is no formal appraisal methodology, although consultants may be called on to give advice where necessary. The small size of many Irish aid projects, and their concern with low-specificity areas such as human resource development and capacity building are recognised as posing particular difficulties for project appraisal and evaluation (OECD, 1995:28).

A first attempt at a full country review was undertaken in 1994, with a joint Irish/Basotho review of the Lesotho Programme, accompanied by four in-depth project evaluations. Though very brief (only 2 weeks in all), this was felt to be a useful study, and a possible model for programme planning and review exercises elsewhere (OECD, 1995:27).

8. PROJECT REVIEWS

This section reviews two of the longest-established Irish Aid country programmes, in Tanzania and Sudan. The reviews highlight the distinctive character of official Irish development programmes, namely, long-term, flexible funding to broadly-based integrated rural development programmes concentrating resources on well-bounded local administrative units, and increasingly managed by national staff.

8.1 Irish Aid programme in Tanzania

Irish Aid has been working in Tanzania since 1979, initially by providing technical assistance and a capital fund to commercial agriculture (mainly dairy farming) in Kilosa District. More recently, the programme in this district has changed into one of area-based integrated assistance (the 'Kilosa District Rural Development Programme', KDRDP), with five principal components: education, rural transport infrastructure, health, rural economic development and the environment. Total

investments in Kilosa District now run at approximately IR£2 m. per year, 6.4% of which is accounted for by spending in the area of forestry and agroforestry (1994).

Forestry support has developed in a number of ways. From 1982 to 1985, a variety of micro-projects were funded in agriculture, forestry and related areas, in response to requests from interested groups and government departments. These were spread widely across the District and included coconut nurseries; a bull breeding centre (aiming to reduce environmental pressure by improving the quality, but not the quantity, of cattle in the area); viticulture; grain store construction; and fish farming.

After the reinstatement of district councils as a local government institution in 1985, Irish Aid adopted Kilosa District Council as its main partner, with the aim of improving capacity to provide basic needs and sustainable development. A Technical Co-operation Agreement was signed with the Tanzania Government in the same year. The programme is now one of the largest Irish Aid country programmes in volume terms, with expenditure of IR£3.1 m. per annum (1994) and rising, most of this being devoted to work in Kilosa District. In 1985, an Agricultural Adviser was appointed to work with the District Natural Resources, Livestock and Crops Officers. Capital and recurrent costs of the three Departments were covered, in order to enable them to implement a 'basket' of projects, including forestry and agroforestry.

8.1.1 Gairo Agroforestry and Land-use project (GALUP)

GALUP is based in the north-west of Kilosa District. The original project sought to address the problems of declining food yields and the linkages between low food production and environmental degradation. In the proposal, emphasis was given to the need to promote sustainable forms of land use, as well as training in agroforestry and soil and water conservation techniques, for forestry and agriculture personnel. A number of activities were organised around a central nursery and training centre. Re-training of village extension staff focused on combining soil conservation and tree planting with agronomy and livestock husbandry.

Over time, the role of the central nursery has changed, and farmers have begun to produce their own tree seedlings. New components have been added, including village land-use planning (with a strong emphasis on environmental conservation), bee-keeping, zero-grazing of improved cattle varieties, and oxenisation. Animation training for village extension workers has been provided as a means of stimulating demand for nursery and bee-keeping enterprises. Participatory rural appraisal techniques have been used as a diagnostic tool, to investigate the variable adoption of the different technologies on offer. In 1996, Irish Aid began supporting land-use planning at village level, in three of the project villages.

GALUP has a Steering Committee at village level, which includes senior District staff. The project is headed by a Project Manager (a Tanzanian national, and a forester). From 1990 to 1995, there were two expatriate advisers (one seconded from Coillte), but, following the country review in 1995, it was decided to

indigenise the project fully, and there are no longer any Irish advisory staff.

An environmental planning exercise was conducted in 1995, and a one-year environmental project plan drawn up. This committed GALUP to a continuation of its existing activities, plus additional forest gazettement and environmental components outside of the Gairo Division.

8.1.2 Kilosa Environmental Action Plan

Kilosa District suffers from serious environmental problems in all Divisions. The main vegetation type, miombo woodland, has been over-exploited for many years, because of both agricultural expansion and charcoal/fuelwood production. Late-season fires are widespread, some spreading into the adjacent Mikumi National Park (where agricultural encroachment and poaching of game pose additional threats). In 1995, an environmental planning workshop was held in Kilosa, as a first step towards developing a District Environmental Action Plan. Planning objectives were identified for the coming year, and a further planning exercise was scheduled for late 1996.

8.1.3 Tanga Coastal Zone Conservation Programme

This was initiated in 1994, as a joint venture between Irish Aid and IUCN. The project is concerned with sustainable exploitation of natural sources, with a local livelihoods perspective. Community management of marine resources is the main focus, with attention given to mangrove swamp and coral reef rehabilitation and conservation.

Also included in the Tanzania Programme is the *Sokoine Agricultural Extension Training Programme*. This has been running for 10 years, as an institutional link between the Department of Agribusiness, Extension and Rural Development of University College, Dublin, and the Centre for Continuing Education at Sokoine University, Morogoro. This project is establishing links with GALUP regarding the promotion of agroforestry extension methodologies for village-based extension workers.

Building on the success of the KDRDP, a second District in Morogoro Region, Ulanga, was identified for Irish Aid support, and a similar programme began in 1996.

8.2 Irish Aid programme in Sudan

This programme was initiated in 1986, and is the longest-running Irish Aid forestry programme. The main forestry investments have been technical assistance and capital input support to the Forest National Corporation (FNC) in the Gezira Province of the Central State. Aid has been concentrated on Butana Province, an area of low mean annual rainfall (average 250mm., though a record low of only 10mm. was recorded in 1993). The population of the province is estimated at 385,000 persons. Subsistence farming predominates, though many of the men obtain seasonal work on the Gezira irrigation scheme.

In the first phase, from 1986 to 1991, the emphasis was on a community forestry programme, with three levels of activity: individual and homestead planting;

school planting; and compound and village planting.

A conservation-based approach was used, promoting tree-planting for fuel and poles, shelter belts, shade trees, and dune stabilization. Seedling production was carried out at two central nurseries and a number of communal nurseries supplying 40 villages in the catchment area. This phase involved both rainfed and irrigated establishments, with heavy emphasis on exotics, such as *Eucalyptus microtheca*, *Casuarina equisetifolia*, *Prosopis chilensis* and *Azadirachta indica*. Local *Acacia* species were also produced, as well as some fruit trees.

In the next phase, 1991–3, support to community forestry continued, and experimental work was undertaken in *Acacia-Balanites* riverine forest reserves. A fuel conservation and improved cooking project was introduced and initial work began in rainfed forest conservation. Planted woodlots were fenced in the early stages and, once a woodlot was established, the fence was moved to another site. Local demand for indigenous species proved very high, not least because of their quicker establishment and better field performance under low rainfall (with indigenous species, the fence could be moved after one season, while the exotics needed fencing for two years or more). In general, demand for indigenous seedlings in Butana exceeded the project supply. Within the fenced area, natural regeneration of grasses and woody vegetation, chiefly *Acacia spp.*, was also found to occur among the planted stock. The project strategy was thus adapted to include direct sowing of indigenous species such as *A.nilotica* and *A.senegal*. The project also contributed to seed harvesting and storage, which benefited users both within and outside the project area.

The project promoted charcoal use and trained women in the manufacture of improved fuelwood stoves. A local artisan was engaged to make charcoal stoves using fired clay and metal liners. Again, demand exceeded supply.

Rehabilitation and conservation of natural forests in rainfed and partially irrigated areas had been priority activities of the FNC for some years. The project supported this work (which was particularly challenging in the rainfed areas, because of the unpredictability of rainfall and the prevalence of wind erosion). The project worked with the FNC in direct sowing of up to 20,000 fedans per year.

Expenditure under the Bilateral Aid Programme amounted to IR£494,414 in 1994, including the forestry programme and other work in primary health care, water supply and microprojects. Though considerably diminished in volume since then (like other donors, Ireland has scaled down its presence in Sudan), the programme retains a small presence in the country on humanitarian grounds, and is directing its efforts to the needs of the poorest sections of the population.

9. CONCLUSION

The Irish aid programme provides one example of the ways in which a small European state with limited resources can seek to use its influence to the benefit of the developing world. Tropical forestry has not been a major sectoral focus for Irish aid, though given its main preoccupations – integrated area-based projects largely

in marginal environments – indigenous drylands forest management has nevertheless figured strongly in programme development. The ‘dual nature’ of the programmes of the main Irish NGOs (relief and rural development), itself a reflection of the strong humanitarian tradition in Irish society, has also led to the growth in knowledge and expertise in tropical drylands forestry.

In recent years, Irish foresters have experienced notable success within the national territory, and institutional changes have figured strongly in the remarkable growth of the Irish forestry industry. To date, this has had little impact on the developing world, save for limited consultancy work in plantations management and forest development. It remains to be seen whether the institutional models which have been applied with such success within the national territory prove to be of value in the rather different economic and social contexts of Ireland’s partners in the developing world.

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ACRONYMS

APSO	Agency for Personal Service Overseas
BAP	Bilateral Aid Programme
CGIAR	Consultative Group on International Agricultural Research
COFORD	National Council for Forest Research and Development
CSD	Commission on Sustainable Development (UN)
DAC	Development Assistance Committee of the OECD
DCD	Development Co-operation Division (of the DFA)
DCO	Development Co-operation Office
DEVCO	State Agencies Development Co-operation Division
DFA	Department of Foreign Affairs
DFID	Department for International Development
DOCHAS	Irish NGO Federation (formerly CONGOOD)
E & A	Evaluation and Audit Unit of the DCD
EC	European Commission
EDC	Environmental Development Consultants Ltd
EDF	European Development Fund
ETFRN	European Tropical Forest Research Network
EU	European Union
EVD	European Volunteers for Development
FAO	Food and Agricultural Organization of the United Nations
FOP	Forestry Operations Programme
GALUP	Gairo Agroforestry and Land-use Project, Tanzania
GNP	Gross National Product
HEDCO	Higher Education Development Authority
IAAC	Irish Aid Advisory Committee
ICRAF	International Council for Research in Agroforestry
IDC	Inter-Departmental Committee
IDI	International Development Ireland Ltd
IFCD	Irish Foundation for Co-operative Development
IRÉ	Irish punt
IUCN	International Union for the Conservation of Nature
IUFRO	International Union of Forestry Research Organisations
KDRDP	Kilosa District Rural Development Programme
NGO	Non-Governmental Organisation
ODA	Overseas Development Agency
oda	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PAEG	Project Appraisal and Evaluation Group of the DCD
SHDI	Self-Help Development International (NGO)
UCD	University College Dublin
UN	United Nations
UNV	United Nations Volunteers

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