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ENVIRONMENT IN DEVELOPMENT

European Community Policy and Action

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ENVIRONMENT IN DEVELOPMENT

EUROPEAN COMMUNITY POLICY AND ACTION

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INTRODUCTION

Not so long ago, environmentalists and those concerned with the development of the world's poorer nations were hardly on speaking terms. Green-minded people argued that with all the poisons being pumped out by the developed world, the first priority should be to stop any more industrialisation. Those whose prime concern lay with the economic plight of the poor world, on the other hand, thought the environment would have to be sacrificed in order to meet the basic needs of the populations of the South. "Africa is not a zoo" was the retort often heard by development-minded people who resented the fact that more publicity was given in the industrialised world to dying elephants than dying people.

Over the past twenty years or so there has been a gradual rapprochement between the two camps. Governments in the developing world, donors and development policy makers have begun to wake up to the fact that the only long-term solution to poverty is to balance economic development with the availability of natural resources. Environmentalists on the other hand now know the only solution to such mammoth problems as global warming, toxic waste and the depletion of the ozone layer is a collective effort between the north and the south. Those with most to gain from this new found meeting of minds are the people of Asia, Africa and Latin America because although they do not necessarily create the problems, they are usually the first victims.

The European Community, as the world's largest aid donor, has a key role to play in promoting sustainable development.

SECTION 1 - ENVIRONMENTAL POLICY

INTERNATIONAL BACKGROUND

The Stockholm Conference

A major landmark in the development of global concern about the environment was the 1972 United Nations Conference on the Human Environment, often referred to as the Stockholm Conference. Delegates met from 113 nations and produced an action plan of 109 separate recommendations. They also agreed a declaration of common principles on global responsibilities in respect of the global environment which remain a basic guide for policy makers the world over.

In the field of development policy it was internationally recognised for the first time that economic and social development is essential for ensuring a favourable living and working environment and that environmental deficiencies generated by conditions of underdevelopment and natural disasters can best be remedied by accelerated development through the transfer of substantial quantities of financial and technical assistance. The Conference recommendations included a call for the stability of prices and adequate earnings for primary commodities as being essential to environmental management and called for the environmental policies "to enhance and not adversely affect the present or future development potential of developing countries".

The early 1970s witnessed a series of droughts in the developing world which led to a rise in general concern about desertification. In 1977 the United Nations launched a Plan of Action to Combat Desertification which called for aid of US$2.4 billion a year for twenty years. The plan failed dismally however, mainly because it concentrated on supporting borderline areas and scientific solutions, and therefore failed to attract cash from donors. For its part, the EC contributed 1.7 billion European currency units (Ecu) during the period 1986-1989 towards its own anti-desertification programme (more details provided in section 2).

The Brundtland Commission

In 1983, an important catalyst for translating rhetoric into action came when the United Nations set up an independent commission under the chairmanship of Norwegian Prime Minister Gro Harlem Brundtland. The commission was charged with drawing up recommendations for a "global agenda change". More specifically, it was asked to formulate a strategy which would allow "sustainable development" to be achieved by the year 2000.

With a budget of US$5 million, the members of the commission travelled to ten countries on five different continents, collecting information from scientists, government officials, industrialists and non-governmental organisations (NGOs).

In 1987 the Brundtland Commission published a report, "Our Common Future". The report stressed that in developing countries, degradation, pollution and lack of growth go hand in hand. It showed poverty and over-rapid population growth as key elements in the complex web of socio-economic causes that weaken a country's ability to deal with pollution problems. The report advocated growth policies which acted within environmental constraints and called on industrialised nations to provide the resources. "Our Common Future" insisted that with human ingenuity sustainable growth was possible. The EC responded positively to the Brundtland Report with a number of policy statements of which the most important was given at a European Council in Dublin in May 1990.

The European Commission was one of the founding members of the Committee of International Development Institutions on the Environment, an organisation set up in 1981 to examine the environmental aspects of economic development assistance and ensure that all the multilateral donor signatories take environmental considerations into account when formulating development policies. There are now 16 signatories. The European Bank for Reconstruction and Development is also due to sign in the first half of 1992.

The Montreal Protocol

The EC played an important role in the adoption of the Montreal Protocol, which came into force in 1989. The Montreal Protocol is an agreement by the industrialised countries to freeze and eventually abolish the production of ozone-layer destroying chemicals, especially chlorofluorocarbons (CFC's). The EC is planning to bring forward its original deadline for a complete ban on CFC production from 1997 to 1995, setting the pace for the world to follow. Since the Montreal meeting, industrialised countries have broadly accepted responsibility for atmospheric pollution but are increasingly convinced that the developing countries need to be involved if solutions are to be found. At a follow-up conference to the Montreal Protocol in London in 1990 the developed world agreed to fund technology transfer to the developing world to help meet CFC phase-out timetables.

Other important international environment agreements are the Basle Convention on the Control of Transboundary Movements of Hazardous Waste, which the EC is in the process of ratifying, the Ramsar Convention for the Conservation of Wetlands of International Importance, the Convention Concerning the Protection of World Cultural and Natural Heritage, the Convention on the Conservation of Migratory Species of Wild Animals and the Convention on International Trade in Endangered Species of Wild Fauna and Flora(CITES)

THE EUROPEAN COMMUNITY'S ENVIRONMENTAL POLICY:

IN EUROPE

Everyone is implicated in the destruction of the planet. The difference is that whilst the poor of this world destroy the environment of their immediate locality, it is the rich industrialised nations that are contributing to the destruction of the globe. For example, Europe and North America account for 80% of the world's emissions of air pollutants and sulphur dioxide, nitrogen oxides, carbon monoxides and hydrocarbons, responsible for acid rain. Three quarters of carbon dioxide emissions, responsible for the greenhouse effect, also emanate from industrialised countries. In addition, the northern industrialised countries often exert economic pressure on the south so that sustainable development is impossible.

The groundwork for the EC's environmental policy was laid at the Paris Summit in 1972, just a few months after the Stockholm Conference. Here the idea was hatched for the first Environmental Action Programme (EAP). The main principles of the programme, subsequently incorporated into the Treaty of Rome stated that the polluter should pay, that activities carried out in one state should not endanger the environment of a neighbouring one and that the best way of combatting pollution is to tackle it at source rather than remedy the effects. There have been three subsequent EAPs (1977, 1983 and 1987) which reflect the changes in environmental thinking over the years. The third and fourth programmes emphasised the concept of sustainable development. The fourth programme was particularly sensitive to the need to assist developing countries in the environment field.

Since the adoption of the first EAP, the EC has adopted over 200 legally binding acts in the field of the environment to which the member states have to comply to limit the environmental damage and loss to rectify past mistakes. The EC takes part in a series of regional and international conventions aimed at resolving common environmental problems , keeps abreast of scientific developments through its research programmes and finally, is making increasing amounts of money available for environmental protection through its own budget.

This year the EC is due to adopt a fifth environmental programme designed to run from 1993 and to fit in with the challenges of the post-1992 single market. The EC's powers over environmental matters, which can only effectively be tackled at regional level, have been enhanced in the new treaty that resulted from the Maastricht Summit in December 1991, and its basic tasks, as defined in Article 2 of the new treaty, are to include the promotion of "sustainable and non-inflationary growth, respecting the environment."

THE EUROPEAN COMMUNITY'S POLICY ON THE ENVIRONMENT IN DEVELOPING WORLD

Africa, Caribbean and the Pacific

The most comprehensive of all the EC's regional agreements with developing countries are those with the African, Caribbean and Pacific (ACP) nations: the Lome Convention. The first two conventions contained no specific references to the environment for the simple reason that when they were signed, the situation had changed dramatically. The human suffering from famine and drought brought about by extensive desertification in the Sahel region of Africa had woken the world up with a jolt to the link between third world poverty and the environment.

Six articles of the Lome III treaty were devoted to the problem of combatting soil erosion and desertification which threatened the convention's priority objective of self-sufficiency and food security. It was agreed to undertake research operations into the desertification phenomena, to make an inventory of water tables and their replenishment capacities, improve weather forecasting techniques and establish a system for the prevention and control of bush fires and deforestation. The convention called for a "drought and desertification control" component to be incorporated into all agricultural and rural operations.

Lome IV - environment centre stage

Lome IV placed the environment at the centre of EC/ACP cooperation, creating a special Title 1 to set out new environmental provisions. The general provisions of the treaty set the tone stating, amongst other things, that "in the framework of efforts to protect the environment and restore natural balances, cooperation shall help promote specific operations concerning the conservation of natural resources, renewable and non-renewable, the protection of ecosystems and the control of drought, desertification and deforestation"(Article 14).

Title 1 of Lome IV developed the theme. Priority was given to a "preventive approach aimed at avoiding the harmful effects on the environment as a result of any programme or operation, a systematic approach that will ensure ecological viability at all stages, from identification to implementation and a trans-sectoral approach that takes into account not only the direct but also the indirect consequences of all the operations undertaken." The text pledged inter alia environmental impact assessments would be carried out for all large-scale projects, or those likely to have a serious effect on the environment.

Title 1 also pledged that the social and cultural dimensions of environmental awareness should be integrated into the total package, and would be specifically addressed by means of education and training programmes. Support was also promised to international and regional efforts to address environmental issues and also to non-governmental organisations (NGOs) and intergovernment organisations furthering these aims. It also included a special chapter on the prevention of drought and desertification, following on from the principles laid down in Lome III. The chapter called for a host of principles to be implemented and measures to be adopted to protect the land and introduce sustainable agricultural systems.

Emphasis on regional cooperation is a common feature of successive Lome conventions. In the relevant title in Lome IV the preservation and improvement of the environment was added as falling under the scope of regional cooperation "especially through programmes to combat desertification, erosion, deforestation, coastal deterioration, the consequences of large scale marine pollution, including large accidental discharges of petroleum or other pollutants with a view to ensuring rational and ecologically balanced development."

In the convention title on mining and energy, emphasis was placed on energy conservation and the promotion of new and renewable sources of energy. A range of provisions were presented dealing with the conservation of biomass resources (including fuelwood, the collection of which is one of the major causes of deforestation, especially in dry zones), improving consumption habits, using energy resources in a sustainable manner, the planning and management of energy policy and research and training and the dissemination of information.

On the important issue of tourism, a major source of potential revenue for the ACP nations, the convention called for product development, specifying the adaptation of existing products "including the preservation and development of cultural heritage, ecological and environmental aspects, management, protection and conservation of flora and fauna".

Toxic waste trade banned

Lome IV was signed shortly after an international scandal concerning the dumping of highly toxic materials by an Italian ship off the coast of Nigeria. The convention imposed a ban on hazardous and radioactive waste exports to ACP countries from the Community. It was a hotly debated topic during the negotiations for the convention with some countries arguing that accepting toxic waste from industrialised countries provided an important source of revenue. Nevertheless, it was eventually agreed that EC exports of this kind should be outlawed, corresponding with the view that the transport of hazardous waste both within and outside the EC should be strictly controlled.

Under the Lome IV provisions, the EC undertook to prohibit all export of such waste to the ACP states while at the same time the ACP states undertook to prohibit the import of toxic waste into their territory from the EC or any other country. The measures did not prevent an EC country to which an ACP country had chosen to export its waste for reprocessing from returning the material to the country of origin once it had been treated.

Asia and Latin America

The increasing emphasis on the environment in development cooperation between the EC and the ACP states has been mirrored in its relations with the Asian and Latin American (ALA) countries. The environmental dimension went, from being practically non-existent in bilateral agreements, to becoming one of the core features.

In 1991 the EC reviewed its 13 years of cooperation policy with its ALA partners. Emphasis is now placed on adapting policy and cooperation objectives to the economic reality of each country, concentrating on assisting the poorest of the ALA nations but without excluding cooperation with the more advanced countries particularly in the fields of the environment, rural development, anti-drugs initiatives and the prevention of natural disasters.

It was agreed that 10 percent of the 2900 million Ecu to be devoted to these fields for 1991-1995 must be spent on environmental projects. Particular emphasis was placed on sponsoring projects aimed at the conservation of tropical forests. The new agreements also call for environmental to be integrated in the development process as a whole, with long-term aims as the protection of the two regions' considerable natural resources and sustainable development.

The Mediterranean

The EC renewed and strengthened its Mediterranean cooperation programme at the end of 1990. The new five-year action programmes, apart from reinforcing bilateral aid agreements which pinpoint the environment as a priority sector, also include the environment in the "regional" cooperation line. It was agreed to allocate 120 million Ecu to environmental pilot projects and training activities and to interest rate subsidies (equivalent to 3%) on European Investment Bank loans to the tune of 500 million ecu.

Of concern to all the Mediterranean countries is the deteriorating state of their coastal regions, especially the Mediterranean sea itself, due to a high concentration of people, industry and tourism. The EC has played a key role in several major initiatives, including the Nicosia Charter of 1990 on environmental cooperation in the area, a five year action plan to give substance to the 1988 Mediterranean Action Plan drawn up jointly by the World Bank, the European Investment Bank, the European Commission and all the Mediterranean states.

In addition, the EC also runs the MEDSPA programme. With a budget of around 37 million Ecu for the first three years(1990-1992), 50% of which is financed by the EC. MEDSPA sponsors waste and water treatment projects in the EC Mediterranean countries. In addition it gives technical assistance to the non-EC Mediterranean countries of Turkey, the Maghreb and the Mashraq so they can develop their environmental policies and administrative structures. This includes helping the governments concerned to collect data, draft environmental protection legislation and provide administrative support.

The majority of the projects in the developing countries under MEDSPA are concerned with monitoring water quality and testing and controlling industrial waste, usually working with the government although sometimes NGOs are involved, as is the case with several projects in Tunisia. Plans are also underway for the establishment of regional crisis response networks for oil slicks as well as other pollution spills with the Maghreb and Mashraq countries, paying special attention to the Suez Canal area which is being increasingly used as a transport link for highly toxic waste. The EC will also give technical advice and assistance in setting up networks as well as supplying cash for infrastructure such as faxes and telephones so the different national authorities can make quick contact with each other in an emergency.

SECTION 2 - ACTION IN THE DEVELOPING WORLD

FOREST CONSERVATION

Deforestation

Over the last ten years,the rate of deforestation has risen dramatically. In the northern hemisphere, forest loss has stabilised, but in the developing countries more than a million square kilometres of forest were destroyed between 1980 and 1990. A 1990 report by the World Resources Institute, based on Food and Agriculture Organisation (FAO) studies, suggested the annual rate of forest destruction was between 16.4 and 20.4 million hectares. At the present rate of deforestation, all but a few of the remotest forest regions could have disappeared by the beginning of the next century (2010-2025).

The present crisis involves all types of tropical forest. Best known are the rain forests of the Amazon region in South America, South East Asia and the Congo Basin in Central Africa. However,deforestation is also occurring in the dry savannah lands of the Sahel and Latin American uplands, and the foothills of the world's major mountainous regions, particularly the Andes and the Himalayas.

The principal cause of forest destruction is the clearance of forest for agricultural purposes, by slashing and burning.This can be a sustainable way to farm tropical forest land but overpopulation means there are short fallow periods between crops so the land does not get a chance to regain its fertility. Trees are also destroyed for firewood, a major source of energy for two thirds of the developing world. The problem is particularly acute in dry areas near to urban centres.

Forests are also exploited to satisfy the demand for tropical timber and associated products such as rubber and resin. International debt obligations aggravate the situation by forcing developing countries to increase logging to sell abroad for convertible currencies. Harvesting can be done without damaging the environment but most often logging is carried out with extensive damage to both soil and remaining trees so reforestation is not possible. Badly thought out public development schemes, such as road building and land clearance for major industrial schemes, also take a heavy toll.

The consequences of the rapid loss of the world's forests are manifold. One of the best known is the contribution of deforestation to the so-called "greenhouse" effect, where carbon dioxide builds up in the atmosphere to create global warming. Forest burning contributes to the CO2 build-up and releases other greenhouse gases such as methane. It should be pointed out however,that in 1980 it was estimated that forest-burning discharged about 0.5 million tonnes compared to 5 billion from consumption of fossil fuels mainly in the industrialised world.

Forest destruction affects the atmosphere in other ways. Forests of all kinds recycle moisture and gases, acting as carbon dioxide "sinks" and giving off carbon dioxide in the process of photosynthesis. Moisture given off by forests affects the local, regional and global climate. For example, the heavy clouds that form over the rain forests soak up the sun's energy and then transport the heat to higher latitudes. On a local level, once the forests have been removed the land usually becomes infertile. Tropical forests also regulate freshwater systems and contribute to flood control. The recent and devastating floods in Bangladesh are widely thought to have been made worse by deforestation in the Himalayas, although by how much is debatable.

Over half of all the world's animal and plant species are to be found in tropical forests. Only five percent of these have been examined by man and the potential of the remaining 95%, particularly in the field of medicine, is without limits. For example, the plant the Rosy Periwinkle, found in the rapidly disappearing forests of Madagascar, has contributed to the treatment of leukaemia. Plants in the forest are also potential food sources.

But the most severe suffering from forest loss is felt by local people. Whole communities of indigenous peoples, an estimated total of 2.5 million, are being driven in to extinction by forest clearance for logging, road building and repopulation. In turn, colonising farmers, many of them poor and lacking the indigenous peoples' knowledge of the delicate forest habitat, themselves fall victim to the barren land they create by ignorant farming practices.

EC Action against Deforestation

Forest Conservation has become an increasing part of the EC's development aid agreements, such as the Lome Convention . The problem of deforestation and forest degradation is referred to in the context of environmental and agricultural cooperation, as well as in connection with food security, drought, desertification control, energy development and regional cooperation.

Specific commitment to the conservation of tropical forests in developing countries was granted member states' backing with the adoption of a Council Resolution on "Tropical Forests - Development Aspects" in May 1990. The Resolution followed on from a 1989 European Commission report entitled "The Conservation of Tropical Forests: The Role of the Community" which gave an overview of the problems and finished with an outline strategy. The Resolution calls for more funds to be provided using existing instruments (donors and institutions). It also reaffirmed the principle of sovreignty of tropical forest countries over their resources and the need to help those countries carry out conservation themselves.

The Tropical Forestry Action Programme is recognised as a basic framework for coordinated action and funding. The Resolution also recognised the social dimension of forests and the role of non-governmental organisations. Particular reference was made to the International Tropical Timber Organisation (ITTO) to which the EC belongs, in promoting forest management. The European Council in Dublin, 1990, affirmed the EC's willingness to increase and develop cooperation on protecting tropical forests with those countries concerned, in particular Brazil.

A new budget line tc finance forest conservation and management was introduced in 1991. The initial endowment of 2 million Ecu was increased to 52 million Ecu in 1992.

Forest conservation is carried out by several European Commission departments, DGVI (agriculture) for forestry matters concerning member states and relations with international organisations such as FAO, DGXI (environment) for global effects of tropical forests, DGXII(research) for scientific research into tropical forests in cooperation with European research institutions and DGVIII (development) which oversees most of the developmental aspects of the work except for aid to the ALA states, which is carried out by DGI (external relations).

Tropical Forestry Action Programme

Initiated by the FAO, the United Nations Development Programme, the World Bank and the World Resources Institute in 1986, the Tropical Forestry Action Programme is an instrument to coordinate the efforts of national and international governmental and non-governmental bodies, the private sector and local communities to draw up and implement national plans in the forestry sector. The EC participates in the TFAP process and views the instrument as crucial to any global forest protection strategy. An important principle of the TFAP is that there should be a declared political commitment by the country at the highest governmental level backed up with appropriate policies.

The TFAP also focuses on meeting the needs of local people and a real involvement of local groups and communities in the planning , management and implementation of forestry projects. It also pushes for actions to be integrated to conserve resources and increase the goods and services that can be provided by the forests and trees. EC experts have already been sent to several countries to help draft national TFAP plans.

The EC also represents member states at the International Tropical Timber Organisation (ITTO) created in the context of the United Nations Commission on Trade and Development. It was initially a commodity agreement but the environmental importance of tropical forests features significantly in the ITTO's terms of reference. These include the "sustainable utilisation and conservation of tropical forests and their resources, and maintaining the ecological balance in the regions concerned."

The importance of the ITTO is that it is the first international framework where timber trade problems can be discussed in close connection with forest conservation issues without neglecting the prospects for economic development that tropical timber offers the developing countries.

EC sponsored programmes.

According to a list drawn up last year, over the past ten years the Community has sponsored more than 250 projects related to forestry in developing countries, committing 372 million ecu of EC funds. The money mostly came from aid provided by the European Development Fund, from the ALA budget line and from special budget lines for ecology in developing countries, for anti-desertification, co-financing with non-governmental organisations and the science and technology for developing countries budget. In terms of distribution, 78% of EC aid for tropical forests went to Africa, 15% to Asia and the Pacific, 4% to Latin America and 3% to the Caribbean.

Divided according to sectors defined by the Tropical Forestry Action Programme the percentage of EC assistance is as follows:

Forestry in land use (including agroforesty)	44%
Forest-based industrial development	29%
Conservation of tropical forest ecosystems	15%
Institutional strengthening	9%
Fuelwood/energy	3%

Central Africa Tropical Forests Conservation

The EC is also playing a central role in regional initiatives to combat deforestation in specific parts of the world. The Central African regional programme for the conservation and sustainable use of forest ecosystems was launched following a meeting of ministers from seven countries of Central Africa in Brazzaville in 1990. The project concerns the second largest tropical forest area in the world after Amazonia. The EC has allocated 24 million Ecu to the project which aims to promote and reconcile long-term forest ecosystem protection with the rational management of resources by local people. As well as the protection of forests and forest ecosystems the project also includes the stepping up of training and research in the area and the development of agro-forestry activities on the outskirts of forests. The programme is due to start in the first half of 1992.

The Brazil Pilot Programme

At a European Council in Dublin in 1990 EC leaders affirmed their willingness to increase and develop cooperation programmes with developing countries in the south. It pinpointed as cause for particular concern the conservation of Amazon rain forests in Brazil. The issue was brought up at the G7 summit of the world's richest nations in Houston, Texas the same year. The leaders at the G7 summit agreed to cooperate with the government of Brazil on a pilot conservation programme, with the long-term aim of then being able to apply the results to other countries.

Drawn up by the Brazilian government, the European Commission and the World Bank, the programme has four specific objectives:
- 1) Conserving biodiversity and areas populated indigenous people
- 2) Consolidating environmental policy changes in Brazil and strengthening implementing institutions. Over the past few years the Brazilian government has made some encouraging developments in its policies towards the rain forests and environmental protection. However progress is still needed in applying these changes.
- 3) Developing and disseminating scientific knowledge and the application of technologies for sustainable development and
- 4) Building support for environmentally friendly development. Often, development projects in the tropical forest field have failed because of lack of knowledge about forest soil, ecosystems and the like.

Much of the action envisaged in the pilot programme will be in the research field, including the development of new forms of sustainable development from basic research through to testing development projects with the groups and local populations involved.

The EC has so far committed $US 15 million for the programme's initial phase, the majority of which is to go towards setting up a Rain Forest Trust Fund. The trustees of the fund will be the World Bank which will largely be responsible for managing aid given by other donors. Germany and the UK have already promised funds, Japan, Italy and Canada are also set to follow suit. An estimated 250 million dollars will be needed to see through the first stage of the pilot programme. At the time this report went to press negotiations were also underway with several states in South East Asia for projects specifically concerned with tropical forests.

Less exotic, perhaps, but no less vital is the question of assisting developing nations in the struggle against the decline in forests and tree resources in arid zones, especially in Africa. Much of the EC's assistance in combatting deforestation has taken the form of a forestry component of an integrated rural development project, often in marginal zones threatened by encroaching desertification. Examples of EC help in this area are described in the following chapter.

DESERTIFICATION CONTROL

DESERTIFICATION

Most people have heard of the phenomena of "creeping deserts" or desertification. The popular image is often that of advancing sand dunes burning up the land as they go. The reality of desertification is far more subtle, more complex deteriorations in the environment of dry areas. Sometimes the process is reversible although it usually lasts for a substantial period and has its roots in over-crowded cities.

The removal of the precious topsoil layer by artificial means or erosion by wind, water or desiccation results in the lowering of the ground's water-storage capacity and fertility, thus causing crops to fail. Over intensive farming and the destruction of natural trees and vegetation helped to create the dustbowl in the United States and has caused deserts in Africa and South West Asia to spread by several kilometres every year.

For many years the extent to which the world was being eaten up by creeping deserts relied on the statistics gathered by the United Nations Environmental Programme in the mid-seventies. These suggested that the Sahara Desert was irreversibly moving southwards and that 20 million hectares of land (the size of the UK) are reduced to negative or zero productivity every year. A further six million hectares, nearly twice the size of Belgium, were, claimed UNEP, transformed into desert.

During the late eighties however, UNEP's predictions came under fire from many quarters including the World Bank, who have even gone as far as to dispute that the Sahara is advancing at all. Comparative studies in the Sahel have shown desertification is often temporary; when rain returns, productivity returns.

The World Bank has defined desertification as a "process of sustained land (soil and vegetation) degradation in arid, semi-arid and dry sub-humid areas, caused at least partially by man. It reduces productive potential to an extent which can neither be readily reversed by removing the cause nor easily reclaimed without substantial investment."

Traditional peasant agricultures do not usually cause desertification and place minimum pressure on the land. However, when rural folk are forced into repeated use of marginal lands, through poverty, lack of land and population pressures, desertification is unavoidable.

A study carried out in Ethiopia in 1984, at the time of the drought that caused the horrific famine, explained the process there as taking part in five stages. Firstly, because of population pressure, wood harvesting exceeds annual growth of trees and shrubs. The wood becomes so scarce the local people increasingly have to use crop residue and dung for fuel. Nutrient recycling is interrupted and the condition of the soil begins to deteriorate.

Stage three is where nearly all the trees have gone and local people now have to pay cash for dung and crop residue fuels, soil deteriorates even further and crop yields decline. In stage four, animal dung is the only fuel source, all crop residue goes to feeding the livestock. Stage five, where the environment collapses, usually triggered by a dry spell. People begin to go hungry.

EC action against desertification

The spectre of desertification sparked off much of the growth in the concern with the environment in the early seventies following the droughts of the earlier parts of the decade. However the emergence of new problems, such as debt and the need for structural adjustment turned policy-makers attentions away from concern with the natural resources base. The EC was one of the few institutions not to follow this trend, illustrated by the fact that food security, agricultural development and the fight against desertification were the central issues of Lome III.

In 1986 the Council of Ministers adopted a Resolution on the Conservation of the Natural Resources and Countering Desertification in Africa. This launched the European Action Plan to which more than three billion ecu were committed by the European Commission.

The Action Plan laid down guidelines for a four-pronged approach to combatting desertification. Firstly, priority was given to be given to the problem by the EC and its member states in their development programmes. Secondly, it laid down the range of measures to be taken with direct action, such as reafforestation or erosion control, to be backed up by indirect action such as training, research and the efficient use of energy resources. It also recognised the need to achieve a so-called "critical mass" of geographical concentration, a comprehensive approach comprising sub-groups of interdependent measures and the need for continuity.

Lastly, the action plan recognised that people were central to any successful strategy and strove to increase awareness of the issues, especially in urban areas. In the past many anti-desertification projects had failed because they didn't get the local people involved. As with anti-deforestation tactics, the European Commission had become convinced that although the problem was a global one, local solutions were often the most effective.

Between 1986 and 1989 the EC financed 230 projects in those part of the developing world under threat of desertification to the tune of 1.7 billion ecu under the auspices of national indicative programmes agreed with signatory governments of the Lome convention.

The projects are largely concerned with the "safeguarding" of natural resources and efficient land-planning, particularly in rural areas. One example is a rural development project in the Sissili province of Burkina Faso. The programme, costing 31.5 million ecu, approved by the European Commission in May 1989 in the framework of Lome III, is aimed at backing up a village development project to improve incomes while at the same time conserving the environment. The whole operation is based on the efficient management of natural resources, for example, environmental awareness training, planting, together with villagers and schoolchildren, 3 million trees and shrubs, carrying out anti-erosion works on 6,000 hectares of agricultural land, restoring a further 3,000 hectares of exhausted soil and improving the management of 100,000 hectares of existing forests.

Katsina is a region in the northern Nigerian state of Kaduna. Drought is a part of the history of the people of this semi-arid savannah zone, with its rolling hills, granite boulders and pebbled plains. Severe droughts were recorded in 1847, 1885, 1913 and 1972. With intervals of roughly 30 years, that means that another drought, which could last up to five years, could be expected in ten years time. Over the past few centuries, the area has been intensively cultivated and grazed leaving just small patches of the original vegetation. As a result, the fragile soils have become increasingly vulnerable to erosion from the wind. Although the progress of desertification in the Katsina area is slow, the efforts needed to reverse or even just halt the process are enormous. The Nigerian government first applied the EC for funds in 1981 as part of its indicative programme under the Lome II convention.

Following a three years study, a shelterbelt plantation programme was begun costing 9.5 million ecu. Shelterbelts of trees and hedges are planted to protect the land and crops from soil erosion. Seedlings are expensive and considerable expertise is needed in planting, growing them and keeping them alive once the initial cash outlay is made. In Katsina and the surrounding neighbourhood, thousands of shelterbelt trees are thriving and are meeting with considerable success in combatting soil erosion.

One of the problems faced by local workers and EC-financed experts was in persuading the local population the trees belonged to them, and not the government, and that they would not be prosecuted for using the wood. The EC has committed a further 25 million ecu to a follow-up project to persuade people the shelterbelts are for their benefit. Special emphasis is to be placed on involving local women and schoolchildren and funds have been set aside for the publication of a local environment magazine.

The use of fuelwood is a cause of growing desertification. In the Bateke plateau in Zaire an EC financed project has been running since the end of 1987, the aim of which is to plant 6,000 acres of forest to meet the fuelwood needs of the neighbouring city of Kinshasa. The rapidly growing city relies on the natural resources of the surrounding area for its fuelwood, with devastating effects on the environment. But, in order to break the vicious cycle of planting trees only to have them destroyed again, the project also has built into it the development of and agro-forestry techniques by which trees form part of a forest/food crop rotation system to provide, on a permanent basis, the answer to the city's key problems, namely food and fuel shortages.

Remote Sensing

Remote sensing is a term used to describe the rapidly developing process of obtaining and interpreting images of the earth, via data from satellites circling the planet. Apart from military use satellite images can be used to record changes in tree cover, monitor crop growth and farming patterns or conditions under which outbreaks of pests, such as locusts are likely, thus acting as an early warning system. Satellite data can also monitor rainfall programmes.

Many developing countries do not have the necessary technical equipment to keep watch over geographical and climate changes using remote sensing. In 1984 the European Commission began a six year research programme on 'the characterisation by remote sensing of the dynamics of desertification phenomena on the periphery of the Sahara'.

Teams from research organisations from several member states, coordinated by the EC's Joint Research Centre in Ispra, in collaboration with their colleagues in all the Sahara countries, studied bush fires, the surveillance of agricultural production standards, evapotranspiration, the use of hydraulic basins and fuelwoods estimates. The aim of the project is to provide the governments concerned with the information, for each ecological unit in their country, on the seriousness of the attack by the desertification phenomena and the country's capacity to take defensive action against desertification, notably through the optimum management of surface water or upper groundwater level reserves and the production of ligneous materials.

The programme has already produced some encouraging results which provide scope for practical action such as the possibility of increasing the number of wells through improved knowledge of water reserves in the Sahara and Sahel rock formations. In Guinea, in the Upper Niger valley, where the main Sudano-Sahelian rivers have their source, out of 199 primary watersheds listed, some 20 have been selected as priority targets for anti-desertification measures. Through the remote sensing programme it also seems possible to be able to determine improved use of grazing land in the Sahel.

Another remote sensing project spearheaded by the EC's Joint Research Centre is the Tropical Ecosystem Environment Observation by Satellites (TREES) developed together with the European Space Agency (ESA). The objective is to establish an integrated satellite observational programme for a long-term and continuous monitoring of tropical forest cover, rate of deforestation and biomass burning in the tropical region in order to provide support for the implementation of various EC policies.

WILDLIFE PROTECTION

Hunting by Europeans and Americans has led to the extinction of the dodo, the passenger pigeon and the great auk, to name but a few. In Africa and other parts of the developing world, huge numbers of the worlds largest and most beautiful animals, as well as countless numbers of birds, plants and aquatic creatures will be lost for ever unless action is taken against hunting and poaching, both by local people for survival, the rich for sport, and international gangs to export skins and tusks.

However, the greatest threat to wildlife is through the loss of natural habitat, caused by virtually all forms of human activity. Just as in Europe bears and wild boars have disappeared from all but the remotest regions because of industrialisation and urbanisation, a study in the late 1980's by the World Conservation Union found a loss of original habitat of 68 percent in the tropical regions of South East Asia and 65 percent in sub-Saharan Africa.

African National Parks

For several years the EC has sponsored the upkeep of almost a dozen national parks in East and West Africa. The projects are roughly divided into the outright protection of floral and fauna by helping to establish reserves, training staff and similar measures. Increasingly, the projects are trying to integrate the local economies and agricultural activities with the conservation work.

The Parc National de Virunga in north-east Zaire, was founded in 1925 and comprises perhaps the greatest diversity of habitats of any park in Africa. Within an area of 8,000 Km there are forest covered mountain slopes, home of mountain gorillas, the huge Lake Edward and the Rutshuru river which contains the world's densest hippopotamus population, open savannah plains home to elephants, lions and buffalos, the snow capped Ruwenzori mountains. In 1988 the Community signed the Kivu Rural Development programme with the Zairian government which contained the sub-project of the Virunga park, classified as a world heritage site. Co-financed by the Italian government the project includes a renovation programme for the park's infrastructure (buildings, roads, bridges) an awareness and education campaign aimed at the local population and a census of the local gorilla and hippopotamus population. The project also included the publication of a beautiful colour wildlife book about the park. Profits from the book sales go towards the fight against poaching.

In terms of financing, by far the most important Community sponsored project concerning wildlife conservation in Africa is the development programme for the northern region of the Central African Republic. The CAR government has pinpointed the conservation of the country's considerable natural resources, under threat from the encroaching desert, bush fires, internationally organised poaching as well as local hunting, as top priority.

At a cost of 25 million Ecu the project aims not only to protect the natural environment but also integrate the considerable natural resources into the national economy by developing ecotourism, increasing the rational utilisation of wild game both to feed the local population and to supply materials for the local handicraft industry. Significant resources were channelled in to the training and equipping of local guards to fight against poaching, much of which is organised by professional gangs from the Sudan and Chad. Five million Ecu of the allocated funds also went to help develop local agriculture, fish farming and building dispensaries and schools for the local population. It is planned to extend the four year project, due to expire in the first half of 1992, for a further four years.

The EC has also sponsored wildlife conservation projects in the Mediterranean. The Ras Mohamed Marine National Park in southern Egypt is one of the world's most unique coral reef ecosystems. Because of this it has attracted hoards of scuba diving enthusiasts and tourists from all over the world which now threaten the park's natural environment. In addition, over-fishing by local people has reduced dramatically the size and variety of the once abundant fish stock as well as contributing to the damage of the reef.

In 1988 the Egyptian government approached the EC for funds under the EC/Egypt cooperation agreement to restore the park as part of its national environmental plan. The project is now in its second phase , to which the EC has donated 2.5 million ecu. The first phase of the project succeeded in more than doubling the area of Ras Mohamed from 97 to 210 square kilometres, upgraded it to national park status and implemented a preliminary management plan. The second phase of the programme aims to further expand management and protection measures of the park with the aim of raising public awareness and funds have been set aside to improve the fishing and marketing skills of traditional Bedouin fisherman.

The Ras Mohamed projects are being carried out in conjunction with a separate EC sponsored programme with Egypt to clean up the oil polluted gulf of Aqaba, also in the Sinai peninsula, which spills over into the Ras Mohamed region. The EC is to donate 4.3 million ecu to the project which involves establishing and staffing an emergency response centre and to establish procedures and measures to combat oil pollution at the entrance to the gulf, which is also of great natural beauty.

Under the framework of MEDSPA, a loggerhead turtle conservation scheme has been run in Turkey, including at the world famous resort of Daliyan on the country's southern coast. With the help of EC funds and expertise from the World Wildlife Fund for Nature, and most importantly the enthusiasm of the local people, turtles have now become the resort's most viable tourist asset. Daliyan has become a pioneer in the concept of environmentally sustainable tourism. Hotel chains are prevented from building on the beach where the turtle eggs are laid. Tourists have to stay in Daliyan village which is a boat ride up the river from the beach. Although they are allowed on the beach during the daytime, sunbathing is forbidden on the strip of sand where the turtles have actually laid the eggs. The EC has also cooperated with a number of Turkish universities to collect data on other important turtle breeding sites along the coast, targeting the ones most in need of protection, and moving small colonies of turtles to other beaches.

The elephant programme

For many centuries African elephants have been hunted down for their tusks which are a major source of ivory. Over the past fifty years or so their natural habitat has also come under threat from population growth and agriculture. In 1990 the Ivory Trade Review Group estimated that there were only 625,000 wild African elephants left, and if current trends continue the huge and familiar beast would be extinct in less than 15 years.

The EC has increasingly become involved in research and development programmes concerning the conservation of wild elephant herds in sub-Saharan Africa. For the year 1991/1992 a series of projects were launched in collaboration with the African Elephant Coordinating Group with 800,000 ecu taken from the EC's special budget line for Ecology in Developing Countries. Nine projects were chosen, to be executed in seven countries, each to last for about a year. It is planned that the projects will then act as a catalyst to more substantial investments from donors.

The projets vary according to the different circumstances of each country. For example, in the Central African Republic, a study has been launched into the population and social structure of three different species of elephants found in the Dzanga-Sangha Reserve area. The study, costing 68,000 ecu will make an important contribution to the knowledge of forest elephants, and help provide data for the management and conservation of the species throughout West Africa.

In Gabon, a study was due to begin as this report was going to press into elephant crop raiding. The researchers will compile an analysis of the costs, benefits and effectiveness of different forms of crop protection, a national management programme and trained staff to deal with problem elephants and crop protection issues in Gabon. 120,000 ecu have been allocated to the project.

CONCLUSION

This briefing document has tried to show how environmental concerns have become an intrinsic part of EC policy both on the home front and in its relationship with the developing world.

In twenty years the EC has done much to rectify past mistakes within its borders. More than 200 legally binding acts have been passed from compulsory high drinking water standards to a system of "eco-labelling" for environmentally-friendly manufactured goods. The new EC treaty negotiated during last year's intergovermental conferences has made the environment a priority area for concerted EC action, giving the EC new powers to coordinate environmental policy across the twelve member states.

Just how far environmental concerns are entering every aspect of EC work is shown by current moves to reform the common agricultural policy and plans to become the first group of industrialised nations to achieve the stabilisation of greenhouse gases by taxing coal, gas and oil in a bid to force industry to limit to a minimum its energy use.

More recently, in March 1992, the European Commission agreed draft laws for a new ten-year programme "Towards Sustainability" - a fifth action programme on the environment which aims to fully integrate environmental concerns into all aspects of the EC's economic policies. This document will set the tone for Europe's approach to environment and development issues over the next ten years. It is hoped EC governments will approve the measures by the end of 1992.

The strong environmental content of the latest Lome convention and of co-operation with Latin America and the Mediterranean countries are further proof of the EC's commitment to enhancing the environmental dimension of its development work. Research and careful project evaluation have now become vital components of EC aid targeting.

At the United Nations Conference on the Environment and Development to be held in Rio de Janeiro in the summer of 1992, the EC will be at the forefront of the developed world in calling for amongst other things, a substantial increase in financial resources and improved technological cooperation to tackle global environmental problems. It also intends to sign two global conventions at the summit-one on climate change and the other on the protection of biological diversity- and to fully support an international declaration on the sustainable management of forests.

The EC will use all its influence to find the necessary consensus and policies to guarantee a more just and safer future for us all.